Quantifying public procurement of R&D of ICT solutions in Europe

SMART 2011/0036

FINAL REPORT

A study prepared for the European Commission

DG Communications Networks, Content & Technology by

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Executive Summary

The European Commission is promoting forward-looking public procurement strategies in several flagship initiatives in the Europe 2020 strategy. For instance, by acting as technologically demanding first buyers, public procurers can drive R&D and innovation from the demand side. Developing effective policy initiatives in this area requires a systematic monitoring of R&D procurement expenditure in Member States across various sectors of public interest and across expenditure categories, such as ICT. However, there is today no systemic unified mechanism to track the total amount of R&D procured by public entities in Europe, and even less information is available about the share of ICT-related R&D procurement.

Against this background, the present study has undertaken a first large scale data gathering exercise on this expenditure and, based on this experience, it provides guidelines to collect the same data in the future and integrate this exercise into the official yearly statistics relating to R&D expenditure. The study was launched in early January 2012 and finalised in March 2014.
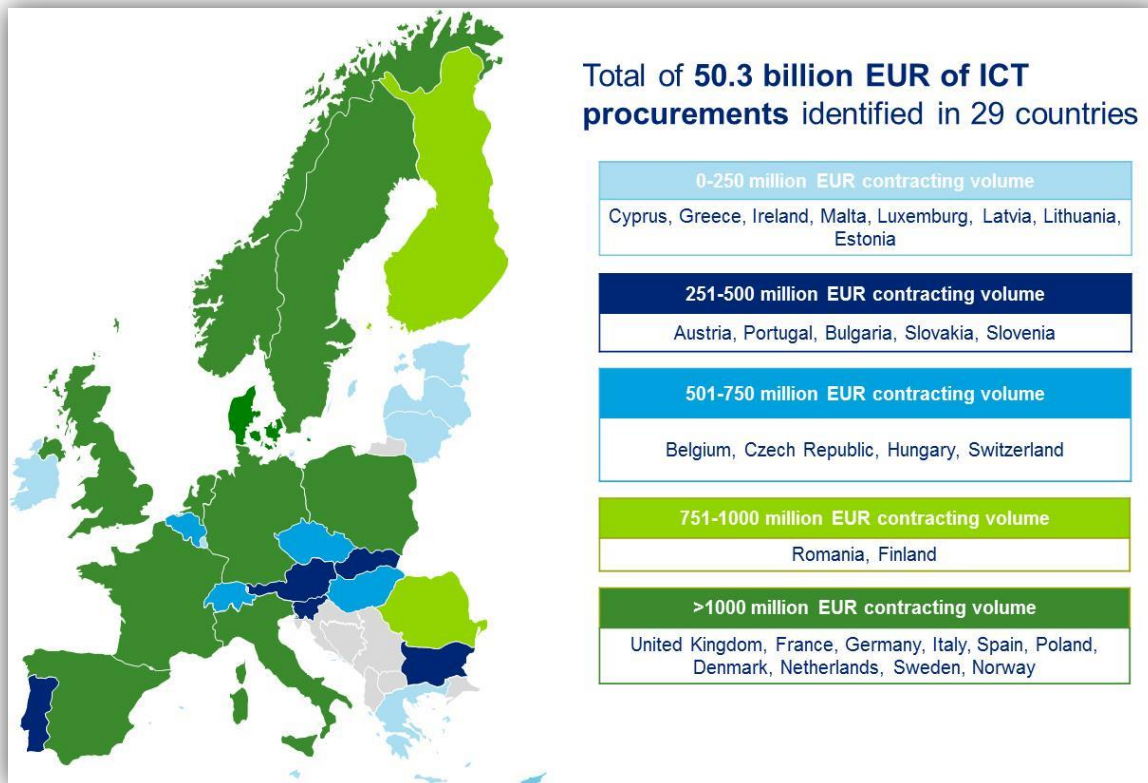
Key findings and results

Based on the study estimates, the total value of reported[1] **ICT public procurement** contracts in the 29 countries within the scope of this study reaches about **EUR 50.3 billion**[2] in 2011.The United Kingdom spends more than any other country on ICT with 26% of the total expenditure (EUR 13.2 billion), followed by France (19%) and Germany (10%). The total value of ICT contracts is lower than EUR 1 billion in the vast majority of the countries. Services contracts represent 60% of the ICT total contract value, while 25% is spent on supplies. The expenditure breakdown by object of contract differs substantially between countries, whereas Denmark and Italy have the highest share of service contracts on the national total contract value (around 80%), while Sweden and Netherland spend 63% and 52% respectively on supplies.

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[1] All figures identified by the study related to reported public procurement contracts only, i.e. contracts that were published in national or European wide (TED) tender databases. For more information on the difference between reported and unreported procurement values see section 2.1.

[2]This and the following estimatesdo not include the value of public procurement contracts in the defence sector. Theseareprovided separatelyfor each country in the main body of the report,where available.

Total value of ICT contracts in 2011, EUR billion

Total of **50.3 billion EUR of ICT procurements** identified in 29 countries

0-250 million EUR contracting volume
Cyprus, Greece, Ireland, Malta, Luxemburg, Latvia, Lithuania, Estonia

251-500 million EUR contracting volume
Austria, Portugal, Bulgaria, Slovakia, Slovenia

501-750 million EUR contracting volume
Belgium, Czech Republic, Hungary, Switzerland

751-1000 million EUR contracting volume
Romania, Finland

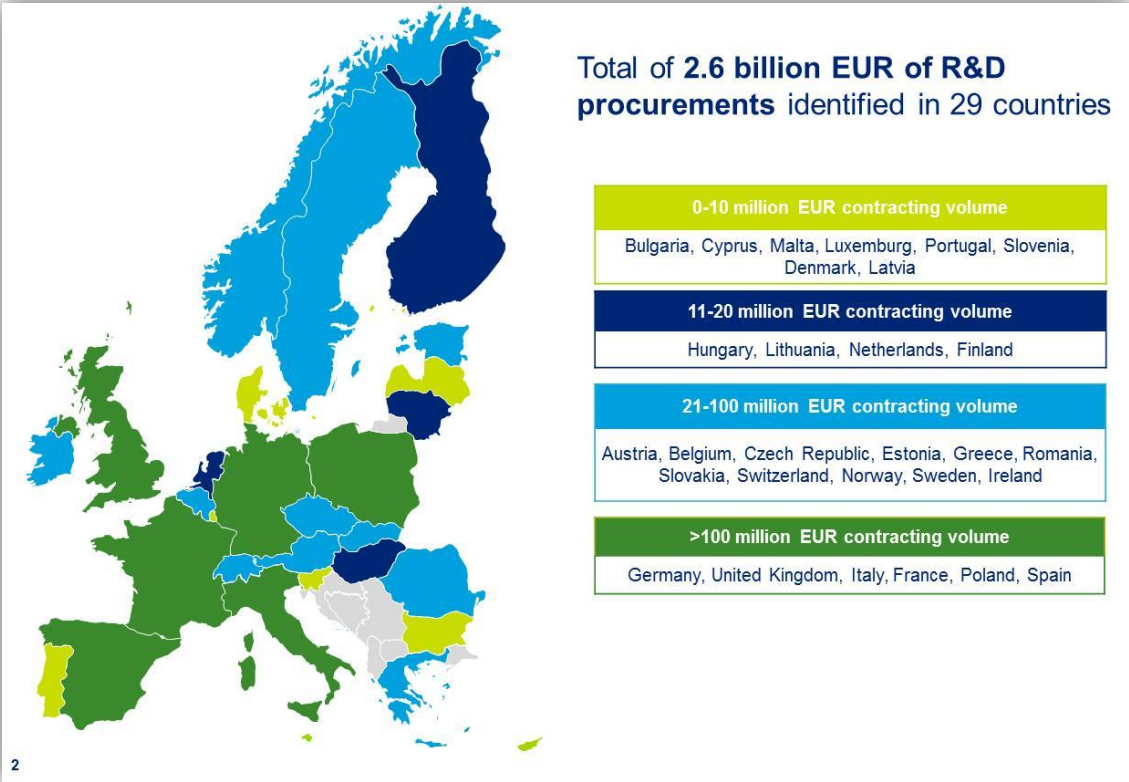| >1000 million EUR contracting volume |
|---|
| United Kingdom, France, Germany, Italy, Spain, Poland, Denmark, Netherlands, Sweden, Norway |

Source: Study dataset

More in detail, 32% of the expenditure relates to IT services, while radio, television, and telecommunication equipment, being the second largest sector of expenditure, covers 16% of the total contract value. This is followed by software packages and information systems (9%). Authorities providing general public services are responsible for about 27% of the expenditure, while significant resources are spent by contracting authorities in the transport (8.6%) and environment sectors (5.6%).The market is in general quite concentrated, as indicated by the fact that the top ten procuring authorities, on average, cover about 52% of the national ICT expenditure. Contract values are heavily concentrated at the low end with an extraordinarily skewed distribution. The median contract value for 2011 is about EUR 43 000 while the mean contract value is about EUR 605 000, with significant differences across countries and types of contracts.

As it regards **R&D procurement**, the total reported contract value of non-defence R&D procurement amounts to about **EUR 2.6 billion** for the 29 countries covered by the present study. Germany has the largest share of the total R&D procurement expenditure (21%), closely followed by the United

Kingdom (19%). In a majority of countries, the total value of R&D contracts is lower than EUR 30 million. In total, supplies contracts add up to about EUR 1.2 billion or 48% of the total value. Notwithstanding a substantially lower skewedness compared to ICT procurement, differences between median and mean contract values persist also in R&D contract values with a median contract value of about EUR 127 000 and a mean contract value close to EUR 441 000. National trends are quite varied as well as influenced by individual high-value contracts awarded in a specific years. About 37% of the total reported R&D procurement expenditure is ICT-related (EUR 974 million).

Total value of R&D contracts in 2011, EUR billion

Total of **2.6 billion EUR of R&D procurements** identified in 29 countries

| 0-10 million EUR contracting volume |
| Bulgaria, Cyprus, Malta, Luxemburg, Portugal, Slovenia, Denmark, Latvia |

| 11-20 million EUR contracting volume |
| Hungary, Lithuania, Netherlands, Finland |

| 21-100 million EUR contracting volume |
| Austria, Belgium, Czech Republic, Estonia, Greece, Romania, Slovakia, Switzerland, Norway, Sweden, Ireland |

| >100 million EUR contracting volume |
| Germany, United Kingdom, Italy, France, Poland, Spain |

Source: Study dataset

In view of ensuring the sustainability and re-use of this data gathering exercise, the present report also proposes a two-phase approach towards reliable and regular Europe-wide statistics on public procurement of ICT / R&D / ICT-related R&D.

During phase 1, public procurement data would be collected and analysed following the approach and methodology developed in the present study, i.e.

based on administrative public procurement data. In addition, phase 1 is meant to be a transition phase towards more harmonized and reliable statistics. In order to achieve this goal, methodological work would be undertaken at European level to refine existing methodologies for the screening of administrative public procurement data for R&D / ICT / R&D of ICT procurements. In parallel, efforts would be undertaken by the national statistical offices, Eurostat and the OECD to improve national government expenditure statistics, notably GBAORD statistics, in view of using them for crosschecks and the completion (with relevant government expenditure not covered by administrative public procurement databases) of the statistics compiled based on administrative data. In addition, statistical organizations across Europe would cooperate to develop a crosschecking/completion methodology for statistics compiled based on administrative public procurement data using the (improved) national government and R&D expenditure data. The aim of this work would be to develop a commonly agreed and harmonized methodology to collect data on public procurement R&D / ICT / R&D of ICT at national level in the future (i.e. in phase 2). Based on the outcomes of the above mentioned methodological developments and discussions at national and EU level, regulatory efforts should then be undertaken at EU-level in order to introduce harmonized reporting obligations for R&D / ICT / R&D of ICT procurement. The introduction of such reporting obligations in EU legislation would ensure a timely provision of national data according to harmonized quality and methodological standards in the future (i.e. in phase 2).

In phase 2, harmonized European statistics would be compiled on a regular basis from administrative public procurement data with crosschecks and completion based on (improved) national government expenditure statistics. Harmonized quality standards and methodological guidance set in EU legislation would ensure the reliability and comparability of data across Europe.

Methodology

The study provides statistics and qualitative insights on ICT, R&D and ICT related R&D public procurement across 27 EU Member States (excluding Croatia), Norway and Switzerland based on data from administrative sources (i.e. public procurement (award) notices). The definition of public contracts given in the public procurement Directives 2004/18/EC[3] and 2004/17/EC[4], as well as the R&D

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[3] Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts (OJ L 134, 30.4.2004, p. 114)

and ICT product definitions provided in the OECD's Frascati Manual and the OECD Guide to Measuring the Information Society have been the main methodological references guiding the data gathering.

The collected data covers both above- and below-EU-thresholds public procurement contracts for 27 countries and above-EU-thresholds contracts for two countries (Austria and Luxembourg). The data has been collected from the EU's Tenders Electronic Daily (TED) platform as well as from a number of other public and private databases covering reported administrative public procurement records below the EU thresholds in the countries of interest. The collected data includes the value of the public contracts as well as the main characteristics of the contracting authorities concerned, such as the level of the administration and the area of public sector activity. It also comprises details on the type and the object of each individual contract.

Based on this information, the study provides quantitative estimates on ICT, R&D and ICT related R&D public procurement in each of the countries considered. Estimates are given in total as well as broken down by areas of public sector activity. The study also identifies the contracting authorities that contributed most to the expenditure of the individual countries. In addition to country-level information, the study offers Europe-wide overall estimates and analyses the key differences and similarities of the countries. Figures for the common reference year 2011 are provided along with estimates of the national trends in the most recent past (2008-2010, depending on data availability).

In addition to the quantitative data gathering, national public authorities have been interviewed about the collection of administrative data on ICT and R&D public procurement in the countries within the scope of this study. These interviews have provided the qualitative information necessary to specify and complement and the statistics presented in the present report. Furthermore, the feedback received from the national authorities provided the basis to design the methodology, which the study proposes to collect public procurement statistics in the future. The design of these methodological guidelines have also benefited from various exchanges with a parallel project carried out by the OECD on measuring public procurement of R&D and innovation for the European Commission DG Enterprise and Industry.

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[4] Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors (OJ L 134, 30.4.2004, p. 1.).

Interpretation of results

Although the estimates of the study rely on a very large dataset, the data provided in this report are best estimates and thus of indicative nature. This is mainly caused by the limitations of the administrative data sources, which have been used for this study. Firstly, it should be considered that procurement contract values are not always available in the original data, notably for below-EU-threshold procurements. For this reason, it was necessary to complete the dataset by assigning an estimated value to all individual contracts for which values were missing (based on statistical extrapolations of existing data). Therefore, despite the width and depth of the data considered ensures the overall reliability of the analysis, it has to be noted that the estimates provided are subject to a certain degree of variability.

Furthermore, it is important to note that the figures about reported R&D and ICT public procurement expenditure quoted in this study are an underestimation of total R&D and ICT public procurement expenditure. Public procurement legislation across Europe includes exemptions from publication obligations for certain types of public procurements relevant to the present analysis, such as public procurement in the area of defence and security, certain ICT goods/services, certain R&D goods/services, contracts of low value as well as procurements of certain international organisations.

With regard to the R&D procurement estimates, identification of R&D procurement contracts has been based on a combination of keyword searches and, subsequently, on the verification of the object of the individual contracts by reading of the individual record description. In general, this allows for a reasonably accurate selection of the relevant contracts. Nevertheless, the available descriptions provide sometimes little information, which makes it difficult to discern the R&D nature of the contract. This notably concerns procurements in areas, which are at the borderline between R&D and other related e.g. scientific and technological activities. For the same reason, it has not been possible in some cases to clarify if the selected contracts relate entirely or only partly to R&D activities.

Additionally, the final dataset builds on a number of different country datasets for the below-EU-threshold procurement contracts. These are necessarily not fully comparable in terms of completeness and quality of the information. For instance, the coverage of the national administrative databases differs to some extent, depending on the country-specific rules and thresholds for the publication of public procurements contracts on administrative platforms. Compliance with

such publication obligations may also vary across countries, thus affecting the robustness of cross-country comparisons and time trends. Wherever possible, the study's analysis has been based on contract award notices, thus on the actual price of contracts. However, the unavailability of this type of notices made it necessary to take the initial estimated value of the contracts as the main reference for the analysis in some of the countries. Notwithstanding these limitations, the TED database remains the most important source of quantitative information of the study, as it by far covers the largest share of the reported overall public procurement value in the countries within the scope of this study. This ensures that the estimates provided for the reported public procurement expenditure can be considered as comparable across the countries to a very large extent.

Acronyms

ASD	Aerospace & Defence Association of Europe
BERD	Business Expenditure in R&D
CAs	Contracting Authorities
COFOG	Classification of Functions of Government
CPC	Customs Procedure Code
CPV	Common Procurement Vocabulary
DHS	U.S. Department of Homeland Security
DoD	U.S. Department of Defence
EDA	European Defence Agency
EMITS	Electronic Mail Invitation to Tender System
ESA	European Space Agency
ESA95	European System of National and Regional Accounts
FPA	Federal Procurement Agency
FPDS	U.S. Federal Procurement Data System
FTE	Full-time Equivalent
GBAORD	Government budget appropriations or outlays for R&D
GERD	Gross domestic expenditure on R&D
ICT	Information and Communication Technologies
ISIC	International Standard Industrial Classification of All Economic Activities
IST	Information Society Technologies

NACE	Nomenclature générale des Activités économiques dans les Communautés Européennes
NASA	National Aeronautics and Space Administration
NSIs	National Statistics Institutes
OECD	Organisation for Economic Co-operation and Development
OECD Guide	OECD Guide to measuring information society 2011
OJ	Official Journal of the European Union
PCP	Pre-Commercial Procurement
PPN	Public Procurement Network
R&D	Research and Development
TED	Tenders Electronic Daily (TED)

Table of contents

1. Foreword

This is the draft final report of the study 'Quantifying public procurement of research and development of ICT solutions in Europe - SMART 2011/0036'.

The tender for this study was launched by DG CONNECT to provide, firstly, quantitative data on ICT-related R&D procured by contracting authorities across Europe and, secondly, to propose a methodology and guidelines for decision makers to set up a systematic method of collecting the same data in the future. The tender was awarded in December 2011 to a consortium of t33 (lead partner) and Deloitte Consulting, who have subcontracted the management of the external network of experts to Spark Legal Network.

The project was launched in early January 2012 and the first phase focused on setting up the study, specifically on the activities needed for the Inception report. These included interviewing officials of European institutions, an in-depth analysis of the existing literature and statistics, as well as an external workshop with the stakeholders.

After that, data collection was launched, and country analysis reports and data sets for seventeen countries were delivered with the First and Second Interim Study reports.

This draft final study report provides a description of the data collection strategy of the study, as well as full data sets and accompanying analysis reports for the 29 countries considered. It includes a draft final data analysis summarizing the disparities, commonalities, trends and key findings from the R&D ICT procurement expenditure in Europe. There is also a draft final version of the guidelines and methodology, which sets up a systematic way of collecting this type of data in the future.

Chapter 2 provides a description of the methodology used to identify R&D and ICT procurement and to estimate the value of public contracts where this is missing in the original dataset. Estimates of the amount of ICT, R&D, and ICT-related R&D procurement for each of the relevant countries are given in Chapter 3. This chapter also describes the collection of data on public contracts by national public authorities, and provides qualitative information to complement the estimates presented in the report.

The analysis of disparities, commonalities, trends and lessons learnt from the R&D ICT procurement expenditure in Europe is given in Chapter 4, while Chapter 5 describes the proposed method to collect public procurement statistics in the future. Lastly, the Annexes provide further details on the data collection methodology, as well as the full country data sets.

The report was prepared by t33, Deloitte Consulting and Spark Legal Network.

2. Methodology

Public procurement data has been collected from various sources for this study. Paragraph 2.1 discusses the characteristics and limitations of the collected data.

Based on the approach adopted to quantify public procurement, the study team needed to identify all relevant public procurement notices and link each of them to a contract value.

Paragraphs 2.2 and 2.3 describe how the OECD ICT and R&D definitions adopted in the study are used to identify public procurement notices that are consistent with such classification standards. After that, paragraph 2.3 describes how contract values of individual public procurement are estimated whenever they are not available in TED or in the national databases.

2.1 DATA SOURCES AND COVERAGE

Public procurement data has been collected from various sources for this study. This section discusses the characteristics and limitations of the collected data.

Data sources and approach

The study provides statistics and qualitative insights on ICT, R&D and ICT related R&D public procurement across 27 EU Member States (excluding Croatia), Norway and Switzerland based on data from administrative sources (i.e. public procurement (award) notices). The definition of public contracts given in the public procurement Directives 2004/18/EC[5] and 2004/17/EC[6], as well as the R&D and ICT product definitions provided in the OECD's Frascati Manual and the OECD Guide to Measuring the Information Society have been the main methodological references guiding the data gathering.

The collected data covers both above- and below-EU-threshold public procurement contracts for 26 countries and above-EU-threshold contracts for three countries. The data has been collected from the EU's Tenders Electronic Daily (TED) platform as well as from a number of other public and private databases covering administrative public procurement records below the EU thresholds in the countries of interest. The collected data includes the value of the public contracts as well as the main characteristics of the contracting

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[5] Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts (OJ L 134, 30.4.2004, p. 114)
[6] Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors (OJ L 134, 30.4.2004, p. 1.).

authorities concerned, such as the level of the administration and the area of public sector activity. It also comprises details on the type and the object of each individual contract.

Based on this information, the study provides quantitative estimates on ICT, R&D and ICT related R&D public procurement in each of the countries considered. Estimates are given in total as well as broken down by areas of public sector activity. The study also identifies the contracting authorities that contributed most to the expenditure of the individual countries. In addition to country-level information, the study offers Europe-wide overall estimates and analyses the key differences and similarities of the countries. Figures for the common reference year 2011 are provided along with estimates of the national trends in the most recent past (2008-2010, depending on data availability).

In addition to the quantitative data gathering, national public authorities responsible for public procurement statistics have been interviewed about the collection of administrative data on ICT and R&D public procurement in the countries within the scope of this study. These interviews have provided the qualitative information necessary to specify and complement and the statistics presented in the present report. Furthermore, the feedback received from the national authorities provided the basis to design the methodology, which the study proposes to collect public procurement statistics in the future. The design of these methodological guidelines have also benefited from various exchanges with a parallel project carried out by the OECD on measuring public procurement of R&D and innovation for the European Commission DG Enterprise and Industry.

Limitations of the available data

Although the estimates of the study rely on a very large dataset, the statistics provided in this report are best estimates and thus of indicative nature. This is mainly caused by the limitations of the administrative data sources, which have been used for this study. Firstly, it should be considered that procurement contract values are not always available in the original data, notably for below-EU-threshold procurements. For this reason, it was necessary to complete the dataset by assigning an estimated value to all individual contracts for which values were missing (based on statistical extrapolations of existing data). Therefore, despite the width and depth of the data considered ensures the overall reliability of the analysis, it has to be noted that the estimates provided are subject to a certain degree of variability.

With regard to the R&D procurement estimates, it should be noted that the identification of R&D procurement contracts has been based on a combination of keyword searches and, subsequently, on the verification of the object of the individual contracts by reading of the individual record description. In general, this allows for a reasonably accurate selection of the relevant contracts. Nevertheless, the available descriptions provide sometimes little information, which makes it difficult to discern the R&D nature of the contract. This notably

concerns procurements in areas, which are at the borderline between R&D and other related e.g. scientific and technological activities. For the same reason, it has not been possible in some cases to clarify if the selected contracts relate entirely or only partly to R&D activities.

Additionally, the final dataset builds on a number of different country datasets for reported below-EU-threshold procurement contracts. These are necessarily not fully comparable in terms of completeness and quality of the information. For instance, coverage of the national administrative databases differs to some extent, depending on the country-specific rules and national thresholds for the publication of public procurements contracts on administrative platforms. Compliance with such publication obligations may also vary across countries, thus affecting the robustness of cross-country comparisons and time trends. Wherever possible, the study's analysis has been based on contract award notices, thus on the actual price of contracts. However, the unavailability of this type of notices made it necessary to take the initial estimated value of the contracts as the main reference for the analysis in some of the countries. Notwithstanding these limitations, the TED database remains the most important source of quantitative information of the study, as it by far covers the largest share of the overall public procurement value in the countries within the scope of this study. This ensures that estimates provided for the reported public procurement expenditure can be considered as comparable across countries to a very large extent.

Lastly, it has to be clarified that key contracting authorities were selected by aggregating all contracts by organisation, then picking the authorities with the highest total contract value in each country. As the same authority may have appeared in the dataset under several names (due to different formats and abbreviations, misspelling, etc.), it was necessary to check manually the records and harmonise the names whenever they seemed to refer to the same authority. Harmonisation focused on dataset entries with higher contract value.

Data coverage: Legislative exemptions from publication obligations

The EU and EEA Member States covered by this study have transposed EU procurement legislation, i.e. Directive 2004/18/EC and Directive 2004/17/EC, into the national public procurement legislation. These legislative instruments, contain exclusions for certain types of procurement, exempting contracting authorities inter alia from their publication obligations for these procurements. The specific exemptions that are relevant for this study are listed below:

- Contracts with a value below each country's individual national publication tresholds for public procurement

- Certain contracts relating to defence, security and armaments (dealt with in separate legislation, Directive 2009/81/EC);

- Contracts for the principal purpose of permitting the contracting authorities to provide or exploit public telecommunications networks or provide to the public telecommunications services (Article 13, Section 3, Directive 2004/18/EC)

- Secret contracts, contracts requiring special security measures (Article 14, Section 3, Directive 2004/18/EC)

- Contracts awarded pursuant to international rules (Article 15, Section 3, Directive 2004/18/EC)

- R&D services other than those where the benefits accrue exclusively to the contracting authority for its use in the conduct of its own affairs, on condition that the service provided is wholly remunerated by the contracting authority (Article 16 (f), Section 3, Directive 2004/18/EC)

- Service concessions or service contracts of an exclusive right under EU-compatible law (Article 17, Section 3, Directive 2004/18/EC)

Most national public procurement databases therefore do not contain information on these contracts. The most commonly excluded contracts are defence contracts and those pertaining to security.

Certain Member States have excluded further contracts, such as in social services, hotel and catering services, entertainment, cultural and sport services, certain public works, procurement consultancy, disaster/accident/emergency management and prevention, prisoner employment, public employment, financial agreements (Hungary) and e-communications (Estonia).

Switzerland, which is neither member of the EU nor of the EEA, is not subject to the EU public procurement legislation. The Government Procurement Agreement of the World Trade Organisation (WTO) represents the cornerstone of the Swiss public procurement legislation. Similarly to the EU public procurement directives, it includes exemptions of certain R&D and ICT procurement contracts.

Data coverage: Exemptions for International Organisations

In general, international organisations based in Europe are <u>not</u> subject to the application of the national public procurement legislation of their host countries.[7] For instance, international organisations based in Switzerland – a country, which is not subject to the EU's public procurement legislation – do not have to comply with Swiss public procurement legislation. International organisations based in Switzerland – such as CERN or the United Nations – apply their own public

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[7] For a detailed legal discussion of this issue, please refer to:
Heuninckx, B. (2009): "*Applicable Law to the Procurement of International Organisations in Europe*", Public Procurement Research Group, University of Nottingham,
http://www.nottingham.ac.uk/pprg/documentsarchive/phdconference2009/baudouin%20heuninckx.pdf

procurement rules, which typically foresee publication obligations on their own platforms.[8] As a result, public procurement of international organisations in Europe is <u>not</u> covered by national public procurement databases, which have been used as data sources for this study.

Similarly, the EU's public procurement legislation is <u>not</u> applicable to international organisations outside the EU-framework based in the European Union, such as EUROCONTROL or NATO. Indeed, Article 15 lit c of Directive 2004/18/EC explicitly excludes "*public contracts governed by different procedural rules and awarded […] pursuant to the particular procedure of an international organisation*" from its application. Such international organisations apply their own public procurement rules, which typically foresee publication obligations on their own platforms.[9] As a result, public procurement of international organisations outside the EU framework based in the European Union is <u>not</u> covered by the OJ EU TED public procurement database, which has been used as main data source for this study.

However, international organisations in the EU-framework[10], such as the European Commission or decentralised EU agencies, are subject to specific public procurement rules, which are compatible with the EU Public Procurement Directives and include publication obligations on the OJ EU TED.[11] Nonetheless, public procurement (above thresholds) by these entities is not included in the estimates provided by the study to allow unbiased comparison of spend in the relevant countries.

All the above exemptions and data gathering limitations inherent to working with administrative public procurement data lead to the result that the amounts of R&D and ICT procurements identified in the framework of this study are an understatement of the actual total amounts of R&D and ICT procurements that are taking place across Europe[12].

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[8] For example, CERN applies its own public procurement rules (http://council.web.cern.ch/council/fr/FC/CERN-e-FinancialRules.pdf) and publishes notices on its own platform (https://found.cern.ch/java-ext/found/CFTSearch.do).

[9] For example, EUROCONTROL applies its own public procurement rules (http://www.eurocontrol.int/sites/default/files/publication/files/20100112-contract-regulations-eurocontrol-en.pdf) and publishes notices on its own platform (https://www.eurocontrol.int/procurement).

[10] For an overview of EU institutions and bodies, see http://europa.eu/about-eu/institutions-bodies/index_en.htm

[11] For instance, public procurement of the European Commission and other Union bodies is ruled by the EU Financial Regulation (*Regulation (EU, Euratom) No 966/2012 of the European Parliament and the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002*, OJ L 298, 26.10.2012) and its Rules of Application (*Commission Delegated Regulation (EU) No 1268/2012 of 29 October 2012 on the rules of application of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union*, OJ L 362, 31.12.2012).

[12] This may explain the difference between Kable's estimates for the UK (€20Bn of ICT public procurement expenditure in 2011) and the estimates of this study (€15Bn). However, overall procurement expenditure found by the study for France, Germany, Italy, Spain, and the U.K. is higher than estimated by IDC for that year (€36 and 28 billion respectively).

2.2 IDENTIFICATION OF ICT

This study analyses IT, telecommunications and multimedia/Internet-related products/services. Additionally, it covers both the purchase of standalone ICT equipment and ICT equipment embedded in other products or services.

Based on these requirements, three different categories of relevant products/services were identified: (a) ICT; (b) content and media; (c) ICT plus (ICT+). The first two classes fall within the framework adopted by the OECD to conceptualize the information society. Instead, the third group comprises a number of goods and services with ICT equipment embedded which, although not included in the OECD classification, are of interest from a policy perspective.

The definitions and the approach used to define the categories are described in detail in the following sub-sections 2.2.a – 2.2.c.

2.2.a ICT goods and services

The **ICT product** definition provided by the OECD Guide to measuring information society 2011[13] (the OECD Guide) is used in this study. This is preferred to limiting the research to the ICT sectors[14] as, although the identification of the industries whose principal production is ICT goods or services is considered an essential component of an information society statistical framework, this would involve a risk of not covering all ICT products and services. In fact, both the OECD Guide and the Frascati Manual (p. 187-189) agree on the fact that ICT production takes place in many industries, <u>either as a principal or secondary output</u>.

The OECD Guide uses the following guiding principle to identify ICT products: 'ICT products must **primarily** be intended to fulfill or enable **information processing** and **communication** by electronic means, including transmission and display.' On that basis, and using the CPC version 2 scheme as a reference, 99 ICT products, including both goods and services, are identified and divided into 10 broad categories (see also Annex 1, table 1.2):

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[13] See http:http://browse.oecdbookshop.org/oecd/pdfs/free/9311021e.pdf
[14] OECD ICT sector definition identifies those industries whose <u>main activity</u> is producing or distributing ICT products or services. The most recent version available is the 2006/2007 revision, which uses ISIC ver. 4 codes (see Annex 1, table 1.1).

Table 2.2.a. 1- OECD Guide ICT products definition: number of products per category

Broad level categories	Number of products (CPC subclasses)
Computers and peripheral equipment	19
Communication equipment	8
Consumer electronic equipment	11
Miscellaneous ICT components and goods	14
Manufacturing services for ICT equipment	5
Business and productivity software and licensing services	11
Information technology consultancy and services	10
Telecommunications services	12
Leasing or rental services for ICT equipment	3
Other ICT services	6

When determining the list, products of the information economy sector were included, while products that are not an output of the sector were excluded, unless there was a compelling case for their exclusion or inclusion respectively.

The OECD product definition has to be adapted to be used during data gathering. In particular, CPC codes have to be transformed into CPV identifiers, which are the ones most commonly used in procurement databases.

Based on the CPC Rev. 2 list of ICT products of the OECD Guide, the consultant has identified a list of CPV codes substantiating the definition of ICT in the framework of the present study. Overall, 1 062 out of a total of 9 454 CPV codes were classified as corresponding to ICT goods and services (see the following table and Annex 1, table 1.3 for further details).

Higher levels of the CPV taxonomy, i.e. categories, groups and divisions were considered ICT only if each of the goods and/or services of the corresponding lower level(s) were also classified as ICT.

Table 2.2.a. 2- ICT definition: number of codes included per CPV division

CODE	TITLE	NO
30	Office and computing machinery, equipment and supplies excluding furniture and software packages	171
31	Electrical machinery, apparatus, equipment and consumables; lighting	80
32	Radio, television, communication, telecommunication and related equipment	186
35	Security, fire-fighting, police and defence equipment	28
38	Laboratory, optical and precision equipment (excluding glasses)	11
42	Industrial machinery	2
45	Construction work	9
48	Software package and information systems	190
50	Repair and maintenance services	61
51	Installation services (excluding software)	19
64	Postal and telecommunications services	41
71	Architectural, construction, engineering and inspection services	1
72	IT services: consulting, software development, Internet and support	247
79	Business services: law, marketing, consulting, recruitment, printing and security	11
80	Education and training services	3
90	Sewage, refuse, cleaning and environmental services	2
Total		**1 062**

2.2.b Content and media

Similarly to the approach taken with ICT, this study refers to the content and media product classification provided by the OECD Guide, which uses the

following guiding principle to identify the relevant products: 'Content corresponds to an organized message intended for human beings published in mass communication media and related media activities. The value of such a product to the consumer does not lie in its tangible qualities but in its information, educational, cultural or entertainment content.'

Analogous to the case of ICT, content and media products are mainly produced by businesses that are classified in industries that comprise the content and media sector. However, some content and media products are produced by businesses outside the sector and by other sectors of the economy as secondary activities. On that basis, and using the CPC version 2 scheme as a reference, the OECD identifies 74 content and media products, including both goods and services, divided into six broad level categories (see also Annex 1, table 1.4).

Table 2.2.b. 1- OECD Guide content and media products definition: number of products per category

Broad level categories	Number of products (CPC subclasses)
Printed and other text-based content in physical media, and related services	18
Motion picture, video, television and radio content, and related services	24
Music content and related services	5
Games software	3
On-line content and related services	12
Other content and related services	12
Total	74

As part of this study CPC codes were transformed into CPV identifiers so they could be used during data gathering and analysis. The list of CPV codes substantiating the definition of content and media products in the framework of the present study includes 126 CPV codes (see the following table and Annex 1, table 1.5 for further details).

Table 2.2.b. 2- Content and media definition: number of codes included per CPV division

CODE	TITLE	NO
22	Printed matter and related products	42
30	Office and computing machinery, equipment and supplies excluding furniture and software packages	4
32	Radio, television, communication, telecommunication and related equipment	13
37	Musical instruments, sport goods, games, toys, handicrafts, art materials and accessories	1
48	Software packages and information systems	4
72	IT services: consulting, software development, Internet and support	5
79	Business services: law, marketing, consulting, recruitment, printing and security	17
80	Education and training services	1
92	Recreational, cultural and sporting services	39
Total		126

2.2.c ICT plus

The ICT plus category comprises a number of ICT-related goods and services which, although not included in the OECD classification of ICT, are of interest from a policy perspective. The majority of these are products that use electronic processing to:(i) detect, measure and/or record physical phenomena; or (ii) control physical processes[15].

The following table includes a non-exhaustive list of examples of these products and services.

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[15]Products that use electronic processing to detect, measure and/or record physical phenomena or to control physical processesare not classified as ICT products by the OCED, based on the argument that it is increasingly difficult to distinguish if the usage of such processing is significant or incidental, given that ICTs are embedded into a growing number of products produced by a variety of industries.

Table 2.2.c. 1 - Examples of products and services included in the ICT plus category

Division	CPV division name	Example of products or services
31	Electrical machinery, apparatus, equipment and consumables	Adapters, battery chargers, electronic detection apparatus
32	Radio, television, communication, telecommunication and related equipment	Optical fibre cables[16]
33	Medical equipment, pharmaceuticals and personal care products	Imaging equipment for medical, dental and veterinary use;
34	Transport equipment and auxiliary products to transportation	Traffic-control equipment, baggage-handling system, simulators (flight, driving, training);
38	Laboratory, optical and precision equipment (excl. glasses)	Meteorological instruments; surveying, hydrographical, oceanographic and hydrological instruments and appliances; baggage-scanning equipment, x-ray inspection equipment
42	Industrial machinery	Vehicle location system, warehouse management system, digital remote-control unit, industrial robots
45	Construction work	Works for telephone and communication lines, installation of cable infrastructure
51	Installation services (except software)	Installation services of meteorological equipment / navigating equipment, installation services of automatic airport check-in devices
63	Supporting and auxiliary transport services; travel agencies services	Train / traffic monitoring services, airport slot coordination services, air-traffic control services

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[16]Fibre optic cables are not included on the OCED list of ICT products as it is considered that, although cables do transport information in electronic format, they are passive components that do not fulfil any electronic processing of information. This functionality is instead made possible by network equipment.

Division	CPV division name	Example of products or services
65	Public utilities	Meter reading service
71	Architectural, construction, engineering and inspection services	Weather-forecasting services, oceanography and hydrology services, (sub)surface surveying services
79	Business services: law, marketing, consulting, recruitment, printing and security	Alarm-monitoring services, identification badge release services; toll-collection services, stock-control services
85	Health and social work services	Medical imaging services
90	Sewage, refuse, cleaning and environmental services	Air / soil /noise pollution monitoring services, ozone depletion monitoring services, oil spillage monitoring services

Complete list of CPV codes included in the category is presented in Annex 1, table 1.6.
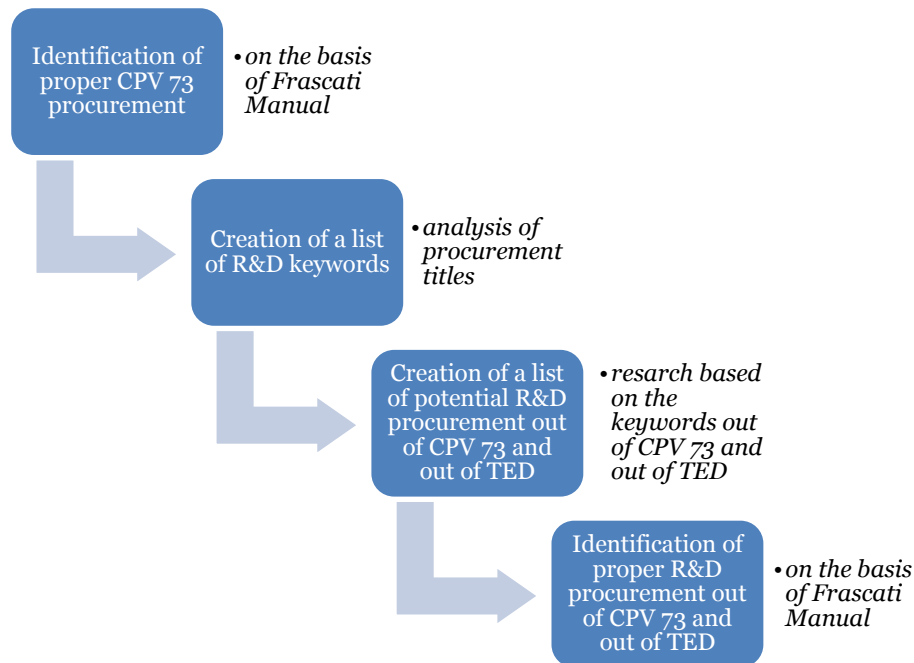
For six of the countries considered[17], most procurement contract notices below the EU thresholds were missing CPV codes. In these cases, keyword search has been used to identify ICT contracts. Complete list of keywords used is presented in Annex 1, table 1.7.

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[17] I.e. France, Germany, Greece, Ireland, Italy and Malta.

2.3 IDENTIFICATION OF R&D PROCUREMENT

The identification of R&D procurement is carried out in four phases, which are detailed in the following paragraphs (see also the figure below). The complete list of keywords used to isolate R&D procurement contracts is provided in Annex 2.

Figure 1– Methodology for the identification of R&D procurement

Identification of proper CPV 73 procurement
• *on the basis of Frascati Manual*

Creation of a list of R&D keywords
• *analysis of procurement titles*

Creation of a list of potential R&D procurement out of CPV 73 and out of TED
• *resarch based on the keywords out of CPV 73 and out of TED*

Identification of proper R&D procurement out of CPV 73 and out of TED
• *on the basis of Frascati Manual*

Identification of proper CPV 73 procurement

All CPV 73 procurement (original titles, descriptions, and characteristics of the authorities) of France, Germany, Italy and the UK are analysed on the basis of the definitions provided by the Frascati Manual. This makes it possible to identify procurement contracts complying with the R&D definition of the Frascati Manual (proper R&D procurement) and discard the ones that are not R&D procurement. The proper R&D procurement category includes contracts meeting the criteria that, according to the Frascati Manual, are used to identify R&D in services (2.4.3, par.149):

- links with public research laboratories;
- involvement of staff with PhDs or PhD students;
- publication of research findings in scientific journals;
- construction of prototypes or pilot plants.

The non-R&D public procurement category includes procurement that is clearly not R&D according to the OECD definition (see Manual 2.2.1 and 2.2.2):

- education and training activities;
- scientific and technical information services not carried out solely or primarily for research objectives;

- general purpose data collection;
- feasibility studies that are not part of research projects;
- specialised health care;
- policy studies;
- routine software development[18].

Creation of a list of R&D keywords

Titles of procurement contracts that are compliant with the Frascati Manual definition are then analysed individually to isolate keywords that identify their R&D content. This is carried out with text analysis software[19] which automates the selection of terms. Again, keywords are selected using the Frascati Manual guidelines as a reference: all terms with a semantic proximity to non-R&D activities or provisions are, whenever possible, excluded.

Table 2.3.1– Example of R&D keyword selection

Country	Title	Keywords
UK	*Supply of DNA sequencing*	DNA + sequencing
UK	*Health Technology Assessment R&D Services*	R&D + services; Health + technology
DE	*Forschungsauftrag*	Forschungsauftrag

The above tables illustrate some examples of selection of keywords from the procurement identified as R&D procurement. In the case of the procurement '*Supply of DNA sequencing'* the word 'supply' is excluded because using these combinations of words for the search will turn up a large number of non-R&D procurement. In a similar way, the word 'assessment' is excluded from the procurement '*Health Technology Assessment R&D Services'* because using these combinations of words for the search will turn up a large number of policy studies.

The result of this analysis is the creation of a list of keywords identifying R&D procurement. The list includes English, French, German and Italian terms. All

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[18]In line with Frascati Manual recommendations, software development contracts are considered R&D only if:
- the software developmentproject depends on scientific and/or technological advancements and its aim is the systematic resolution of a scientific and/or technological uncertainty (see Frascati Manual, paragraph 135);
- the software is part of an overall R&D project or the R&D is associated with software as an end product (see Frascati Manual, paragraph 136);
- the software development components leads to an advance in the area of computer software (see Frascati Manual, paragraph 137).

[19]Corpus Presenter Version 12.

keywords are then translated into English and duplicates eliminated. The final list of keywords allows all the procurement initially identified as R&D procurement to be captured.

Creation of a list of potential R&D procurement out of CPV 73 and out of TED

The list is then used to select potential R&D procurement from the public and private databases with procurement under the threshold as well as from TED, including procurement that is not encoded with CPV 73.

In order to maximize the ability to search in all relevant languages, each keyword is translated with one or more synonyms and the search on the titles is made by omitting gender and number suffixes.

Identification of proper R&D procurement out of CPV 73 and out of TED

In the last phase the list of procurement selected by using the keywords is analysed (title, title description and authority name) based on the Frascati Manual definitions and non-R&D procurement are discarded.

2.4 ESTIMATION OF PROCUREMENT CONTRACT VALUES

The estimates presented in this study are based upon observed contract values published in the TED and the national databases. As these are not available for a number of notices, multiple imputation is used to assign a probable value to all contracts individually for which values are missing. A general description of the multiple imputation method is given in the following box.

Multiple imputation creates several complete versions of the relevant dataset, replacing the missing data with a set of plausible values. The m imputed datasets are identical for the observed data entries, but differ in the imputed values. The magnitude of these differences reflects the uncertainty about what value to impute for the 'true' unknown value. The approach allows to deal with the inherent uncertainty of the imputed values.

The plausible values are drawn from a distribution specifically modelled with appropriate information to address the choice towards likely values and preserve the relations among variables in the imputed data.

In the specific case of this study, the method adopted to assign plausible values to the missing data of the target variable ('contract value') has been the Predictive Mean Matching (PMM). This imputation method is flexible as it can handle both quantitative and qualitative variables, as well as robust to model misspecification, variable e.g. log transformation, and distribution skewness. For each missing entry, the method selects a candidate from all complete cases that

have predicted values close to the predicted value for the missing entry. Then, the observed value of the donor is used to replace the empty place.

The filled-in values should not be considered as micro-data for the observation but rather as values that are statistically plausible given other information about that observation available in the dataset.

Source: t33

The model estimates the missing contract values (so called 'target variable') based on a set of qualitative and quantitative variables, also depending on the information available in each country dataset. More in detail, the estimation procedure includes the following steps (see also the chart on the next page):

▸ creation of ICT and R&D country-year batches of data including the relevant information of the individual notices;
▸ data cleaning and restructuring, including:
  o check for duplication of records;
  o transformation of data formats, where necessary;
  o currency conversion, where necessary;
  o detection of outliers (usually contract values below EUR 100 or above EUR 1 billion) and correction in case of errors, e.g. due to wrong transcription of decimals[20];
  o check for missing/wrong data marks, e.g. zero values, blanks, etc.;
▸ calculation of the percentage of missing data in both the target variable and the predictors;
▸ log transformation of the contract value[21];
▸ application of the iterative imputation procedure[22];
▸ diagnostics of the imputations reliability through suitable graph plotting and statistical testing[23];
▸ extraction of the imputed data sets and reversion of values to the original scale.

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[20] Outliers are excluded from the subsequent steps of the procedure and, if correct, added again to the relevant dataset after completion of the estimation process.

21 The distribution of the contract values appears to be highly skewed. Therefore, logarithm transformation has been applied to meet the statistical assumptions of the method and allow for easy interpretation of the data.

[22] The algorithm MICE (Van Buuren, 2012) is used for the purpose, with PMM as the method to assign plausible contract values where these are missing. The number of imputations has been set to m=10, in line with the literature which suggests 3<m<20.

[23] The plausibility of the imputations is checked by verifying the discrepancy between the observed and the imputed data. The underlying idea is that 'good' imputations should have a distribution similar to the observed data. In other words, the imputations could have been real had they been observed. The graph plotting adopted includes convergence of the algorithm, comparison of the (cumulative) density of the observed data and the individual imputations (figure xxx), strip plot comparison of each of the ten imputations and the observed data. The specific testing procedures adopted include the Kolmogorov-Smirnov test for two groups (George Marsaglia, Wai Wan Tsang and Jingbo Wang 2003), the Anderson-Darling test for two groups (Scholz, F. W. and Stephens, M. A. 1987), the Wilcox Robust Statistics test for quantiles distributions of two groups (Wilcox, R. R. 2005).

Figure 2 - Multiple imputation process

Refining data
(error check, outliers, missing data marks)

Procurement values log transformation

Model and Iterations setting

MICE imputation

Algorithm convergence? — N

Y

Graphic assessment: density plot, strip plot, cumulative density function

Satisfactory outcome? — N

Y

Testing: Kolmogorov − Smirnov, Anderson − Darling, Wilcox Robust Statistic

Satisfactory outcome? — N

Y

Exponential transformation

Source: t33

Almost each country dataset includes some missing contract values. While in general individual country-year batches of data have been used to impute the missing information, all data related to the specific country has been used jointly in case of either severe missingness or small number of observations (n<60). Additionally, contract values are almost completely missing for a few countries. In these cases, the whole dataset including information on all countries has been used as the reference data for the estimation procedure[24]. On the contrary, for those batches of data with nearly complete contract values i.e. less than 5% of missing values, the median of the observed values distribution of each country-year has been used[25].

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[24] Generally, a larger share of missing data increases the variability of the estimates. For this reason, the total estimated contract value for these countries should be interpreted with care.

25 This reference framework has not been adopted in the case of Malta and Luxemburg. The relevant data sets of the two countries have an extremely small number of observations and have been imputed by using the median 2 all the observed values.

3. The full country Analysis Reports

3.1 AUSTRIA

This chapter presents estimates of the amount of ICT-related (3.1.a), R&D (3.1.b), and ICT-related R&D procurement (3.1.c) in Austria. The figures do not include the value of defence contracts and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.1.d, while the availability of qualitative information that can complement the estimates presented in the report – including the value of defence contracts, when available -is discussed in paragraph 3.1.e.

Full country data set is provided in Excel format (see Annex 3).

3.1.a   Public procurement of ICT

The total value of ICT public procurement contracts in Austria in 2011 was about **EUR 379.6 million**[26], an increase of **28%** compared to 2008.

The following table[27]shows the breakdown of the overall ICT contract value across different areas of public sector activity for 2008 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[26] Of which 99.88% of the amount is above EU-threshold while 0.12% is unknown.

[27] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions are sometimes classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.1.a. 1- *Austria ICT – Contract values by public sector activity*

Public Sector Area	2011	2008	Δ
Economic and financial affairs	1%	25%	-24,6%
Education	1%	1%	0,5%
Electricity	5%	3%	1,6%
Environment	0%	1%	-1,3%
Gas, oil and heat	1%	0%	0,8%
General public services	52%	23%	29,4%
Health	17%	13%	4,1%
Other	3%	4%	-1,0%
Postal services	1%	1%	0,5%
Public order and safety	1%	0%	0,4%
Transport	16%	24%	-8,2%
Unknown	2%	5%	-2,3%
Total	100%	100%	

The contracting authorities that contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 72% of the total and centred on IT services (67% of the total for the key authorities), medical equipment, pharmaceuticals and personal care products (10% of the total for the key authorities) and office and computing machinery (9%).

Table 3.1.a. 2 - *Austria ICT 2011 – Key contracting authorities*

Contracting authority/entity	Public sector area
AMS Österreich vertreten durch die Heid Schiefer Rechtsanwälte OG als vergebende Stelle (AMS Austria represented by the Heid Schiefer Rechtsanwälte OG as awarding authority)	General public services
Salzburger Landeskliniken Betriebsgesellschaft mbH (Salzburg State Clinics mbH)	Public order and safety

Contracting authority/entity	Public sector area
NÖ Landeskliniken Holding (NE Regional Hospital Holding)	Unknown
ÖBB-Infrastruktur AG (ÖBB Infrastructure AG)	General public services
ÖBB-IKT GmbH (ÖBB-IKT GmbH)	General public services
Wiener Linien GmbH & Co KG (Wiener Linien GmbH & Co KG)	Other
Stadt Wien (City of Vienna)	General public services
Austro Control GmbH (Austro Control GmbH)	Public order and safety
TIWAG-Tiroler Wasserkraft AG (TIWAG Tyrolean Hydropower AG)	General public services
Bundesrechenzentrum GmbH (Federal Computing Centre)	Unknown

3.1.b   Public procurement of R&D

The total value of R&D public procurement contracts in Austria was about **EUR 92.7 million**[28] in 2011, as compared to 2008 – **EUR 6.6 million.** A breakdown of R&D contract value across different areas of public sector activity for 2008 and 2011 is given in Table 3.1.b.1.

Table 3.1.b.1- Austria R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	0%	0%	0,0%
Education	15%	90%	-75,2%

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[28] Of which 100% is above EU threshold.

General public services	1%	0%	0,7%
Health	73%	0%	73,4%
Other	0%	10%	-10,2%
Unknown	11%	0%	11,3%
Total	100%	100%	

The contracting authorities that contributed most to expenditure in 2011 are listed in the table below. Expenditure of these authorities cover the 100% of the total spend and centered on construction works (EUR 23.9 million, especially related to the construction of the MedAustron ion therapy center), laboratory furniture and equipment, e.g. specialised equipment for research laboratory purchased by the Leopold-Franzens-Universität Innsbruck and the Innsbruck Medical University and electrical machinery and apparatus. Inclusion on the list of key authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.1.b.2 – Austria R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
EBG MedAustron GmbH	Health
Österreichische Forschungsförderungsgesellschaft mbH (Austrian Research Promotion Agency)	Unknown
Leopold-Franzens-Universität Innsbruck (Leopold-Franzens-University of Innsbruck)	Education
Universität Wien (University of Vienna)	Education
Medizinische Universität Innsbruck (Medical University of Innsbruck)	Education
Veterinärmedizinische Universität Wien (University of Veterinary Medicine Vienna)	General public services
Montanuniversität Leoben (University of Leoben)	Education

Technische Universität Wien (Vienna University of Technology)	Education
Karl-Franzens-Universität Graz - Wirtschaftsabteilung (Karl-Franzens-Universität Graz - Economic Department)	General public services
Universität für Bodenkultur Wien (University of Agricultural Sciences Vienna)	Education

3.1.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Austria was about **EUR 50.3 million**[29] in 2011, compared to **EUR 4.1 million** in 2008. Table 3.1.c.1 provides a breakdown of ICT-related R&D contract value across different areas of public sector activity for 2008 and 2011.

Table 3.1.c.1- Austria R&D ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	10%	100%	-89,7%
General public services	1%	0%	1,4%
Health	88%	0%	87,7%
Unknown	1%	0%	0,7%
Total	100%	100%	

The key contracting authorities, which contributed most to expenditure in 2011, are listed in Table 3.1.c.2. Expenditure of these authorities cover the 100% of the total spend and provide electrical machinery, apparatus, equipment and consumables, e.g. MedAustron GmbH, security, fire-fighting, police and defence equipment and laboratory, optical and precision equipment, e.g. University of Vienna. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

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[29] 100% of the amount is above EU threshold.

Table 3.1.c.2- Austria ICT–related R&D: Key contracting authorities

Contracting authority or entity	Public sector area
EBG MedAustron GmbH	Health
Universität Wien (University of Vienna)	Education
Leopold-Franzens-Universität Innsbruck (Leopold-Franzens-University of Innsbruck)	Education
Montanuniversität Leoben (University of Leoben)	Education
Veterinärmedizinische Universität Wien (University of Veterinary Medicine Vienna)	Education
Medizinische Universität Innsbruck (Medical University of Innsbruck)	General public services
Technische Universität Wien (Vienna University of Technology)	Education
Karl-Franzens-Universität Graz - Wirtschaftsabteilung (Karl-Franzens-Universität Graz - Economics Department)	Education
Universität für Bodenkultur Wien (University of Agricultural Sciences Vienna)	General public services

3.1.d Collection of procurement data by public authorities

Legal context

Public procurement in Austria is regulated by a number of laws and decrees, which transpose the relevant European legislation[30]:

- **Standard procurement regime:**

o Federal Procurement Act 2006– Bundesgesetz über die Vergabe von Aufträgen, BGBl. I Nr. 17/2006 idF BGBl. I Nr. 15/2010 ('the Procurement Act')[31];

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30 For more details on the legal framework in Austria see:
http://www.bka.gv.at/site/5100/default.aspx

o   Law   to   establish   the   National   Public   Procurement   Agency
(Bundesbeschaffung GmbH-Gesetz 2001 - Bundesgesetz über die Errichtung der
BBG).

- **Procurement in the water, energy, transportation and postal sectors:**

o   The Procurement Act.

- **Defence and security procurement:**

o   The Procurement Act. The Federal Public Procurement Defence and
Security Act -Bundesvergabegesetz Verteidigung und Sicherheit 2012.[32]

The **national threshold for the direct award of public procurement** in
Austria is those contracts not exceeding EUR 100 000. This is raised for contracts
below EUR 130 000, in the case of supply and services, and those below EUR 500
000 for works contracts. There are also several sub-thresholds at which level
certain restricted procedures are available.[33]

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[31] This act implements Directive s (EU) 2004/17/EC and 2004/18/EC. It provides the legal
framework for the award of public works, supply and service contracts, and works and service
concessions and contests and contains regulations coordinating the public procurement procedures
of entities operating in the water, energy, transport and postal services sector. Under both
regimes, the law covers public tenders above and below-threshold of EU Regulation 2083/2005 and
contains procedural provisions relating to the review of the award of public contracts. The Public
Procurement Act applies to public tenders awarded by the nine Austrian provinces and the
communities and public bodies governed by them. It aims to ensure an efficient and harmonized
procedure, although procurement will remain decentralized. The Act also regulates the use of
electronic media, e.g. e-procurement and electronic auctions, and enhances the system of legal
protection. The last amendment to this act entered into force 1st April 2012.
[32]http://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=200
07693. This act entered into force on 1.4.2012 and created a completely new legal basis for
contracts for defence and security. It applies to military procurement by traditional contracting
public authorities as well as security-related procurement by traditional contracting public
authorities and sectoral contracting authorities.
33The 2012 amendments to the Procurement Act introduced the new procedure of ''direct award
with prior publication of the contract notice'' which applies to supply and service contracts not
exceeding the threshold of EUR 130,000 and for works contracts below EUR 500,000. In the
domain of defence and security contracts below 75,000 EUR, contracts can be directly awarded
with publication of a contract notice and without tender proceedings involving more than one
tenderer.See   the   Public   Procurement   Act,   lastly   amended   on   1.4.2012.
http://www.schoenherr.eu/news-publications/legal-insights/austria-recent-public-procurement-
law-introduces-a-new-award-procedure-while-a-last-minute-regulation-dispels-confusion-on-
threshold-values   and
http://www.dbj.at/sites/default/files/bm_new_public_procurement_regime_introduced_-_ilo.pdf.
The contracting authority may conduct the award procedure at its discretion, decide whether to
enter into negotiations , to solicit offers or to award the contract directly. However, the contracting
authority must publish a contract notice providing certain minimum information enabling economic
operators to participate in the direct award and determine objective, non-discriminatory selection
criteria pertaining to the proposed award.

Public procurement data collection process

In Austria, the FPA (Bundesbeschaffung GmbH)[34], the main central purchasing body, provides central procurement services to federal agencies, in particular to negotiate framework contracts and make them available to the agencies. The FPA falls under the Ministry of Finance, which is the responsible ministry for Austrian public procurement legislation and other rules and regulations.[35] The FPA has created an **e-procurement solution**, which includes an electronic publication and notification platform, a desktop purchasing system, a travel booking tool and a data warehouse and analysis tool where the purchased data is saved for analysis and reporting.

In principle, data collection is facilitated by the Federal Ministry of Economy, Family and Youth ('the Ministry of Economy'). Data is collected through standard forms, which are sent to the contracting authorities. Central government entities are contacted directly, while sub-central government entities' data is collected via the federal governments (which collect data in their area of responsibility).

According to the instructions on collection of statistical data provided by the Ministry of Economy, every procurement entity is obliged to report those purchases made on its own account, which avoids duplication of inputs. The FPA does not need to collect any data on procurement contracts if it is not the contracting authority itself, unless it executed an award procedure on behalf of another public entity.[36] The FPA publishes all its' administered tenders on a dedicated website[37].

Each tender with a value above the (EU) threshold is published both online[38] and in paper format: Amtsblatt zur Wiener Zeitung (administered by Wiener Zeitung GmbH).[39] The latter is also used independently from the FPA by other contracting authorities, which enter contract notices over www.lieferauftrag.at.[40] The publication of tenders under the threshold is regulated by regional by-laws. The Wiener Zeitung GmbH ensures that notices can be sent online (or in exceptional circumstances electronically or by fax) any time, that an online edition of the official Gazette appears daily Monday through Friday, except holidays, that the online editions of the Official Gazette are available for more than two (2) years, that the access to the online editions of the Official Gazette is free and full and basically is possible at any time and immediately, and that the technical operation of the online editions of the Official Gazette delivery is monitored.[41]

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34 The Federal Government founded Bundesbeschaffung GmbH (Federal Procurement Agency, FPA) in 2001 by the Federal Procurement Agency Act - Bundesgesetz über die Errichtung der BBG („BBGmbH-Gesetz')

35 http://www.bmf.gv.at

36 The data collected was validated and additional information was given by Mag. Juliane Köhrer, Multilaterale und EU-Handelspolitik, Federal Ministry of Economy, Family and Youth.

37 http://www.bbg.gv.at/lieferanten/ausschreibungen/alle/

38 At https://www.pep-online.at/CP/

39Responsibilities of the Wiener Zeitung GmbH are stated in the Publication Media Regulation 2006 - Publikationsmedienverordnung 2006.

40See also Publicationmediaregulation 2006 - Publikationsmedienverordnung 2006.

41Publicationmediaregulation 2006 - Publikationsmedienverordnung 2006.

Coverage of the public procurement databases

On the FPA website, all tenders (notices and awards) from all contracting authorities dealing through the FPA above the threshold are published online[42]. Neither the FPA's database nor the data set provided by the FPA to the Ministry of Economy includes defence procurement or secret contracts[43], or single contracts awarded pursuant to international rules which are not conducted or collected by FPA. Telecommunications was previously excluded but is now part of FPA's contracting scope.

The data requested by the consortium could be extracted however it would need to be processed first. Moreover, 99,9 % of the contracts awarded by the FPA have a value which is beyond the EU threshold.

The database administered by Wiener Zeitung GmbH[44] covers tender alerts from all contracting authorities/entities regarding tenders above the threshold. All contracting authorities and entities, whatever their level, are included in the database. Defence procurement contracts are also covered by this system. This system does not contain an archive of the published tender alerts; the data is only held for 24 months.

3.1.e   Other   information   sources   or   qualitative information

Other information sources: public procurement in all sectors

The Austrian registry of contractors (Auftragnehmerkataster Österreich)[45] was founded in 2000 by the regional authorities and municipalities and other stakeholders. The institute administers a database of suitable and approved companies and provides support for economical procurement procedures for clients, tenderers and applicants.

It is worth noting that Austria is participating in the Peppol project with the Federal Ministry of Finance (BMF), FPA and the Federal Computing Centre (BRZ). The long-term and broader vision of Peppol is to allow any company (including small- and medium-sized companies) in the EU to communicate electronically with any EU governmental institution in all procurement processes.

The study team has concluded a cooperation agreement with the Tender Service Group, a pan-European private tender alert provider, which holds public

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[42] At https://www.pep-online.at/CP/
43See Federal Law on Public Procurement in area of defence and security /Bundesgesetz über die Vergabe von Aufträgen im Verteidigungs- und Sicherheitsbereich (Bundesvergabegesetz Verteidigung und Sicherheit 2012 – BVergGVS 2012.
[44] www.auftrag.at
[45] http://www.ankoe.at/ankoe_home.asp

procurement data for Austria. Tender Service Group has provided the study team with public procurement data for Austria. However, the study team has decided not to use these data for the study as the amount of records provided was lower than the amount contracts available in TED suggesting that the coverage of the dataset was not sufficiently complete.

Other information sources: public procurement in the defence sector

According to the data provided by the EDA, the "R&D (including R&T) Expenditure" of Austria was EUR 7,5 million in 2009 and EUR 1 million in 2010. Expenditure on "Outsourced Defence Expenditure" in Austria was EUR 352 million in 2009 and EUR 329 million in 2010.

The Austrian MoD cannot provide information on the amount spent on ICT and/ or R&D, because it is not clear where contractors provide existing services for the MoD, or develop new ones. Data for defence expenditure provided to the EDA is based on the budget statements, including any (all) defence institutions. Based on EDA data provided in 2010 around €1m is spent yearly on R&D by the defence sector, around 90% of which is outsourced either for specific projects or through partial funding of external research institutes. This includes EDA R&T CAT A and CAT B projects. Further information on Austrian defence funding of ICT R&D was unavailable.

3.1.f Future data provision to the European Commission

Data provision by the public procurement authorities

As mentioned above, the FPA would not be able to provide the data required, since they do not collect and store data from contracts under the EU threshold. Other than that, it is difficult to provide cost estimations, since it would not be enough to simply extract the data – it would also need to be aggregated, displayed and verified. There is no technical impediment to providing such data, but additional resources would be needed.

Our contact persons at the FPA have informed the study team that the Austrian Ministries are increasingly asking for procurement data. The Federal Ministry of Economy, Family and Youth for example requires additional data on innovation procurement, and the Ministry of Life (Ministry of the Environment) requires data on procurement related to sustainability.

Data provision by the MoD

The possibility of providing relevant data to the EU in the future would require familiarisation with data requirements, designing methodologies and templates, retrieving relevant data, adjusting existing data, and validates the data.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D or ICT / R&D of ICT procurement – BERD

According to Statistik Austria, it would be very difficult to use a BERD survey to compile the requested data. ICT-related R&D is currently not specified in Austria. Only 'total R&D expenditure' is collected in the R&D surveys, while R&D performers are not requested to separate their R&D expenditure into 'ICT-related' and 'non-ICT-related'. Additionally, there is no distinction made between public funding for R&D by 'grants' or by 'public contracts'. Hence, to retrieve the relevant data, it would be required to design clear definitions for 'ICT-related' and 'procurement contracts'. It would furthermore be questionable whether enterprises will be able to make the necessary distinction between ICT-related and non-ICT-related R&D.

(B) Funder-based measurement of R&D or ICT / R&D of ICT procurement – GBAORD

GBAORD is compiled via budget analyses where specific budget items are considered R&D-relevant. The current procedures for compiling GBAORD do not allow a distinction between R&D expenditures via 'procurement' procedures and other types of funding, such as grants. Even if this were feasible it seems highly unrealistic that public authorities would apply a co-efficient of ICT-relevance to certain procurement activities. GBAORD probably also excludes certain relevant procurement activities that are of interest (those of public enterprises, or regional governments).

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

National accounts aggregates or estimates for ICT-related R&D procurement statistics are only available for the Austrian economy as a whole. Therefore, the national account aggregates cannot be used to extract statistics on state procurement or procurement of the public sector.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

Statistik Austria does not consider it possible to recommend any of the above methods to extract ICT-related R&D procurement statistics, as each of them seem unsuitable. Firstly, it would be necessary to develop a methodology for procurement statistics in general, which simply does not exist. This would have to include a definition of 'procurement' and clarification of certain issues, e.g. should the procurement of public enterprises be included (which are not part of the government sector and therefore not included in GBAORD). According to Statistik Austria, there is no binding definition of 'public procurement'. For statistical purposes it would be desirable, if not necessary, to be able to present a definition to respondents in the course of a survey. Similar efforts would, supposedly, be necessary to clarify and define as good as possible the term 'ICT-related'. In Austria, the national R&D statistics regulations would have to be revised, as all indicators collected within the R&D surveys must be listed in the legal framework. In order to collect internationally comparable data, the introduction of a respective indicator in the EU regulation on R&D and innovation statistics could be envisaged. However, among lawmakers there is a reluctance to implement a further legal obligation for providing statistical data on businesses.

3.2 BELGIUM

The section presents estimates of the amount of ICT-related (sub-section 3.2.a), R&D (sub-section 3.2.b), and ICT-related R&D procurement (sub-section 3.2.c) in Belgium. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in sub-section3.2.d, while the availability of qualitative information, which can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in sub-section3.2.e.

Full country data set is provided in Excel format (see Annex 3).

3.2.a   Public procurement of ICT

The total value of ICT public procurement contracts in Belgium in 2011 was about **EUR 611 million**[46], an increase of **16%** compared to 2010.

The following table[47]shows the breakdown of the overall ICT contract value across different areas of public sector activity for 2010 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

Table 3.2.a. 1- Belgium ICT – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	2%	1%	0,5%

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[46] 93.54% of the total amount is above EU threshold, while 5.07% is below. Remaining 1.39% is unknown.

[47] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions are sometimes classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Education	2%	2%	0,8%
Electricity	0%	4%	-3,9%
Environment	1%	3%	-2,4%
Gas, oil and heat	1%	2%	-1,0%
General public services	40%	29%	10,3%
Health	3%	12%	-9,4%
Other	19%	22%	-3,1%
Public order and safety	10%	3%	6,7%
Transport	5%	2%	2,7%
Unknown	17%	16%	0,9%
Water	1%	3%	-2,1%
Total	100%	100%	

The contracting authorities that contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 36% of the total and centred on IT services - consulting, software development, Internet and support (49% of the total for the key authorities or EUR 104 million), office and computing machinery, equipment and supplies (43% of the total for the key authorities) and radio, television, communication, telecommunication and related equipment (4%).

Table 3.2.a.2- Belgium ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Police fédérale direction des achats (Federal Police)	Public order and safety
SPF P-O-CMS - Centrale de Marchés pour Services fédéraux (Central Markets for Federal Services)	General public services
Sibelga SCRL	Unknown
Direction générale institutions et population (Institution and population)	General public services
Smals	General public services

Contracting authority or entity	Public sector area
Département des technologies de l'information et de la communication (Department of Information Technology and Communication)	General public services
SPF FIN service ICT	General public services
ETNIC	Other
Loterie Nationale société anonyme de droit public (National Lottery corporation governed by public law)	Other
Eandis cvba	Unknown

3.2.b Public procurement of R&D

The total value of R&D public procurement contracts in Belgium was about **EUR 65.9 million**[48] in 2011, with an increase doubled compared to 2010. A breakdown of R&D contract value across different areas of public sector activity for 2010 and 2011 is given in Table 3.2.b.1.

Table 3.2.b.1 -Belgium R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	11%	20%	-8,7%
Environment	0%	2%	-1,7%
General public services	58%	27%	30,8%
Health	0%	1%	-0,4%
Other	29%	41%	-12,3%
Unknown	2%	10%	-7,7%
Total	100%	100%	

The contracting authorities that contributed to expenditure in most to expenditure in 2011, are listed in the table below. Expenditure of these

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[48] 59.36% is above the threshold while 37.77% is below. 2.87 % is unknown.

authorities cover the 88% of the total spend and provide data capture services (EUR 22 million, e.g. the development of an electronic system for voting commissioned by the General Directorate of institution and population), industrial machinery, imaging equipment for medical, dental and veterinary use and laboratory optical and precision equipment. Inclusion on the list of the key authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.2.b. 2 – Belgium R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Direction générale institutions et population (General Directorate of institutions and population)	General public services
Universiteit Gent (University of Gent)	Education
Instituut voor Landbouw en Visserijonderzoek	General public services
Université de Mons (University of Mons)	Other
Université de Liège (University of Liège)	Education
Régie des Bâtiments (Building Agency)	General public services
Universiteit Antwerpen	Education
Université Libre de Bruxelles (Free University of Bruxelles)	Education
CTP	Other
Université de Liège, Service des marchés (University of Liège - Department of Market)	Other

3.2.c Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Belgium was about **EUR 34.7 million**[49] in 2011, as compared to **EUR 15.5 million** in 2010. The table below provides a breakdown of ICT-related R&D contract value across different areas of public sector activity for 2010 and 2011.

Table 3.2.c. 1- Belgium R&D ICT – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	18%	36%	-18,0%
Environment	0%	1%	-1,0%
General public services	68%	19%	48,8%
Other	14%	36%	-22,1%
Unknown	0%	8%	-7,6%
Total	100%	100%	

The key contracting authorities, which contributed most to expenditure in 2011, are listed in *Table 3.2.c. 2*. Expenditure of these authorities cover the 97% of the total spend and provide IT services, e.g. General Directorate of institutions and population, laboratory, optical and precision equipment, e.g. University of Gent and medical equipment, pharmaceuticals and personal care products. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.2.c. 2- Belgium ICT–related R&D: Key contracting authorities

Contracting authority or entity	Public sector area
Direction générale institutions et population (General Directorate of institutions and population)	General public services

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[49] 94.17% is above EU threshold while 2.18% is below and 3.65% is unknown.

Contracting authority or entity	Public sector area
Université de Liège (University of Liège)	Education
Universiteit Antwerpen	Education
Universiteit Gent (University of Gent)	Education
Université de Liège, Service des marchés (University of Liège - Department of Market)	Other
Université de Mons (University of Mons)	Other
Université Libre de Bruxelles (Free University of Bruxelles)	Education
Institut royal des sciences naturelles de Belgique (Belgium Royal Institute of Natural Science)	Other
Université catholique de Louvain (Catholic University of Louvain)	Education
Etablissements Scientifiques	General public services

3.2.d Collection of procurement data by public authorities

Legal context

Public procurement in Belgium is regulated by a number of laws and decrees transposing the relevant European legislation[50]:

Standard procurement regime:

- Loi du 24 décembre 1993 relative aux marchés publics (articles 1, 3, § 3, et 4 jusqu'à 25);
- Loi du 15 juin 2006 relative aux marchés publics (articles 2, 4°, 15 et 31);
- Arrêté royal du 8 janvier 1996 – règles de passation;

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[50] For more details on the legal framework in Belgium see: http://16procurement.be.
Practical guidance is provided in a manual published by the federal authorities: http://www.publicprocurement.be/portal/page/portal/pubproc/beep%20algemeen/handleiding%20 overheidsopdrachten2/manuel23f.doc.

- Arrêté royal du 26 septembre 1996 – règles générales d'exécution + annexe (Cahier général des charges);
- Arrêté royal du 15 juillet 2011 - relatif à la passation des marchés publics dans les secteurs classiques.

Procurement in the water, energy, transportation and postal sectors:

- Loi du 24 décembre 1993 relative aux marchés publics (articles 1, 2 jusqu'à 41 quinquies pour les pouvoirs adjudicateurs, articles 47 jusqu'à 63 pour les entreprises privées);
- Loi du 15 juin 2006 relative aux marchés publics (articles 2, 4° et 15);
- Arrêté royal du 10 janvier 1996 – règles de passation (pouvoirs adjudicateurs);
- Arrêté royal du 18 juin 1996 – règles de passation (entreprises privées);
- Arrêté royal du 26 septembre 1996 – règles générales d'exécution (uniquement pour les pouvoirs adjudicateurs).

Defence and security procurement:

- Loi du 13 août 2011 relative aux marchés publics et à certains marchés de travaux, de fournitures et de services dans les domaines de la défense et de la sécurité;
- Arrêté royal du 23 janvier 2012 relatif à la passation des marchés publics et de certains marchés de travaux, de fournitures et de services dans les domaines de la défense et de la sécurité;
- Arrêté royal du 24 janvier 2012 fixant l'entrée en vigueur de la loi du 13 août 2011 relative aux marchés publics et à certains marchés de travaux, de fournitures et de services dans les domaines de la défense et de la sécurité, ainsi que les règles relatives à la motivation, à l'information et aux voies de recours concernant ces marchés.

The standard **national threshold for the publication of public procurement** in Belgium is EUR 67 000.

Public procurement data collection process

In Belgium, there are two public information systems in which data on public procurement is digitally collected, stored and published:

- Since July 2008, the information system[51] ('JEPP 2' or '**ENOT-BDA**') operated by the Belgian Federal Authorities ('SPF P&O E-Procurement') has covered the Belgian federal level, the three Belgian regions (Brussels, Flanders and Wallonia), local level authorities and public undertakings;
- Since 2007, the information system[52] ('**IAM/PAM**') covers Wallonia and the French-speaking community. Since 2010, all information contained in this

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[51]On http://www.publicprocurement.be
[52] On http://marchespublics.cfwb.be

database has been automatically transferred and included in the http://www.publicprocurement.be ('JEPP 2' or 'ENOT-BDA') database.

Public authorities at the federal, regional and local level are involved in data collection. All types of public authorities and public undertakings are covered. The public authorities and undertakings are themselves responsible for publishing their procurement in line with the Belgian public procurement legislation.

Different processes exist for publishing procurement information in Belgium; these are depicted in the visual below:
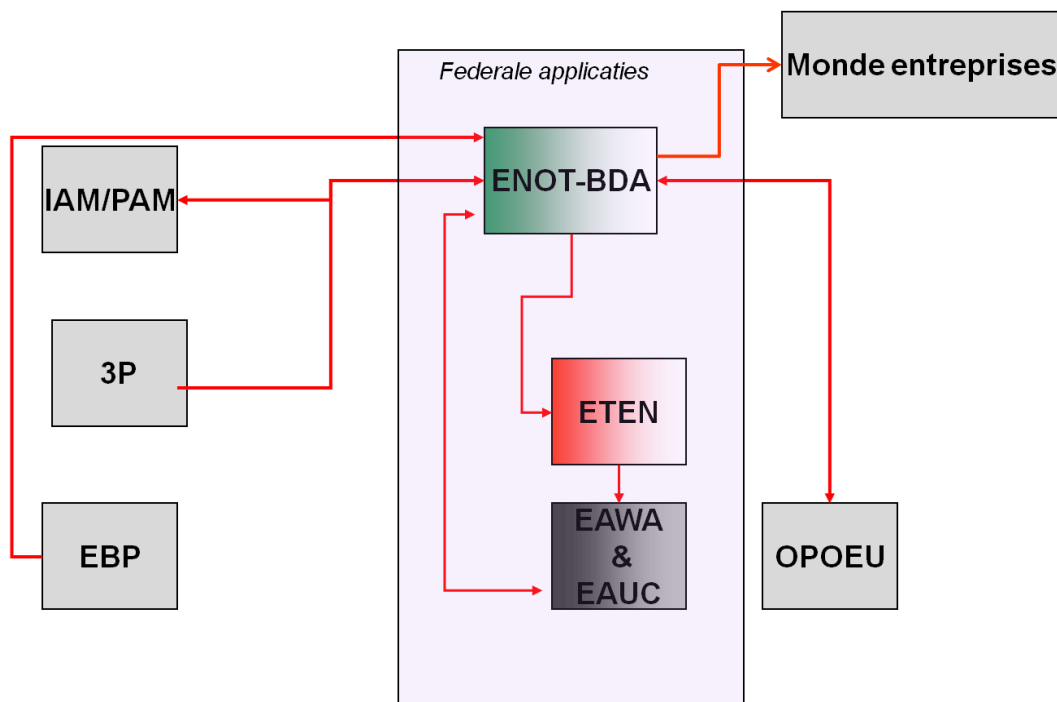
The ENOT-BDA e-notification system[53] is at the heart of collection, storage and publication of public procurement information in Belgium. Many authorities enter their procurement directly into this database. This is notably the case for all federal authorities, the authorities of the Flanders and Brussels regions as well as the German-speaking community. All public authorities, public undertakings and international institutions operating in Belgium may register as procurers and submit their information to the system.

Procurement information is entered into the system via electronic templates that are based on the TED templates (with a limited number of modifications in order to cope with national specificities).

A key advantage of using this system is that it includes a module for e-tendering which can be used free of charge by the authorities. Further, the use of the

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[53]http://www.publicprocurement.be.

national platform ensures a high visibility of tenders and augments the probability to receive competitive bids.

Several Belgian public authorities and undertakings are, however, using different systems in order to publish their procurement:

- Authorities and public undertakings of all levels in the Walloon region and French-speaking community use their own system, the IAM/PAM system[54], which has been, however, fully interconnected with the ENOT-BDA system since 2010. All information entered into the IAM/PAM database is automatically transmitted and included in the ENOT-BDA database.
- Many Belgian public authorities at the local level are using a back-office software package provided by the private company '3P'. This software includes a direct interface with ENOT-BDA. Information is transmitted in XML format and automatically integrated and published in the federal database.
- Finally, several Belgian public authorities and undertakings manage their public procurement with the support of the private service provider 'EBP'. EBP's information system has a direct interface with ENOT-BDA. Information is transmitted in XML format and automatically integrated and published in the federal database.

All information systems ensure data quality by pre-defined templates, which are used to introduce data. The data quality is checked by automatic technical procedures. Further, helpdesks, manuals, tailored trainings and descriptions of the classifications used are available at federal level.

The ENOT-BDA e-notification system has an automatic interface with the TED system. Information is sent to TED automatically in XML format. The use of (slightly modified) TED templates in Belgium ensures a high compatibility of both systems and very low rates of data rejection.

All companies (and other individuals or organisations) have direct and free access to all information published on the federal e-notification system. For a rising number of procurement, e-tendering is organised via the platform.

Coverage of the ENOT-BDA public procurement database

Potentially all types of public procurement can be entered into the database.

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[54]http://marchespublics.cfwb.be.

However, in practice many public authorities do not publish their procurement if they are not legally obliged to do so. This concerns both the specific exemptions under the procurement directives and below national threshold procurement.

The Federal Procurement Authorities observe a trend towards higher publication rates of procurement which fall under specific exemptions or below-thresholds. Further, from June 2012, the rules with regard to the publication of public procurement in Belgium have been tightened – leading to better coverage of the public procurement database and more transparency.

Procurement of R&D / ICT / R&D of ICT is not published in a specific category in any of the databases in Belgium.

No type of procurement is excluded from the publication on the ENOT-BDA database – potentially all types of public procurement can be entered into the database. This explicitly concerns procurement below EU thresholds and procurement below the national threshold of EUR 67 000.

However, the Federal Procurement Authorities underline that public authorities in Belgium cannot be obliged to publish their procurement below the relevant national thresholds. Entering below national threshold procurement is encouraged by a simplified procedure and the possibility to reach a large number of potential contractors. The Federal Procurement Authorities estimate that it might take decades until mentalities have changed and a large majority of below-national-threshold procurement is actually published on a voluntary basis.

3.2.e   Other information sources or qualitative information

Other information sources: public procurement in all sectors

The ENOT-BDA database is the central source for public procurement information in Belgium. As described above, ENOT-BDA includes public procurement information from all types of public authorities and public undertakings operating at all levels of government in Belgium. The IAM/PAM regional database feeds all its data automatically in the ENOT-BDA system.

There are no other available sources of information in Belgium that could lead to a more precise view on public procurement of ICT / R&D / R&D of ICT.

There is no other information source from which data on unpublished below-national-threshold procurement could be gathered.

Three private tender alert providers covering Belgium were identified: EBP, Govex and workXL AG. All providers build on the ENOT-BDA system in order to populate their databases. They do not cover additional procurement and do not hold superior information. Further, the private providers have signalled their inability and/or unwillingness to provide full datasets of public procurement in Belgium.

Other information sources: public procurement in the defence sector

Like all Belgian public sector bodies, the Belgian MoD / Armed Forces collect – and in certain cases, complying with the Belgian legislation, publish – their public procurement information.

The section below provides detailed insights concerning the processes and characteristics of defence procurement in Belgian as well as its coverage by the ENOT-BDA database.

(a)   *Procurement process at the Belgian MoD / Armed Forces*

Each department in the MoD / Armed Forces has a 'Material Manager' whose role is to translate the needs of his department into technical specifications. These are then submitted to procurement division which organises the procurement process with an aim to satisfy the needs. The procurement division interacts with the market for the provision of the required goods and services and ensures that the national and European procurement publication rules are respected.

In some cases, the procurement division organises the procurement via the central Belgian Procurement Office. This is notably the case for standardised commercial off-the-shelf products such as PCs or software solutions which are listed in the Belgian Procurement Office's catalogue of goods and services. The use of this route leads to economies of scale and thus to cost savings.

The different departments in the MoD / Armed Forces annually send their procurement statistics to the Belgian MoD, Department ACOS STRAT[55] (Assistant Chief of Staff "Strategy"), which aggregates the data according to the definitions

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[55]http://www.mil.be/strat/subject/index.asp?LAN=fr&ID=130

agreed upon with other Member States within the EDA and NATO. Aggregated figures are then communicated to these international bodies.

(b)   Procurement of R&D by the Belgian MoD / Armed Forces

According to the data provided by the EDA, the 'R&D (including R&T) Expenditure' of Belgium was EUR 9,27 million in 2009 and EUR 9,20 million in 2010. Further, the 'Outsourced Defence Expenditure' of Belgium is reported to be EUR 215 million in 2009 and EUR 205 million in 2010.

As a result of various interviews with the Belgian authorities, it is important to underline that the Belgian MoD / Armed Forces have clear directions to procure only commercial or military off-the-shelf goods and services. More than 99% of the total procurement is off-the-shelf.

The purchase of unfinished solutions that require R&D is extremely rare and needs to be duly justified by a demanding approval process. This is because Belgium has bad experiences in the past with developing own solutions, due to missing critical size and unreachable economies of scale. The development of own solutions is now considered too expensive and risky and therefore to be avoided where possible. The last major R&D efforts of the Belgian MoD / Armed Forces date back to the 1970s and early 1980s.

This means that R&D procurement does not or only rarely take place in the Belgian MoD / Armed Forces. Procurement of R&D across all sectors was estimated to be close to zero.

(c)   Procurement of ICT by the Belgian MoD / Armed Forces

The Belgian MoD / Armed Forces have an annual ICT budget of about EUR 50 million of which a majority is procured from external providers. Out of this budget, about EUR 8 million are used for investments in new ICT systems. Except for sensitive or secret procurement as well as procurement below national thresholds, all ICT procurement of the Belgian MoD / Armed Forces are published on ENOT-BDA. The Belgian MoD, Department ACOS STRAT[56], estimates that a maximum of 10% (probably less) of all ICT public procurement undertaken by the Belgian MoD / Armed Forces falls in the secret or top-secret category and are therefore not published on the ENOT-BDA system.

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[56] http://www.mil.be/strat/subject/index.asp?LAN=fr&ID=130

As explained above, R&D procurement does not or only rarely takes place in the Belgian MoD / Armed Forces. This is notably true for procurement of R&D of ICT solutions. [Software customisations are not considered as R&D in line with the Frascati Manual.] It is estimated that basically <u>no</u> R&D procurement in the field of ICT is undertaken by the Belgian MoD / Armed Forces.

(d)   Coverage of defence procurement by the ENOT-BDA database

A large share (estimated at 70%-80% by the MoD DG Material Resources) of public procurement in defence is officially published in the national public procurement system ENOT-BDA[57] – which was initially developed by the MoD. The high degree of publication is also be explained by the focus on readily-developed commercial and military off-the-shelf goods and services (which are less sensitive than own developments).

Procurement that is not published typically falls below the national threshold of EUR 67 000 or is not managed through the DG Material Resources (estimated at max. 25% of all procurement). The latter group may refer to top-secret procurement or other sensitive procurement which is typically organised via simplified procedures (single bidder – direct negotiation) with memorandums of understandings.

The interviewees agree that R&D procurement may take place in this second group of unpublished procurement. Further, they agree that the potential proportion of R&D (of ICT) procurement in this group is certainly higher than in the group of published procurement.

3.2.f   Future data provision to the European Commission

Data provision by the public procurement authorities

The Belgian public procurement authorities see no difficulties in providing procurement data to the European Commission or a contractor on a regular basis. An annual data provision is judged as being the best solution.

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[57] www.publicprocurement.be

Data provision by the MoD

The Belgian MoD, Department ACOS STRAT[58], is available to respond to specific questionnaires from the European Commission for potential future data gathering exercises.

However, the Belgian MoD, Department ACOS STRAT, underlined that it is not willing to provide statistical data on a recurring, e.g. annual basis to the European Commission. It was underlined that any statistical data gathering for the European Institutions should be organised via the EDA which has been founded for that purpose.

The Belgian MoD, Department ACOS STRAT, proposed that the European Commission clearly defines its future data needs in the area of defence and then collects this data through the EDA (after having agreed with the EDA Member States on definitions and feasibility of the data collection).

Data provision by the national statistical office

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

The Belgian business R&D survey does not include a question about how to identify the amount of government-funded R&D performed under public procurement contracts or grants.

According to BELSPO, the business R&D survey already includes '*an extensive question regarding the financing of R&D expenditures including government-funded R&D, but [there is no] supplementary distinction for public procurement contracts and grants*'. BELSPO argues that '*an additional level of disaggregation would not improve the accuracy and the quality of the survey responses because of the voluntary nature of the survey.*' There are currently '*20 items about the financing of R&D. Given the voluntary nature of the survey, [BELSPO has] already low response rates for this question.*'

The Belgian national BERD statistics are provided by the Belgian Public Service for the BELSPO Federal Science Policy.[59]

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[58]http://www.mil.be/strat/subject/index.asp?LAN=fr&ID=130
[59]http://www.belspo.be/belspo/stat/index_fr.stm

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

The Belgian GBAORD statistics do not separately identify public procurement contracts for business enterprises and BELSPO does not intend to introduce such a disaggregation. Furthermore, no information is collected on the public R&D funding bodies. BELSPO explains that '*the names of the public authorities that paid for R&D [are not collected], but […] a distinction [is made] between regional, national, European (European Commission), international institutions and foreign national authorities'*. Similarly to the BERD survey, BELSPO argues that '*asking for the names would make the response rate plummet*'.

BELSPO also states that '*the budgetary sources/documents, used for producing the GBAORD, are not suitable for providing […] information*' on public procurement contracts awarded by higher education institutions and public research organisations.

The Belgian national GBAORD statistics are provided by BELSPO[60]

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

BELSPO explains that '*the COFOG classification is neither used for classifying GBAORD data, nor for classifying surveyed R&D data in Belgium*.'

The Belgian national account aggregates are provided by the Belgian Institute for National Accounts[61]. The data does not allow for a differentiation of different modes of R&D expenditure or ICT-related expenditure.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

BELSPO does not recommend any alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement. The use of administrative data (on public procurement) in order to compile R&D statistics has so far not been considered.

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[61] http://www.inr-icn.fgov.be/

3.3 BULGARIA

The section presents estimates of the amount of ICT-related (sub-section 3.3.a), R&D (sub-section 3.3.b), and ICT-related R&D procurement (sub-section 3.3.c) in Bulgaria. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, as gathered by the private tender alert provider Tender Service Group.

Collection of data on procurement contracts by the national public authorities is illustrated in sub-section 3.3.d, while the availability of qualitative information, which can complement the estimates presented in the report, including value of defence contracts, if available, is discussed in sub-section 3.3.e.

Full country data set is provided in Excel format (see Annex 3).

3.3.a Public procurement of ICT

The total value of ICT public procurement contracts in Bulgaria in 2011 was about **EUR 315.8 million**[62], with an increase of **32%** compared to 2009.

The following table[63]shows the breakdown of the overall ICT contract value, across different areas of public sector activity for 2009 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[62]31.91 % of the total amount is above EU-threshold while 12.25% is below. 55.85% is unknown.
[63] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions are sometimes classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.3.a.1 - Bulgaria ICT – Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Economic and financial affairs	18%	27%	-8,9%
Education	3%	3%	-0,1%
Electricity	5%	3%	1,8%
Environment	1%	1%	0,1%
Gas, oil and heat	1%	0%	0,3%
General public services	14%	10%	3,9%
Health	7%	19%	-12,0%
Other	32%	29%	2,9%
Postal services	0%	0%	0,3%
Public order and safety	3%	1%	2,8%
Transport	8%	2%	5,4%
Unknown	7%	2%	5,3%
Water	0%	2%	-1,8%
Total	100%	100%	

The contracting authorities that contributed to expenditure in 2011 are listed in the table below. The expenditure of the authorities covered 45% of the total spending and centred on office and computing machinery, equipment and supplies (22% of the total for the key authorities), printed matter (21%), and radio, television, communication and telecommunication equipment (20%, e.g. Bulgarian National Radio). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.3.a.2 -Bulgaria ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
ИзпълнителнаагенцияАвтомобилнаадминистрация (Executive Agency Automobile Administration)	Transport
Българсканационалнателевизия (Bulgarian National Television)	Other
Българсконационалнорадио (Bulgarian National Radio)	General public services
ДържавенфондЗемеделие (State Fund Agriculture)	Other
Централенорганзаобщественипоръчкииминистърнафинансите (Central Public Procurement Authority and Minister of Finance)	Economic and financial affairs
Министерствонафинансите (Ministry of Finance)	Economic and financial affairs
Националнаагенциязаприходите (National Revenue Agency)	Economic and financial affairs
Министерствонатрудаисоциалнатаполитика (Ministry of Labour and Social Policy)	Other
СБАЛССЗ "Света Екатерина" ЕАД ("St. Catherine" hospital)	Health
АГЕНЦИЯ "МИТНИЦИ" (National Customs Agency)	Other

3.3.b   Public procurement of R&D

The total value of R&D public procurement contracts in Bulgaria was about **EUR 3 million**[64] in 2011, an 11% decrease compared to 2009. A breakdown of R&D contract value across different areas of public sector activity for 2009 and 2011 is given in Table 3.3.b. *1 -* .

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[64] 27.06% is above the threshold while 26.81% is below. Remaining 46.13% is unknown.

Table 3.3.b. 1 - Bulgaria R&D – Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Education	45%	30%	14,5%
Environment	0%	2%	-1,7%
General public services	0%	2%	-1,8%
Health	4%	16%	-11,9%
Other	46%	51%	-4,9%
Unknown	6%	0%	5,7%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011, are listed in the table below. Expenditure of these authorities cover the 94% of the total spend and include software package and information system (EUR 0.9 million, e.g. connectivity between schools, universities and research institutes acquired by the Ministry of Education and Science), architectural design services (EUR 0.5 million), laboratory equipment (EUR 0.4 million, e.g. nitrogenous fertilisers, fertiliser minerals and pesticides acquired by the Ministry of Agriculture) and laboratory, optical and precision equipment for the use of the Ministry of Education. Inclusion on the list of key authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.3.b. 2- Bulgaria R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Министерствонаобразованието, младежтаинауката (Ministry of Education, Youth and Science)	Education
Министерствонакултурата (Ministry of Culture)	Other
Институтпоземеделие – Карнобат (Institute of Agriculture)	Other
Медицинскиуниверситет-София-Ректорат (Medical University Sofia)	Education

Contracting authority or entity	Public sector area
СтопанскаАкадемияД. А. Ценов (Economic Academy)	Education
ИНСТИУТПОБИОРАНООБРАЗИЕИЕКОСИСТЕМНИИЗСЛЕДВАНИЯ-БАН (Institute of Biology and Ecosystem Research)	Unknown
Институтпообщаинеорганичнахимияпри Българскаакадемиянанауките (Bulgarian Academy of Science)	Other
Министерствонаобразованието (Ministry of Education)	Education
ИМБ-БАН	Other
МедицинскиуниверситетПроф. д-рП. Стоянов (Medical University Prof. Dr. P. Stoyanov)	Health

3.3.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Bulgaria was about **EUR 1.6 million**[65] in 2011, compared to **EUR 2.4 million** in 2009. *Table 3.3.c. 1* provides a breakdown of ICT-related R&D contract value across different areas of public sector activity for 2009 and 2011.

Table 3.3.c. 1- *Bulgaria R&D ICT – Contract values by public sector activity*

Public Sector Area	2011	2009	Δ
Education	63%	42%	20,2%
Environment	0%	2%	-2,3%
Health	7%	3%	4,0%
Other	19%	52%	-32,6%
Unknown	11%	0%	10,7%
Total	100%	100%	

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[65] 51.24% is above EU threshold while 29.31% is below and 19.45% is unknown.

The key contracting authorities, which contributed most to expenditure in 2011, are listed in *Table 3.3.c.2* . Expenditure of these authorities cover the 100% of the total spend and centered on software packages and information systems (EUR 0.8 million, e.g. Ministry of Education and Science), laboratory, optical and precision equipment (EUR 0.3 million, e.g. Institute of General and Inorganic Chemistry), office and computing machinery, equipment and supplies, e.g. Economic Academy 'D.A.Tzenov'. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.3.c.2- Bulgaria ICT−related R&D: Key contracting authorities

Contracting authority or entity	Public sector area
Министерствонаобразованието, младежтаинауката (Ministry of Education, Youth and Science)	Education
СтопанскаАкадемияД. А. Ценов (Economic Academy)	Education
ИНСТИУТПОБИОРАНООБРАЗИЕИЕКОСИСТЕМНИИЗСЛЕДВАНИЯ-БАН (Institute of Biology and Ecosystem Research)	Unknown
Институтпообщаинеорганичнахимияпри Българскаакадемиянанауки те (Bulgarian Academy of Science)	Other
МедицинскиуниверситетПроф. д-рП. Стоянов (Medical University Prof. Dr. P. Stoyanov)	Health
ИнститутпополимериприБългарскаакадемиянанауките (Institute of Polymers, Bulgarian Academy of Sciences)	Other
ИНСТИТУТПОБИОРАЗНООБРАЗИЕИЕКОСИСТЕМНИИЗСЛЕДВАНИЯ - БАН (Institute of Biodiversity and Ecosystem Research - BAS)	Other

3.3.d   Collection of procurement data by public authorities

Legal context

Public procurement in Bulgaria is regulated by a number of laws and decrees[66]that, transpose the relevant European legislation on public procurement:

- **Public Procurement Act**[67] *(promulgated State Gazette no. 28/2004, last amended State Gazette no. 15/15.02.2013);*

- **Rules for the implementation of the Public Procurement Act**[68] *(promulgated State Gazette no. 53/2006, last amended State Gazette no. 20/09.03.2012);*

- **Ordinance for the conduct of contests in urban development and investment design**[69] *(promulgated State Gazette no. 75 of 31.03.2009).*

After transposition of Directive 2009/81/EC of the European Parliament and of the Council[70]of 13July 2009on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security, and amending Directives 2004/17/EC and 2004/18/EC, Defence procurement is regulated only in the Public Procurement Law (PPL). The Ordinance on the Award of Special Purpose Public Procurement is no longer in force. Offsets are possible only outside the scope of the law.

The general **thresholds for the publication of public procurement** in Bulgaria have been defined as follows (all thresholds are provided for in Article 14 of the PPL):

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[66] For more information on the legal framework in Bulgaria and links to the primary sources, refer to:
http://rop3-app1.aop.bg:7778/portal/page?_pageid=173,1106253&_dad=portal&_schema=PORTAL
http://europa.eu/youreurope/business/profiting-from-eu-market/benefiting-from-public-contracts/bulgaria/index_en.htm
[67]http://www.aop.bg/fckedit2/user/File/bg/Normativna%20baza/LAW_FOR_THE_PUBLIC_PROCUREMENT.pdf
[68]http://www.aop.bg/fckedit2/user/File/bg/Normativna%20baza/PPZOP_09032012.pdf
[69]http://www.aop.bg/fckedit2/user/File/bg/Normativna%20baza/Naredba_konkursi.pdf
[70]Directive 2009/81/EC of the European Parliament and of the Council of 13July 2009 on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security, and amending Directives 2004/17/EC and2004/18/EC (L 216, 20.8.2009, p. 76.

European thresholds that require a publication in the national public procurement register and in the OJ / TED *(Article 45a Public Procurement Act)*[71]

Works: exceeding BGN 9 779 000 (excluding VAT)

Services: exceeding BGN 391 160 (excluding VAT)

Supplies: exceeding BGN 254 254 (excluding VAT)

National thresholds that require publication in the national public procurement register *(Article 14 Public Procurement Act)*

Works: exceeding BGN 264 000 (excluding VAT) and where the procurement has a place of fulfilment outside the country exceeding BGN 1 650 000 (excluding VAT)

Supplies and services: exceeding BGN 66 000 (excluding VAT) and where the procurement has a place of fulfilment outside the country exceeding BGN 132 000 (excluding VAT)

National thresholds that require publication of a Public Announcement in the national public procurement register

Works: from BGN 60 000 to 264 000 (excluding VAT) and when the location of the performance is abroad from BGN 670 000 to 1 650 000 (excluding VAT)

Supplies: from BGN 20 000 to 66 000 (excluding VAT) and when the location of the performance is abroad from BGN 66 000 to 132 000(excluding VAT)

Services: from BGN 20 000 to 66 000 (excluding VAT) and when the location of the performance is abroad from BGN 66 000 to 132 000 (excluding VAT)

National thresholds that do not require any publication in the national public procurement register

Works: below BGN 60 000(excluding VAT) and when the location of the performance is abroad below BGN 670 000 (excluding VAT)

Supplies: below BGN 20 000 (excluding VAT) and when the location of the performance is abroad below BGN 66 000 (excluding VAT)

Services: below BGN 20 000 (excluding VAT) and when the location of the performance is abroad below BGN 66 000 (excluding VAT)

Design contests: below BGN 66 000 inclusive (excluding VAT)

The Bulgarian public procurement policy is implemented by the Minister of Economy and Energy[72]. The Bulgarian Public Procurement Agency[73] is an

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[71]See also: http://ec.europa.eu/internal_market/publicprocurement/rules/current/index_en.htm
[72]http://www.mi.government.bg
[73]http://www.aop.bg

independent legal entity which supports the Minister of Economy, Energy with policy implementation in that area. The Public Financial Inspection Agency[74](PFIA) and the National Audit Office[75] act as controlling authorities with regard to adherence to public procurement legislation[76].

Public procurement data collection process

In Bulgaria, public procurement data is collected and stored digitally on one common database that covers the different levels of government: the **PPR[77]**

The national PPR is operated by the Bulgarian PPA. It was developed with the financial support of the PHARE Programme and the Operational Programme Administrative Capacity co-funded by the European Union through the European Social Fund. While the platform offers e-notification functions, e-procurement services have not been implemented yet.[78] As part of future e-Tendering phases, electronic documentation download and Q&A (Questions and Answers) electronic exchange are already in use through the Public Procurement Portal.

Contracting authorities are obliged by law to publish contract (and award) notices for above national and EU threshold procurement. The Bulgarian contracting authorities and entities enter the data themselves or send the data to the PPA to be entered by PPA's officials. The relevant information can be directly entered by contracting authorities into the portal using available online forms (*on-line forms* function) or through free application software 'Procurement Form Editor' (offline filling the information and direct importing it to the database using electronic signature). The alternative for the contracting authorities is to send the completed forms to PPA by email and to ask for ex-officio entering the data by a PPA public servant. The national standard forms are based on the European TED templates. After verification, the data is published online on the portal and, where relevant, also submitted to TED for a Europe-wide publication (*eSender* function).

Predefined templates, automatic data checks, user manuals and a helpdesk ensure the quality of the data. Data quality on the portal is also monitored by the PPA; yet, as a principle, the contracting authorities remain solely responsible for the quality and completeness of their publications on the portal.

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[74]http://www.adfi.minfin.bg/en/
[75]http://www.bulnao.government.bg/?lang=en
[76] Article 123 of the Public Procurement Act
[77] http://www.aop.bg
[78] For a detailed description of the functions of the portal, see http://rop3-app1.aop.bg:7778/portal/page?_pageid=173,1082251&_dad=portal&_schema=PORTAL

The PPA regularly compiles statistics based on PPR data, including[79]:

- Contracts awarded per month;
- Contracting authorities with most contracts awarded per year;
- Contracts awarded by type of objects of public procurement contracts; and
- Procedures lacking information for over six months

Coverage of the public procurement database

Bulgarian authorities and entities at all levels are represented in the database. Potentially all types of public procurement can be found in the national public procurement portal; only defence procurement below EU thresholds and public contracts of the lowest value are not included in the database.

All Bulgarian contracting authorities and entities are obliged to send the required information directly to the PPA. There are no sub-national data collection bodies.

Contracting authorities can also send for publication information about contracts concluded as an exception to the PPL rules. Nevertheless, they are not obliged to do so as these contracts fall outside the material scope of the law.

The PPR contains information about procurement above thresholds stipulated in Article 14 of the PPL. The public announcement database contains information for business opportunities above thresholds, stipulated namely in Article 14 (4) PPL, i.e. this is procurement not requiring the conduct of the procedures provided for in the directives but that is published via public announcements. Only information about procurement of lowest value (up to BGN 60 000 for work contracts and up to BGN 20 000 for supply and service contracts) is available in the database.

Public procurement of R&D / ICT / R&D of ICT is not published in a specific category on the national public procurement portal.

The PPR is composed of two main databases:

- PPR[80], also containing defence and security procurement[81]
- Public Announcements database (containing small value procurement[82])

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[79]http://rop3-app1.aop.bg:7778/portal/page?_pageid=173,1184251&_dad=portal&_schema=PORTAL&url=687474703A2F2F7777772E616F702E62672F73746174697374696373322E70687p

[80]http://rop3-app1.aop.bg:7778/portal/page?_pageid=173,1192251&_dad=portal&_schema=PORTAL

[81]http://rop3-app1.aop.bg:7778/portal/page?_pageid=93,1528259&_dad=portal&_schema=PORTAL&url=6874747703A2F2F7777772E616F702E62672F657365617263685F6473322E70687p

3.3.e   Other information sources or qualitative information

Other information sources: public procurement in all sectors

There are no other information sources with regard to public procurement data for Bulgaria other than the national public procurement register.

The study team has concluded a cooperation agreement with the Tender Service Group, a pan-European private tender alert provider, which holds public procurement data for Bulgaria (retrieved national public procurement register). Tender Service Group has provided public procurement data for Bulgaria for 2009 and 2011. The data has been analysed as described in the methodological section, using both CPV-based and keyword-based searches.

The table below provides an indicative view on the characteristics of the Tender Service Group dataset for Bulgaria. It indicates the total number of records for 2011 (contract notices and contract awards) as well as the number of ICT-related records identified in 2011 and 2010 in a CPV-based search.

Table 3.3.e.1 - Characteristics of the Tender Service Group dataset for Bulgaria

Indicative information on Tender Service Group public procurement data for Bulgaria		
Total number of records in 2011 *(contract notices and contract awards)*	12,553	
<u>*As a comparison:*</u> **Total number of TED records in 2011** *(contract notices and contract awards)*	4,618	
Number of ICT records (CPV-based search)		
Year	*Contract notices*	*Contract awards*
2010	296	1

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[82]http://rop3-app1.aop.bg:7778/portal/page?_pageid=93,1488254&_dad=portal&_schema=PORTAL&url=687474703A2F2F7777772E616F702E62672F657365617263685F7070322E706870

Indicative information on Tender Service Group public procurement data for Bulgaria		
2011	402	51

Other information sources: public procurement in the defence sector

According to the data provided by the EDA, there was no, i.e. EUR 0 'R&D (including R&T) Expenditure' of Bulgaria in 2009 and 2010. No EDA data is available on the 'Outsourced Defence Expenditure' of Bulgaria.

No additional information on public procurement in the defence sector in Bulgaria could be obtained from the Bulgarian MoD.

3.3.f   Future data provision to the European Commission

Data provision by the public procurement authorities

The conditions of a potential future data provision to the European Commission would have to be negotiated with the Bulgarian Public Procurement Agency[83].

Data provision by the MoD

No information on the potential future data provision on public procurement in the defence sector in Bulgaria could be obtained from the Bulgarian MoD.

Data provision by the national statistical office

In Bulgaria, national R&D statistics, including GBAORD, BERD, GERD are provided by the Bulgarian National Statistical Institute (NSI).[84]

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[83]http://www.aop.bghttp://www.publicprocurementnetwork.org/index.php?Itemid=53&option=com_contact&view=contact&id=21:toncheva-gergana-legal-expert&catid=74:bulgaria
[84]   Relevant   R&D   statistics   and   publications   can   be   downloaded   under: http://www.nsi.bg/otrasalen.php?otr=54.

The Bulgarian R&D surveys currently do not include a question to identify how much government-funded R&D was performed under public procurement contracts or grants.

According to the Bulgarian NSI, 'the issue of statistics on ICT-related R&D public procurement expenditure [should be considered] in the context of the more general question related to the measurement of publicly funded ICT R&D. Public investment in ICT R&D is included in a scoreboard of key performance indicators that will be used within an annual monitoring exercise to map and update the progress on the Digital Agenda targets. ICT-related R&D is […] currently not covered by the statistical measurement at a necessary level of detail.'

The NSI explains that 'precise measurement of total government funding of ICT R&D is a complex and difficult task because the current methodological framework for collecting the data for funding and performing R&D does not allow calculating directly, or in full detail, the amount of ICT R&D [nor the amount of R&D procurement].'

'The statistical challenges with the measurement of ICT R&D are related to the scope of measurement, type of measurement (possible approaches) and classifications to be used. The ICT R&D key performance target of the Digital Agenda requires capturing the total public funds for ICT-related R&D activities performed in the whole economy, i.e. in all four sectors of performance (business enterprises, government, higher education sector and non-profit institutions). In theory, there are two possible approaches for producing a total economy measure of government support for ICT R&D:

- ***GBAORD-based approach, i.e. compiling statistics on ICT GBAORD***
  - o For Bulgaria data on publicly funded ICT R&D cannot be directly drawn from GBAORD, which is compiled through dedicated survey following the NABS classification (Nomenclature for the Analysis and Comparison of Scientific Budgets and Programmes[85]). This is because there is not a specific socio-economic objective for an ICT topic, recognised as a separate NABS category. Government funds for relevant ICT R&D activities may be included in different NABS categories, i.e. nomenclature of analysis and comparison of scientific programmes and budgets.
  - o Production of reliable ICT R&D data on the basis of GBAORD might not be feasible in a short term, since the budget data sources used for this study are not detailed enough to allow the isolation of the ICT-related R&D as a special NABS objective.
- ***R&D expenditure-based approach, i.e. producing data on ICT BERD funded by government:***

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[85] http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/gba_esms_an2.pdf

- For Bulgaria, data on publicly funded ICT BERD in accordance with NACE Rev. 2 principal activity of the R&D performing enterprises for the period 2007-2011 are available. [Yet, the statistics do not differentiate between procurement contracts and grants.]
- Business-performed ICT R&D is identified following the OECD definition of the ICT sector, based on the ISIC Rev.4 (and its corresponding EU version - NACE Rev.2). The main limitation of this definition, which is based on the principal activity of the enterprises, is that it does not cover ICT-related research that takes place in other industries, i.e. ICT R&D performed by the companies, classified in non-ICT industries in business enterprises.
- Since ICT R&D data derived from BERD (by source of funds) still give an incomplete picture of total government support for such R&D, the long-term goal should be to explore feasible solutions and to consider potential development steps in order to compile and add ICT R&D data for the other three sectors of performance (government, higher education sector and non-profit institutions). Since this task would potentially require new development work, gaining as much knowledge as possible on the existing countries' experience on this issue will be very useful.'

Furthermore the Bulgarian NSI states that 'recognising the complexity of the task and the long-term efforts that might be needed, Bulgaria agrees with the proposal of Eurostat to adopt a pragmatic step by step approach in order to establish (if at all feasible) a coherent measurement framework for all publicly funded ICT R&D.'

It is considered that 'R&D expenditure-based approach for producing data on ICT-related R&D performed under public procurement contracts should be preferred in terms of relevance, completeness, reliability, comparability and timeliness.'

In this regard, the Bulgarian NSI explains that 'in principle, it would be feasible to collect data on ICT R&D expenditure with inclusion of additional questions to the R&D survey but it would significantly increase burden of respondent and NSI. A question to identify how much of government-funded R&D was performed under public procurement contracts would be feasible to include in this separate module in the R&D survey of Bulgaria.'

Finally, the Bulgarian NSI notes that 'currently […] no data compilation practices on the new breakdown of GBAORD into 'project funding' and 'institutional funding', which is required on an optional basis by the Commission implementing Regulation (EU) No 995/2012, [are available in Bulgaria].'

The Bulgarian NSI does not recommend any alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement. The use of administrative data (on public procurement) in order to compile R&D statistics has so far not been considered.

3.4 CYPRUS

The section presents estimates of the amount of ICT-related (3.4.a), R&D (3.4.b), and ICT-related R&D procurement (3.4.c) in Cyprus. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, as gathered by national authorities.

Collection of data on procurement contracts by the national public authorities is illustrated in paragraph 3.4.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, if available, is discussed in paragraph 3.4.e.

Full country data set is provided in Excel format (see Annex 3).

3.4.a   Public procurement of ICT

The total value of ICT public procurement contracts in Cyprus in 2011 was about **EUR 39 million**[86], an increase of **107%** compared to 2010.

The following table[87] shows the breakdown of the overall ICT contract value, across different areas of public sector activity for 2010 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

Table 3.4.a.1 - Cyprus ICT – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	1%	8%	-6,4%
Education	9%	14%	-5,4%

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[86] 85.05% of the total amount is above EU threshold while 11.77% is below. 3.18% is unknown.
[87] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions are sometimes classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Electricity	0%	7%	-7,1%
Environment	0%	0%	0,0%
General public services	9%	38%	-29,6%
Health	5%	1%	4,2%
Other	66%	26%	39,6%
Public order and safety	7%	2%	5,0%
Transport	1%	0%	1,5%
Unknown	1%	4%	-2,1%
Water	0%	0%	0,3%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 77% of the total spending and centred on business services (48% of the total for the key authorities or EUR 14.3 million), radio, television, and (tele)communications, equipment (21%, e.g. Cyprus Broadcasting Corporation), and IT services (9%, e.g. maintenance of information technology software acquired by the Cyprus Police). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.4.a.2- Cyprus ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Κυπριακός Οργανισμός Τουρισμού (Cyprus Tourism Organisation)	Other
Cyprus Broadcasting Corporation (Cyprus Broadcasting Corporation)	Other
ΤμήμαΥπηρεσιώνΠληροφορικής (Department of Information Technology)	Other

Contracting authority or entity	Public sector area
Αστυνομια Κυπρου (Cyprus Police)	Public order and safety
ΥπουργείοΠαιδείαςκαιΠολιτισμού (Ministry of Education and Culture)	Other
ΙατρικέςΥπηρεσίεςκαιΥπηρεσίεςΔημόσιαςΥγείας (Medical Services and Public Health)	Health
ΠανεπιστήμιοΚύπρου (University of Cyprus)	Education
Cyprus University of Technology	Education
ΤμήμαΚρατικώνΑγορώνκαιΠρομηθειών (Department of Government Purchasing and Supply)	General public services
Ογκολογικό Κέντρο Τράπεζας Κύπρου (Bank of Cyprus Oncology Centre)	Health

3.4.b   Public procurement of R&D

The total value of R&D public procurement contracts in Cyprus was about **EUR 1.5 million**[88] in 2011, with a 43% decrease compared to 2010. A breakdown of R&D procurement contract value across different areas of public sector activity for 2010 and 2011 is provided in *Table 3.4.b.1*.

Table 3.4.b.1- Cyprus R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	9%	4%	4,9%
General public services	0%	41%	-41,2%
Other	91%	55%	36,3%
Total	100%	100%	

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[88]Of which 80.51% is above EU threshold while 19.49% is below.

The contracting authorities that primarily contributed to expenditure in 2011, are listed in *Table 3.4.b. 2*. Expenditure of these authorities cover the 100% of the total spend and include research and development services (EUR 0.6 million, representing more than one third of the total amount), services incidental to fishing, e.g. Department of Fisheries and Marine Research and research and laboratory instruments for the use of the University of Cyprus. Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.4.b. 2- Cyprus R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
ΥπουργείοΠαιδείαςκαιΠολιτισμού (Ministry of Education and Culture)	Other
ΤμήμαΑλιείαςκαιΘαλασσίωνΕρευνών (Department of Fisheries and Marine Research)	Other
ΠανεπιστήμιοΚύπρου (University of Cyprus)	Other
Agricultural Research Institute - Ministry of, Agriculture, Natural Resources and Environment	Other
Cyprus University of Technology - Public Organisations	Education
Cyprus Police - Ministry of Justice and Public Order	Other
University of Cyprus - Public Organisations	Education

3.4.c   *Public procurement of R&D ICT*

The total value of ICT-related R&D public procurement contracts in Cyprus was about **EUR 294 300**[89] in 2011, compared to **EUR 265 000** in 2010.

Table 3.4.c. 1 provides a breakdown of ICT-related R&D contracts value across different areas of public sector activity for 2010 and 2011.

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[89]Of which 70.65% is above Eu threshold while 29.35% is below.

Table 3.4.c. 1- Cyprus ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	23%	17%	6,3%
Other	77%	83%	-6,3%
Total	100%	100%	

The key contracting authorities, which contributed most to expenditure in 2011, are listed in *Table 3.4.c. 2*. Expenditure of these authorities cover the 100% of the total spend and centered on These authorities purchased laboratory, optical and precision equipment, medical equipment, and software package and information systems. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.4.c. 2- Cyprus ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
ΠανεπιστήμιοΚύπρου (University of Cyprus)	Other
Cyprus University of Technology - Public Organisations	Education
Cyprus Police - Ministry of Justice and Public Order	Other
Agricultural Research Institute – Ministry of, Agriculture, Natural Resources and Environment	Other
University of Cyprus - Public Organisations	Education

3.4.d Collection of procurement data by public authorities

Legal context

Public procurement in Cyprus is regulated by a number of laws and decrees transposing the relevant European legislation:

- **Standard procurement regime:**

o   Law 12 (I) 2006 on the Coordination of the Contracting Processes for Commissioners, Projects and Services and other related items, published 17February 2006, which implements Directive 2004/18/EC;

o   Part 4 of Law 101(I) 2003;

o   Law still to be approved by the Parliament – complying with Directive (EU) 2007/66/EC[90];

o   Law for the Management of Revenues and Expenditure and of the Accounting System; of the Republic and other related matters N112(I)/2002, N22(I)/2004.

- **Procurement in the water, energy, transportation and postal sectors:**

o   Law 11(I) 2006 on the Coordination of the Contracting Process For Supplies, Work And Services in the Water, Energy, Transport and Postal Services Sectors and other related items, enacted 17 February 2006, which implements Directive 2004/17/EC.

- **Defence and security procurement:**

o   Law 173/1/2011, which partly implements Directive 2009/81/EC.

o   Law - *at the stage of drafting* - implementing Directive 2009/81/EC.

The **national threshold for the publication of public procurement** in Cyprus is EUR 2 000.[91]

Public procurement data collection process

In Cyprus, the Public Procurement Directorate of the Treasury of the Republic of Cyprus is the national authority responsible for public procurement.[92] The

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[90] Directive 2007/66/EC of the European Parliament and of the Council of 11 December 2007 amending Council Directives 89/665/EEC and 92/13/EEC with regard to improving the effectiveness of review procedures concerning the award of public contracts (OJ L 335, 20.12.2007)
[91] See Law Section 84 of Law 12(I)/06.

Treasury announces public competitions in Cyprus and it also supports assigning authorities to enforce the regulations that govern EU and national public contracts. Competitions are published in the Official Gazette of the Republic of Cyprus and in the local press.

There are several guides that have been produced to assist those involved in public procurement. For example, the website contains sections on 'Electronic public procurement' and 'Interactive Walkthroughs for Economic Operators,' which provide more information on the whole process. The Public Procurement Directorate has compiled a Guide to public contracts[93]and published it online, as well as a Guide to best practices.[94]

Data about public procurement is collected and stored in an online on an information system coordinated by the Public Procurement Directorate[95]. This database is freely accessible by the public. The procurement officers of organisations, via the CAPC, as well as economic operators, can register online and receive data alerts.

There is no mechanism of data quality control as such. Each contracting authority is responsible for the quality assurance of the data and their publication at the OJ.

Coverage of the public procurement database

The national database covers information about all contracting authorities, from 2011 onwards. These include public organisations, universities, governmental organisations and international utility companies such as Noble Energy International Ltd in the USA.

Each contracting authority and contracting body, including central government, local and regional bodies, organisations governed by public law and utilities, are obliged (above the 'national threshold' for contracts) to publish their notices on the platform. That means contracting authorities have to: (i) create a workspace in the system and complete all the necessary information regarding the specific competition, i.e. title, CPV, estimate value, procedure to be followed, type of purchase, deadlines etc.;(ii) create the notice by filling in the EU standard forms; and (iii) publish it. Contracting authorities are also obliged to state the contractor of each competition and the amounts awarded and publish the contract award notice. Additionally, for every purchase whose value is above EUR 2 000 contracting authorities are obliged to post their purchase (providing some details) in the platform for statistical purposes. As mentioned above, contracts whose estimate value is below EUR 2 000 are not posted in the database.

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[92]http://www.treasury.gov.cy/treasury/publicpro/ppro.nsf/dmlindex_en/dmlindex_en?OpenDocument

[93]http://www.treasury.gov.cy/treasury/publicpro/ppro.nsf/all/AFE36637504D4B91C22574100034278C

[94]http://www.publicprocurementguides.treasury.gov.cy/OHS-GR/HTML/index.html

[95] https://www.eprocurement.gov.cy/ceproc/home.do

Section 84 of Law 12(I)/06 provides that if the contract is up to EUR 2 000, then the contracting authority may directly award the contract without any procedure being followed.

Contracts in the field of telecommunications are excluded pursuant to Section 14 of Law 12(I)/06.

A new national law implementing part of Directive 2009/81 regulates defence procurement (Law 173/1/2011).This law regulates public procurement cases over EUR 387 000. For cases which refer to smaller amounts the MoD still applies the old law.

The structured template used by contracting Authorities to post the details of the competitions in the system safeguards the consistency of the provided information. The Treasury of the Republic, being the competent authority for public procurement, performs regular checks on the data posted in the system to ensure the quality of these data.

3.4.e   Other information sources or qualitative information

Other information sources: public procurement in all sectors

Contracting authorities may keep records on their own expenditure. Contracting authorities publish these on their respective websites, which usually exclude contracts that are exempted from the application of the Directives.

All statistics from 2005 onwards are available for download in excel format from the Treasury's website[96].

Other information sources: public procurement in the defence sector

According to the data provided by the EDA, the 'R&D (including R&T) Expenditure' in both 2009 and 2010 was 0 million EUR, which was confirmed by the Head of the Procurement Department of the Ministry of Defence of the Republic of Cyprus. In addition, Cyprus does not publish any data on 'Outsourced Defence Expenditure'. Defence statistics that are provided to the EDA are collected through the e-Procurement system which is run by the Public Procurement Directorate of the Treasury of the Republic of Cyprus. Classifications and allocation of the data are regularly undertaken by the Public Procurement Directorate of the Treasury of the Republic.

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[96] Available on:
http://www.treasury.gov.cy/treasury/publicpro/ppro.nsf/dmlstatistical_en/dmlstatistical_en?OpenDocument

Public expenditure within the MoD in Cyprus primarily concerns equipment purchases, according to the guidelines provided by the NGGS (National Guard General Staff). There is no space-related expenditure.

3.4.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Public Procurement Directorate of the Treasury of the Republic of Cyprus has informed the study team that they would be willing to cooperate and can certainly provide data in the future. However there may be difficulties, especially in cases of excluded contracts. The interviewee at the Treasury has, in this respect, stressed that apart from the structured template that must be used by contracting authorities to post notices and awards in the system, which are regular checks by the Treasury on the data posted in the system, there is currently no process to fully guarantee the quality of the data by the Public Procurement Directorate in Cyprus. Due to the large amount of competitions and contracts that are published through the system, a more rigorous quality check would be very time-consuming.

Data provision by the MoD

Our contact in the Ministry of Defence added that, if the Public Procurement Department is requested to proceed to further elaborate and/or classify the data, this would lead to a demand for the recruitment of more personnel since this sector suffers from a lack of personnel.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

The Statistical Service of Cyprus (SSC) does not consider it feasible to work on the basis of the Frascati Manual to adapt methods and tools used for performer expenditure-based R&D indicators, in particular BERD, to extract ICT-related R&D procurement statistics, because of the great range of the ICT sector. Although it may depend on the parameters of the case at hand, according to the SSC this method only works in relation to R&D related statistics.[97]

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[97]Generally, the unfeasibility for ICT-related R&D procurement statistics is related to the size of the ICT sector. However, it always depends on the particular parameters of each case.

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

The SSC would not consider it feasible to adapt methods and tools used for funder-based R&D indicators, in particular GBAORD to extract ICT-related R&D procurement statistics. It would be very difficult to keep records since it is impossible to define categories of records regarding ICT. The SSC went so far as to say that any method outside the Frascati Manual would be unfeasible.

(C) National account data for the measurement of R&D / ICT / R&D of ICT procurement

The SSC would not consider using national account aggregates to extract ICT-related R&D data at this stage since it is impossible to correlate national accounts with R&D. To extract ICT-related R&D procurement statistics only BERD could be feasible, in relation to the particular data recording parameters.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

Our interviewee at the SSC suggested that there should be an independent body for coordination and data recording regarding R&D public procurement data. This would remedy the current unfeasibility of data recording. In addition, a task group should be created for the examination of the methodological issues and implementation of the suggested solutions, under the auspices of the Planning Bureau of the Republic of Cyprus. It would not be feasible at this stage to estimate the related time and cost. Such estimations would be among the tasks of the previously mentioned group.

3.5 CZECH REPUBLIC

This chapter presents estimates of the amount of ICT-related (3.5.a), R&D (3.5.b), and ICT-related R&D procurement (3.5.c) in the Czech Republic. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.5.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.5.e.

Full country data set is provided in Excel format (see Annex 3).

3.5.a   Public procurement of ICT

The total value of ICT public procurement contracts in the Czech Republic in 2011was about **EUR 689.4 million**[98], a decrease of **24%** compared to 2008.

The following table[99] shows the breakdown of the overall ICT contract value, across different areas of public sector activity for 2008 and 2011. Please note that the category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national and the regional level.

Table 3.5.a. 1- Czech Republic ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	6%	6%	-0,1%
Education	6%	1%	5,0%

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[98] Of which 89.32% is above EU threshold while 6.47% is below.

[99] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions are sometimes classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
Electricity	6%	2%	4,0%
Environment	5%	1%	4,2%
Gas, oil and heat	0%	0%	0,1%
General public services	19%	23%	-4,0%
Health	5%	6%	-1,6%
Other	33%	37%	-4,5%
Postal services	5%	8%	-2,6%
Public order and safety	10%	8%	2,0%
Transport	3%	6%	-3,3%
Unknown	4%	2%	1,7%
Water	0%	0%	0,1%
Total	100 %	100 %	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 50% of the total spending and centred on IT services, (31% of the total for the key authorities, e.g. consulting, software development, Internet and support), software package and information systems (24%) and office and computing machinery (15%). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.5.a. 2 - Czech Republic ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Česká republika - Ministerstvo vnitra (Ministry of Interior)	Public order and safety
Státní tiskárna cenin, státní podnik (State Printing)	Other
Česká republika - Ministerstvo práce a sociálních věcí (Ministry of Labour and Social Affairs)	Other
Česká pošta, s.p. (Cezch Post)	Postal Services
ČEZ, a. s.	Electricity
Všeobecná zdravotní pojišťovna České republiky (General Health Insurance Company of the Czech Republic)	Other
Správa železniČní dopravní cesty, státní organizace, (Railway Infrastructure Administration)	Transport
Česká republika - Ministerstvo financí (Ministry of Finance)	Economic and financial affairs
Lesy České republiky, s.p. (Forests of the Czech Republic)	Environment
Česká televize (Czech Tv)	General public services

3.5.b   Public procurement of R&D

The total value of R&D public procurement contracts in the Czech Republic was about **EUR 39.5 million**[100] in 2011, which is almost eight times the expenditure for 2008. A breakdown of R&D procurement contract value across different areas of public sector activity for 2010 and 2011 is provided in *Table 3.5.b. 1*.

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[100] 89.05% is above the threshold while 7.51% is below. 3.44% is unknown.

Table 3.5.b. 1 – Czech Republic R&D - Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	71%	7%	63,4%
Health	1%	18%	-17,4%
Other	24%	75%	-50,4%
Public order and safety	1%	0%	1,1%
Unknown	3%	0%	3,4%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011, are listed in *Table 3.5.b. 2* . Expenditure of these authorities cover the 90% of the total spend and provide construction works (EUR 20 million, 55% of the total amount, e.g. building of the 'Centre of the Region Hana for Biotechnological and Agricultural Research' and the 'Regional Centre of Advanced Technologies and Materials' commissioned by the Palacky University), transmission electron microscope for the use of the University of West Bohemia, laboratory machine and CT scanner. Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.5.b. 2 – Czech Republic R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Univerzita Palackého v Olomouci (Palacky University)	Education
Vysoké učení technické v Brně (University of technology)	Education
Západočeská univerzita v Plzni (University of West Bohemia in Pilsen)	Education
Ústav geoniky AV ČR, v. v. i. (Institute of Geonics)	Other
Ústav organické chemie a biochemie Akademie věd České republiky (Institute of Organic Chemistry and Biochemics)	Education

Centrum výzkumu globální změny AV ČR, v. v. i. (Globe Change Resource Centre)	Other
MATERIÁLOVÝ A METALURGICKÝ VÝZKUM s.r.o. (MATERIAL AND METALLURGICAL RESEARCH Ltd.)	Other
Výzkumný ústav veterinárního lékařství, v.v.i. (Veterinary Research Institute)	Other
Centrum výzkumu Řež s.r.o. (Research Centre Rez Ltd.)	Other
Výzkumný ústav anorganické chemie, a.s. (Research Institute of Inorganic Chemistry)	Other

3.5.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Czech Republic was about **EUR 8.5 million**[101] in 2011, compared to **EUR 3.3 million in 2008**. *Table 3.5.c. 1* provides a breakdown of ICT-related R&D contracts value across different areas of public sector activity for 2008 and 2011.

Table 3.5.c. 1- Czech Republic ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	34%	13%	21,3%
Health	0%	27%	-27,5%
Other	56%	60%	-4,2%
Public order and safety	5%	0%	4,9%
Unknown	6%	0%	5,6%
Total	100%	100%	

The key contracting authorities which contributed most to expenditure in 2011 are listed in *Table 3.5.c. 2*. Expenditure of these authorities cover the 100% of the total spend and centered on laboratory, optical and precision equipment

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[101] 98.11% is above EU threshold while 1.89% is below.

(EUR 4.2 million, especially for the needs of the Institute of Geonics), industrial machinery (EUR 1.8 million, e.g. Institute of Geonics and Technical University of Liberec), and medical equipment (EUR 1.8 million, e.g. tomography devices for the University of West Bohemia). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.5.c. 2 – Czech Republic ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Ústav geoniky AV ČR, v. v. i. (Institute of Geonics)	Other
MATERIÁLOVÝ A METALURGICKÝ VÝZKUM s.r.o. (MATERIAL AND METALLURGICAL RESEARCH Ltd.)	Other
Ústav organické chemie a biochemie Akademie věd České republiky v.v.i. (Institute of Organic Chemistry and Biochemics)	Education
Ústav živočišné fyziologie a genetiky (Institute of Animal Physiology and Genetics)	Unknown
Česká republika - Ministerstvo vnitra (Czech Republic - Ministry of Interior)	Public order and safety
Univerzita Karlova v Praze, 1. lékařská fakulta (Charles University in Prague, 1st Faculty of Medicine)	Education
Univerzita Palackého v Olomouci (Palacky University)	Education
Západočeská univerzita v Plzni (University of West Bohemia in Pilsen)	Education
Technical University of Liberec	Education

3.5.d Collection of procurement data by public authorities

Legal context

Public procurement in the Czech Republic is regulated by a number of laws and decrees transposing the relevant European legislation[102]:

- **Standard procurement regime:**

  o The Public Procurement Act No. 137/2006 Coll., as amended.[103]
  o Act No. 139/2006 Coll., on Concession Contracts and Concession Procedures, as amended.
  o Governmental regulation No. 78/2008 Coll., on Setting up the Financial Limits for the Purposes of the Act on Concession Contracts and Concession Procedures.

- **Procurement in the water, energy, transport and postal services sectors:**

There is no separate legislation to regulate procurement in the water, energy, transport and postal services sectors; the Public Procurement Act No. 137/2006 (above) implements both EU Directives.

- **Defence and security procurement:**
  o Governmental Executive Regulation No. 77/2008, on Setting up the Financial Limits for the Purposes of the Act on Public Contracts, on the Delimitation of Products Procured by the Czech Republic - Ministry of Defence to which Special Financial Limits Applies, and on the Recalculation of Financial Values Laid down in the Act on Public Contracts in Euros into Czech Currency.
  o Ministry Ordinance No. 274/2006 Coll., Laying Down the List of Products in the Field of Defence for Purposes of the Act on Public Contracts.

The standard **national threshold for the publication of public procurement contracts** in the Czech Republic is as follows:

- For supply and services contracts it is CZK 1 000 000 (EUR 39 334)

- For works contacts, it is: CZK 3 000 000 (EUR 118 002)[104]

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[102]For more details on the legal framework in the Republic, see: http://www.portal-vz.cz/en/Systemove-stranky/PageNotFound?aspxerrorpath=/Legislation.

[103]This is the main act implementing both Council Directives stipulating the procedures for the award of public contracts, design contests, supervision over compliance with the Act and the conditions for the maintenance operation of the list of approved economic operators.

[104]There exists yet another category, the so called public contracts with limited value (zakázky malého rozsahu) that should also be announced through the Journal; however, the requirements on the completeness of data on those contracts are less strict since the Public Procurement Act No. 137/2006 Coll. only partially applies to this kind of contracts.

Public procurement data collection process

In the Czech Republic, the Ministry for Regional Development has a legal obligation to announce all public procurement contracts. The Ministry maintains an Information System for public procurement, which fulfils the obligation to publish public procurement data[105]. The Ministry for Regional Development also maintains a list of qualified suppliers that fulfill the basic qualification criteria. Individual suppliers can acquire information from this list during a public procurement procedure.

The public information system that collects and stores data on public procurement is the 'Věstník veřejných zakázek' (Journal for public contracts, (the Journal) and a larger Information System on Public Procurement[106] (the Information System).

Data is entered into the Information System by the contracting authorities themselves; there are no other bodies involved in this task. The forms that a public contractor completes correspond to the forms used on TED for the various corresponding procedures. For contracts below the European thresholds, the same forms are used; however, the procedures are less strictly regulated.

Furthermore, for certain commodities (according to this list[107]), central governmental bodies and organisations related to them are required to make use of the **E-market** (Elektronické tržiště). ICT-related investment is included in this group.

In order to ensure the quality of the information entered by the contracting authorities, the Information System provides for checks on, for example, the logical connection between different CPV codes. Without entering certain data, the contraction authority is not allowed to submit a form.

Coverage of the public procurement database

Both the Journal and the Information System contain information on public contracts above and below the European thresholds. The Information System also contains information on the profile of the respective contracting authority: a set of data, required by the Public Procurement Act. Through this profile, public authorities provide extensive information on themselves and the contracts they wish to conclude.

The exemptions stipulated in Directive 2004/18/EC have been transposed in the Public Procurement Act and are thus applicable to the Journal and the Information System. In contrast to the contracting authorities under the regime of Directive 2004/18/EC, entities operating under Directive 2004/17/EC are not required to enter data for contracts under the European threshold.

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[105] http://www.isvzus.cz/cs
[106] http://www.isvz.cz/ISVZ/Podpora/ISVZ.aspx
[107] http://www.portal-vz.cz/getmedia/5a593c6e-02b7-4684-a3b6-ce7b947d9853/UV-451-priloha-1.pdf.

The data made publicly available covers defence procurement. Since Article 10 of Directive 2004/18/EC exempted those products falling within the scope of Article 346 of the TFU from the effects of the Directive, this exemption is contained in Czech regulation as well. As a result, the contracting authorities are not obliged to apply the Act on Public Contracts to purchases of military products from the list which is contained in Ordinance No. 274/2006 Coll., if the purpose of their procurement is the defence and security of the Czech Republic. Also, the Act on Public Contracts does not have to be applied to public contracts, which are above the threshold on such military products if they are procured for the armed forces of the Czech Republic.

3.5.e   Other information sources or qualitative information

Other information sources: public procurement in all sectors

The Ministry of Regional Development publishes statistical outputs of public procurement and lists of concession contracts that have been concluded in compliance with the Act on concession contracts and the concession procedure. The Czech Statistical Office also publishes statistics about R&D expenditure in individual sectors and regions, expenditure in different spheres of science and various information about the 'high-tech' sector.[108]

Selective information about public procurement can be also found on the pages of the Institution for Protection of Competition, on the portal Business info (national official portal for business and export), on the Portal of Public Administration and on the website of the PPN.[109]

It is possible to search for R&D procurement on the Information System for research, experimental development and innovations. This is the information system of the public administration which administers the collection, elaboration, provision and use of data about research and development. This system is administered by the Council for Research, Development and Innovation[110].

Other information sources: public procurement in the defence sector

According to data provided by the EDA, the 'R&D (including R&T) Expenditure' of the Czech Republic was EUR 20,77 million in 2009 and EUR 20,16 million in 2010. The 'Outsourced Defence Expenditure' was EUR 241 million in 2009 and EUR 257 million in 2010.

The study team has invested a considerable amount of time and effort in trying to organise an interview with the Czech MoD to collect more details on R&D and ICT-related expenditure; however an interview has not been secured.

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[108]http://www.czso.cz/
[109]Institution for Protection of Competition: http://www.compet.cz/; Businessinfo: http://www.businessinfo.cz/cz/; Portal of Public Administration of Czech Republic: http://portal.gov.cz/wps/portal/_s.155/6966/place; Public Procurement Network: http://www.compet.cz/verejne-zakazky/public-procurement-network/
[110]http://www.vyzkum.cz/FrontClanek.aspx?idsekce=610

3.5.f   Future data provision to the European Commission

Data provision by the public procurement authorities

The representative of the Czech Ministry for Regional Development has indicated that the Ministry would be happy to provide the requested data again in the future, also if this is required on an annual basis. The possibilities to ensure the quality of data are relatively small; however from the Ministries' point of view, the existing quality is sufficient. Providing such data will not incur any additional costs.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

The current **BERD** system does not collect data on the proportion of state-funded R&D performed under public procurement contracts. Information is collected on the government's R&D expenditure, and income for related services performed by businesses, but it does not differentiate between procurement contracts or grants. It would be feasible, however, to aggregate the data to reflect this fact. ICT-related and non ICT-related investment can be separated under the current system, but as noted above, this would not distinguish contracts from grants. Information on which departments are funding R&D is available; however, it is not currently included in the BERD survey.

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

Regarding the **GBAORD** data collection by the OECD – NESTI Working Group, the RDISSU (Research, Development and Information Society Statistics Unit) suggested the ICT aspect of public procurement contracts was imprecisely defined, and based on socio-economic goals. It was not clear whether this information was accessible. The RDISSU suggested that within the Czech Republic, higher education institutions and public research organisations do not award public procurement contracts (that would thus not be relevant in a GBAORD classification), but are themselves the recipients of grants and contracts.

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

Information regarding alternative methodology and data collection systems is forthcoming.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

Information regarding alternative methodology and data collection systems is forthcoming.

3.6 DENMARK

This section presents estimates of the amount of ICT-related (sub-section 3.6.a), R&D (sub-section 3.6.b), and ICT-related R&D procurement (sub-section 3.6.c) in Denmark. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, as gathered by the private tender alert provider Mercell.

Procurement contract data collection by the national public authorities is illustrated in sub-section 3.6.d, while the availability of qualitative information, which can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in sub-section 3.6.e.

Full country data set is provided in Excel format (see Annex 3).

3.6.a   Public procurement of ICT

The total value of ICT public procurement contracts in Denmark in 2011 was about **EUR 1.27 billion**[111], a decrease of **9%** compared to 2008.

The following table[112]shows the breakdown of the overall ICT contract value, across different areas of public sector activity for 2008 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[111] Of which 93.24% is above EU threshold and 2.54% is below.

[112] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions are sometimes classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.6.a. 1 - Denmark ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	6%	16%	-10,0%
Education	1%	1%	0,2%
Electricity	0%	0%	0,1%
Environment	0%	1%	-0,8%
Gas, oil and heat	0%	0%	-0,2%
General public services	18%	35%	-17,0%
Health	8%	15%	-6,9%
Other	30%	17%	13,1%
Postal services	0%	0%	-0,2%
Public order and safety	1%	0%	1,0%
Transport	31%	3%	28,0%
Unknown	4%	11%	-7,5%
Water	0%	0%	0,0%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 72% of the total spending and centred on transport equipment and auxiliary products to transportation (40% of the total for the key authorities or EUR 366 million), postal and telecommunications services (36%) and IT services (11%). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.6.a. 2 - Denmark ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Banedanmark (Rail Net Denmark)	Transport
Statens og Kommunernes Indkøbs Service A/S (National Procurement Service)	Other
Økonomistyrelsen	Economic and financial affairs
Aarhus Kommune (Aarhus)	General public services
Medicoteknik, Region Syddanmark (Biomedical engineering, Region of Southern Denmark)	Health
Region Nordjylland, Region Midtjylland, Region Syddanmark, Region Sjælland (North Jutland Region, Central Denmark Region, Region of Southern Denmark, Zealand)	Health
Dong Energy A/S	Electricity
Region Hovedstaden, Koncern Indkøb (Capital Region, Group Purchase)	Health
Rigspolitiet v/SINE-sekretariatet (National Police)	Public order and safety
Udenrigsministeriet (Ministry of Foreign Affairs)	General public services

3.6.b   Public procurement of R&D

The total value of R&D public procurement contracts in Denmark was about **EUR 8.7 million**[113] in 2011, a 30% decrease compared to 2008. A breakdown of R&D procurement contract value across different areas of public sector activity for 2008 and 2011 is provided in *Table 3.6.b. 1*.

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[113] 41.78% is above the threshold while 5.6% is below. 52.62% is unknown.

Table 3.6.b. 1 – Denmark R&D - Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	2%	0%	1,5%
Education	34%	10%	24,6%
General public services	4%	0%	4,3%
Health	42%	4%	37,6%
Other	16%	86%	-69,8%
Unknown	2%	0%	1,7%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.6.b. 2*. Expenditure of these authorities cover the 90% of the total spend and include medical equipment, pharmaceuticals and personal care products (EUR 1.9 million, acquired by the Staten Serum Institute, the University of Copenhagen and the Bomedical Engineering, Region of Southern Denmark) and industrial machinery (EUR 1.8 million, e.g. freezing equipment acquired by the Staten Serum Institute). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.6.b. 2 – Denmark R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Statens Serum Institut	Health
Aarhus University	Education
Københavns Universitet (University of Copenhagen)	Education
Medicoteknik, Region Syddanmark (Biomedical engineering, Region of Southern Denmark)	Health
Forsknings- og Innovationsstyrelsen (Research and Innovation)	Other

Det Strategiske Forskningsråd (DSF), Styrelsen for Forskning og Innovation (Strategic Research (DSF), the Department of Research and Innovation)	Other
Styrelsen for Forskning, Innovation og Videregående Uddannelser	Other
Risø DTU	Education
Central Denmark EU Office	General public services
Aalborg University	Education

3.6.c Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Denmark was about **EUR 1.9 million**[114] in 2011. *Table 3.6.c. 1* provides a breakdown of ICT-related R&D contracts value across different areas of public sector activity for 2008 and 2011.

Table 3.6.c. 1- Denmark ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	100%	100%	0,0%
Total	100%	100%	

The key contracting authorities, which contributed most to expenditure in 2011 are listed in *Table 3.6.c. 2*. Expenditure of these authorities cover the 100% of the total spend and centered on laboratory, optical and precision equipment (EUR 1.2 million, e.g. microscopes for the use of the Aarhus University), medical equipment, pharmaceuticals and personal care products (EUR 0.5 million, e.g. Aarhus University and University of Copenhagen), and research and development services, e.g. University of Copenhagen. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

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[114] 14.86% of the amount is below EU threshold and 85.14% is unknown.

Table 3.6.c. 2 -Denmark ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Aarhus University	Education
Københavns Universitet (University of Copenhagen)	Education
Aalborg University	Education
DTU (Technical University of Denmark)	Education

3.6.d   Collection of procurement data by public authorities

Legal context

The legal context of public procurement in Denmark can be split into two main parts: the implementation of EU Directives and national legislation.

a)   Implementation of EU Directives

The EU directives on public procurement (Directive 2004/17/EC and Directive 2004/18/EC) have been implemented into Danish law 'as is'. Indeed, Danish law states that the directives are directly applicable. The two directives have been implemented through the governmental order numbers 936 and 937 respectively.

b)   National Legislation

The Danish national legislation contains publication obligations for public procurement between the following thresholds[115]:

- Procurement of supplies and services above the national threshold of DKK 500 000 (EUR 67 000) and below the EU thresholds of DKK 968 383 (EUR 130 000) and DKK 1 489 820 (EUR 200 000) for procurement under Directive 2004/17/EC or DKK 2 979 640 (EUR 400 000) for procurement under Directive 2004/18/EC.
- Procurement of works above the national threshold of DKK 3 000 000 (EUR 400 000) and below the EU threshold of DKK 37 245 500 (EUR 5 000 000).

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[115] For the applicable EU thresholds in DKK, see:
http://ec.europa.eu/internal_market/publicprocurement/rules/current/index_en.htm

The national legislation on public procurement includes:

- Public work contracts below the EU threshold that are governed by the Danish Act on Tender Procedures for Public Work Contracts, law number 338 of 18 May 2005. It entered into force on September 2005 and replaces law number 450 of 7 June 2001 on tendering procedures for work contracts and governmental order number 595 of 9 July 2002.[116]
- The Danish Act on public procurement ('*Tilbudsloven*') of 7 December 2007, which enacts law number law number 338 of 18 May 2005 and the law number 572 of 6 June 2007, which abrogates chapter 7 of 'Tilbudsloven', concerning complaints and litigation.
- The Order on some vendors' use of private contracts under the Act on inviting tenders in the construction sector '*Bekendtgørelse om visse udbyderes anvendelse af underhåndsbud efter lov om indhentning af tilbud i bygge- og anlægssektoren*'Act number 817 of 23 August 2005, further detailing § 12, concerning certain providers' use of private contracts.
- Act number 280 of 23 March 2012 on call for tenders of goods and services on Udbud.dk (i.e. the new Danish public procurement portal).

The previously mentioned Act on Tender Procedures for Public Work Contracts applies to contracting authorities as defined in Directive 2004/18/EC, any other entity or body receiving public grants and contractors who seek offers from subcontractors in relation to the award of public works from a public contracting authority.

It should be noted that changes were proposed to the Danish public procurement legislation. In August 2012, the Danish Competition and Consumer Authority completed a public consultation on amending the publishing requirements for so-called Annex II B services which include contracts in health and social care, education, legal assistance and hospitality services. The proposed act was part of the implementation of the Agreement on Municipal Finances for 2013.[117] The result of this process is that from 1 January 2013, services that fall under the Annex II B category are no longer subject to the Danish procurement laws, regardless of their value. However, they are still subject to the principles laid out in the EU treaties, such as equal treatment, transparency, etc. Whilst the procurement, regardless of size, is not subject to the Danish legislation on procurement, the procurement authority emphasises that EU legislation in the area of such services still applies to procurement above the EU threshold.

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[116]http://www.kfst.dk/en/udbudsomraadet/udbudsregler-og-vejledninger-mm/legislation/
[117]http://www.udbudsportalen.dk/Ret-og-regler/Direktiver-love-og-regler/Udbudsregler/Tilbudsloven-Danske-regler-for-udbud/Ophavelse-af-annonceringspligten-for-bilag-II-B-tjenesteydelser/

Public procurement data collection process

Prior to 1 March 2012, the official public procurement portal in Denmark was www.udbudsavisen.dk. This portal was open to all public procurement regardless of whether the amount was above or below the national and EU thresholds or whether it was undertaken by central or local government. Yet, there was no legal obligation for contracting authorities to publish tenders on this portal.

On 1 March 2012, the new Danish public procurement portal www.udbud.dk was launched and it replaced the previous portal. With the launch of the new portal, Danish contracting authorities were obliged to publish tenders above the national thresholds on the portal. Tenders below the national thresholds are, however, not covered by the publication obligation, although publication is recommended.

The Danish Competition and Consumer Authority submits public procurement notices above the EU thresholds to the Publications Office of the European Union for a publication in the OJ, i.e. the TED database.

Defence procurement is carried out by DALO, which previously published a procurement bulletin. However, this has been abandoned following a recommendation from DALO. DALO procurement, which requires publication under European legislation (Directives 2004/18/EC and 2009/81/EC),is published on the national portal and on TED.

Coverage of the public procurement database

The data collected on the new national public procurement portal includes:

- CPV codes, which are used for all procurement;
- the type of document;
- the contracting authority name;
- the contracting authority type;
- the type of contract;
- the title of the contract in the native language;
- sector classification;
- initial estimated total value of the contract excluding VAT; and
- total final value of the contract excluding VAT.

3.6.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

Relevant sources of information include:

- The new Danish public procurement portal[118]
- Danish Competition and Consumer Authority[119]
- The old Danish public procurement portal[120]
- Ministry of Business and Growth[121]
- The Complaints Board for public procurement[122]
- A page giving access to legislative information (including circulars, Acts, notices, laws, etc.[123]

Other information sources: public procurement in the defence sector

Relevant sources of information include:

- DALO[124]
- The new Danish public procurement portal[125]

The Danish MoD explained that procurement in the defence sector in Denmark is subject to the same legal obligations as any other procurement, meaning that, based on the value, there is an obligation to announce the procurement on the udbud.dk portal.

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[118] www.udbud.dk
[119] http://www.kfst.dk/en/
[120] http://www.udbudsportalen.dk/
[121] http://www.evm.dk/om-ministeriet/udbud
[122] http://www.klfu.dk/
[123] https://www.retsinformation.dk
[124] http://forsvaret.dk/FMT/eng/Pages/default.aspx
[125] www.udbud.dk

3.6.f Future data provision to the European Commission

Data provision by the public procurement authorities

In future, it will be possible to obtain data on public procurement for Denmark from national authorities due to the newly created central portal www.udbud.dk. The conditions of potential data provision to the European Commission would have to be negotiated with the Danish Competition and Consumer Authority.

The private tender alert data provider Mercell, which has provided below-EU-threshold data for Denmark in the framework of this study, has declared that it is willing to provide similar data sets to the European Commission for a fee.

Data provision by the MoD

Denmark is not a member of the EDA and therefore does not submit any statistical data to this entity.

The Danish MoD explained that defence procurement in Denmark has to be announced on the Danish Portal udbud.dk, just like procurement by other public institutions. If data can be obtained from the portal, this will include the data relating to defence procurement. Direct data provision is not possible.

Data provision by the national statistical office

Statistics Denmark regularly publishes data on R&D expenditure in Denmark.[126] The published statistics do not differentiate between R&D grants and procurement.

No additional information could be obtained from the Statistics Denmark.

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[126]http://www.dst.dk/en/Statistik/emner/forskning-udvikling-og-innovation/forskning-og-udvikling.aspx

3.7 ESTONIA

This chapter presents estimates of the amount of ICT-related (3.7.a), R&D (3.7.b), and ICT-related R&D procurement (3.3.a) in Estonia. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.7.d, while the availability of qualitative information that can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in paragraph 3.7.e.

Full country data set is provided in Excel format (see Annex 3).

3.7.a   Public procurement of ICT

The total value of ICT public procurement contracts in Estonia in 2011 was about **EUR 86.7 million**[127], an increase of **32%** compared to 2008.

The following table[128] shows the breakdown of the overall ICT contract value, across different areas of public sector activity for 2008 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

Table 3.7.a. 1- Estonia ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	24%	7%	17,2%
Education	20%	10%	9,2%

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[127] Of which 65.3% is above EU thresholds, 16.3% below, and the remaining 18.3% is unknown.

[128] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions are sometimes classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
Environment	1%	1%	0.2%
General public services	17%	24%	-7.2%
Health	14%	22%	-8.5%
Other	12%	17%	-4.3%
Postal services	3%	0%	2.6%
Public order and safety	6%	1%	5.3%
Transport	0%	1%	-1.3%
Unknown	3%	17%	-13.3%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011, are listed in the table below. Expenditure of these authorities covered 63% of the total spending and centred on office and computing machinery (24% of the total for the key authorities or EUR 7.7 million), IT services (23% or EUR 7.3 million) and electrical machinery and apparatus (20% or EUR 6.5 million).

Table 3.7.a. 2 - Estonia ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Tallinna Tehnikaülikool (Tallin University of Technology)	Education
Sihtasutus KredEx (KredEx)	Economic and financial affairs
Maksu- ja Tolliamet (Tax and Customs Board)	Economic and financial affairs
Siseministeerium (Ministry of Interior)	Public order and safety
Registrite ja Infosüsteemide Keskus (Centre of Registers and Information System)	General public services
Sihtasutus Tartu Ülikooli Kliinikum (Tartu University Hospital Foundation)	Health

Contracting authority or entity	Public sector area
Statistikaamet (Statistical Offcie)	General public services
Tartu Ülikool (University of Tartu)	Education
sihtasutus Põhja-Eesti Regionaalhaigla (North Estonian Regional Hospital Foundation)	Health
Tervise Arengu Instituut (Institute of Health Development)	Health

3.7.b   Public procurement of R&D

The total value of R&D public procurement contracts in Estonia was about **EUR 44 million**[129] in 2011, with a 144% increase compared to 2008. A breakdown of R&D procurement contract value across different areas of public sector activity for 2011 is provided in *Table 3.7.b.1*.

Table 3.7.b.1 – Estonia R&D - Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and Financial Affairs	0%	1%	-1.0%
Education	70%	62%	7.8%
Environment	2%	0%	1.7%
General public services	14%	11%	3.6%
Health	0%	11%	-11.2%
Other	14%	14%	-0.8%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011, are listed in *Table 3.7.b. 2*. Expenditure of these authorities cover the 100% of the total spend and include network servers (EUR 2 million, for the use of the Tallin

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[129] 8.5% of the contract value is above EU thresholds, and 23.4% below. It was not possible to classify the remaining 68.1% of the value by EU thresholds.

University of Technology), laboratory furniture (EUR 0.8 million for the Estonian Biocentre) and architectural, construction, engineering and inspection services (EUR 0.6 million for the Estonian Academy of Arts and the Tartu Observatory). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.7.b. 2 – Estonia R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Tallinna Tehnikaülikool (Tallin University of Technology)	Education
Tartu Ülikool (University of Tartu)	Education
Eesti Biokeskus (Estonian Biocentre)	Education
Eesti Hariduse ja Teaduse Andmesidevõrk (Estonian Education and Research Network EENet)	Education
Eesti Maaülikool (Estonian University of Life Sciences)	Education
Eesti Töötukassa (Estonian Unemployment Insurance Fund)	Other
Mehhatroonika Assotsiatsioon (Association for Mechatronics)	General public services
Registrite ja Infosüsteemide Keskus (Centre of Registers and Information Systems)	General public services
Statistikaamet (Statistical Insitute)	General public services
Haridus- ja Teadusministeerium (Ministry of Education and Research)	Education

3.7.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Estonia was **EUR 34.0 million**[130] in 2011, about four times more than in 2008. *Table 3.7.c.1* provides a breakdown of ICT-related R&D contracts value across different areas of public sector activity for 2011.

Table 3.7.c.1- Estonia ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and Financial Affairs	0%	2%	-2.2%
Education	68%	34%	34.1%
Environment	2%	0%	1.8%
General public services	15%	8%	6.7%
Health	0%	25%	-24.4%
Other	15%	31%	-16.1%
Total	100%	100%	

The key contracting authorities, which contributed to the above expenditure levels for 2011, are listed in *Table 3.7.c.2*. Expenditure of these authorities cover the 100% of the total spend and centered on software packages and information systems, e.g. network servers for Tallin University of Technology and architectural, construction and engineering services, e.g. Tartu Observatory.

Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

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[130]Of which 5.9% and 21.9% are above and below Eu thresholds respectively. It was not possible to classify the remaining 72.2% of the value by EU thresholds.

Table 3.7.c.2 -Estonia ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Tallinna Tehnikaülikool (Tallin University of Technology)	Education
Tartu Ülikool (University of Tartu)	Education
Eesti Hariduse ja Teaduse Andmesidevõrk (Estonian Education and Research Network EENet)	Education
Eesti Töötukassa (Estonian Unemployment Insurance Fund)	Other
Mehhatroonika Assotsiatsioon (Association for Mechatronics)	General public services
Eesti Maaülikool (Estonian University of Life Sciences)	Education
Registrite ja Infosüsteemide Keskus (Centre of Registers and Information Systems)	General public services
Statistikaamet (Statistical Insitute)	General public services
Põllumajanduse Registrite ja Informatsiooni Amet (Agricultural Registers and Information Board)	Other
Siseministeeriumi infotehnoloogia- ja arenduskeskus (Ministry of Interior)	Other

3.7.d   Collection of procurement data by public authorities

Legal context

The Estonian public procurement regime is governed by national procurement legislation implementing the relevant European Community directives on public procurement (Directives 2004/17/EC, 2004/18/EC and 2009/81/EC):

- **Standard procurement regime:**[131]
  - Public Procurement Act (RT I, 14.02.2012, 2).

- **Procurement in the water, energy, transportation and postal sectors:**
  - Public Procurement Act (RT I, 14.02.2012, 2).[132]

- **Defence and security procurement:**
  - Public Procurement Act (RT I, 14.02.2012, 2).[133]

The standard **national threshold for the publication of public procurement** in Estonia is EUR 10 000 for public supply and service contracts and EUR 30 000 for public works contracts.

Public procurement data collection process

In Estonia, data on public procurement is collected and stored in the State Public Procurement Register ('the Register'). The Register was established, and the statutes of the Register adopted, by the Government of the Republic. The chief processor of the Register is the Ministry of Finance. The purpose of the Register is to ensure the publication of notices in the field of public procurement and forward such notices to the Publications Office of the European Union; disclose the results of appeal proceedings; allow for electronic public procurement proceedings; ensure the gathering of public procurement statistics and disclose other relevant information about public procurement.

The contracting authority is responsible for the correctness of the data submitted to the Register. Should the data presented by the contracting authority fail to fulfil the requirements of the Estonian Public Procurement Act, the register will ask the contracting authority to correct the data before the register publishes the data.

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[131]The most common type of procurement procedure is the open procedure whereby any interested person compliant with certain general requirements provided by the Public Procurement Act may submit a tender.

[132]In awarding a public contract in the utilities sector, the contracting authority may, at its own discretion, use an open procedure, a restricted procedure or a negotiated procedure with prior publication of a contract notice.

[133]If a contracting authority operating in the field of national defence awards a contract for defence purposes, the contracting authority shall apply the procedure provided for in the Public Procurement Act to the extent that is in accordance with Article 346 of the TFU and the provisions of the legislation established on the basis thereof

Coverage of the public procurement database

The register gathers information regarding notices in the field of public procurement, results of appeal proceedings and information about the pursuance of public procurement proceedings. The Estonian Public Procurement Act stipulates which data has to be presented to the State Public Procurement Register by the contracting authority and the Public Procurement Appeals Committee.

At sub-national level the public authorities are not involved in data collection. Below national thresholds a so-called simplified procurement procedure must be organised. This involves the submission of a simplified contract notice to the public procurement register, reference to an e-mail address or website where procurement documents can be retrieved or where there is an option to upload such documents to the register and the submission of a public procurement report after termination of the procedure.

The Public Procurement Act provides that the contracting authority is not obliged to follow a certain procurement procedure and therefore no data is submitted to the state procurement register where the EU exemptions apply, and in addition where a contract is awarded with the aim to offer or operate electronic communications networks or provide an electronic communications service to the public for the purposes of the Electronic Communications Act[134].

3.7.e   Other information sources or qualitative information

Other information sources: public procurement in all sectors

There are no other sources providing public procurement data in Estonia other than the State Public Procurement Register, which includes statistical information established by the Ministry of Finance.

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[134]An electronic communications service for the purposes of the Electronic Communications Act is a service which consists wholly or mainly in transmission or conveyance of signals over the electronic communications network under the agreed conditions.

Other information sources: public procurement in the defence sector

According to the data provided by the EDA[135], the 'R&D (including R&T) Expenditure' of Estonia was EUR 320 000 in 2009 and EUR 740 000 EUR in 2010. Estonia did not report any 'Outsourced Defence Expenditure' for 2009 or 2010.

In Estonia, defence expenditure statistics are calculated and classified on the basis of existing accounting information and provided annually to the EDA by the Estonian MoD.

The defence R&D expenditure for 2012 was EUR 1,4 million (the vast majority is outsourced to suppliers from outside the Estonian MoD and Estonian Defence Forces). In 2012, EUR 0,5 million of the 'outsourced' R&D defence expenditure was spent on ICT. In 2012, EUR 28 million from the procurement budget of the Estonian MoD was spent on ICT.

There is no direct space-related expenditure in the defence budget in Estonia.

3.7.f   Future data provision to the European Commission

Data provision by the public procurement authorities

Our contacts at the Estonian Ministry of Finance have informed us that the register would not have enough resources to provide data to the European Commission on a regular basis, e.g. on an annual basis.

Data provision by the MoD

The representative of the Estonian MoD suggested that an agreement among EDA Member States would need to be established regarding the purpose of defence procurement data and the ways and means of providing this in the future. The most relevant cost would be the retrieval of relevant information from existing data.

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[135]Defence Data: EDA participating Member States in 2010.

Data provision by the national statistical institute

The study team has been in contact with the Estonian Statistical Board, which has indicated that they have information regarding R&D procurement and the funding sources of R&D procurement and would be happy to present existing statistical data. The Estonian Statistical Board does not have resources to extract ICT-related R&D procurement statistics based on national account aggregates.

The study team has not received more specific insights from the Estonian Statistical Board on the possible methodologies to maintain and update relevant expenditure statistics in the future.

3.8 FINLAND

This chapter presents estimates of the amount of ICT-related (3.8.a), R&D (3.8.b), and ICT-related R&D procurement (3.8.c) in Finland. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.8.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.8.e.

Full country data set is provided in Excel format (see Annex 3).

3.8.a   Public procurement of ICT

The total value of ICT public procurement contracts in Finland in 2011 was about **EUR 801.5 million**[136], almost three times the expenditure for 2008 - **EUR 360 million**.

A breakdown of ICT contract value across different areas of public sector activity for 2008 and 2011 is given in Table 3.8.a. 1[137]. Please note that the category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national and the regional level.

Table 3.8.a. 1- Finland ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	0%	3%	-2,6%
Education	1%	3%	-2,1%
Electricity	2%	3%	-0,3%

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[136] 98.56% of the total amount is above EU threshold while 0.6% is below and 0.84% is unknown.
[137] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
Gas, oil and heat	0%	0%	0,4%
General public services	60%	40%	20,4%
Health	5%	13%	-8,2%
Other	7%	12%	-4,6%
Public order and safety	11%	0%	11,4%
Transport	4%	6%	-2,0%
Unknown	8%	21%	-12,4%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in Table 3.8.a. 2. Expenditure of these authorities covered 72% of the total spending and centred on office and computing machinery, equipment and supplies (35% of the total for the key authorities, e.g. purchase of computer and information technology equipments and accessories by KL-Kuntahankinnat Oy,Espoon kaupunki, Hansel Oy), IT services (32%), postal and telecommunications services (22%). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.8.a. 2- Finland ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Hansel Oy (Hansel)	General public services
Tampereen kaupunki (City of Tampere)	General public services
Suomen Erillisverkot Oy (Finnish Networks Ltd.)	Public order and safety
Hätäkeskuslaitos (Emergency Response Centre)	Unknown

Contracting authority or entity	Public sector area
Espoon kaupunki (City of Espoo)	General public services
KL-Kuntahankinnat Oy (KL-Kuntahankinnat Ltd)	General public services
Liikennevirasto (Transport Agency)	Transport
Helsingin ja Uudenmaan sairaanhoitopiiri (The Helsinki and Uusimaa Hospital District)	Health
Kansaneläkelaitos (The Social Insurance Institution)	Other
Tullihallitus (National Board of Customs)	General public services

3.8.b   Public procurement of R&D

The total value of R&D public procurement contracts in Finland was about **EUR 10.7 million**[138] in 2011, 12% more than in 2008. A breakdown of R&D contract value across different areas of public sector activity is given in Table 3.8.b. 1 for 2011.

Table 3.8.b. 1- Finland R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	27%	8%	19,2%
Environment	0%	33%	-33,3%
General public services	22%	0%	22,3%
Health	16%	29%	-13,5%
Other	13%	29%	-16,0%
Unknown	21%	0%	21,2%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in Table 3.8.b. 2. These cover the 100% of the total spend. Relevant

[138] 92.03% is above EU threshold while 6.47% is below. 1.5% is unknown.

contracts include laboratory optical and precision equipment (EUR 3.8 million, 35.5% of the total amount, acquired by the Technical Research Centre, the Agriculture and Agrifood Research and the University of Oulu), industrial machinery (2.5 million), IT services (2.1 million), medical equipment (EUR 1.2 million, e.g. the purchase of a X-ray equipment for the Helsinki and Uusimaa Hospital Districts) and architectural, construction, engineering and inspection services (EUR 0.5 million). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.8.b. 2-Finland R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Helsingin ja Uudenmaan sairaanhoitopiiri (The Helsinki and Uusimaa Hospital District)	Health
Teknologian tutkimuskeskus VTT (VTT Techinical Research Centre)	Other
Varsinais-Suomen sairaanhoitopiirin kuntayhtymä (Southwest Finland Health Care District)	Health
Pirkanmaan ammattikorkeakoulu Oy (Tampere University of Apllied Science)	Other
Pirkanmaan sairaanhoitopiirin kuntayhtymä (Pirkanmaa Hospital District)	Health
Maa- ja elintarviketalouden tutkimuskeskus (Agriculture and Agrifood Research)	Other
Oulun yliopisto (University of Oulu)	Education
Lappeenrannan Teknillinen Yliopisto (Lappeenranta University of Technology)	Education
Oulun yliopisto, Biocenter Oulu (University of Oulu, Biocenter Oulu)	Education
Itä-Suomen yliopisto (University of Eastern Finland)	Education

3.8.c   Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Finland was about **EUR 547 000**[139] in 2011, a 48% decrease compared to **EUR 1 million** in 2008. A breakdown of ICT-related R&D contracts value across different areas of public sector activity for 2008 and 2011 is given in Table 3.8.c. 1*.*

Table 3.8.c. 1- Finland ICT–related R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	3%	0%	2,6%
Education	16%	92%	-75,9%
Environment	0%	0%	0,1%
General public services	18%	0%	18,5%
Health	18%	0%	18,1%
Other	42%	8%	33,9%
Unknown	3%	0%	2,7%
Total	100%	100%	

Expenditure of the key contracting authorities cover the 100% of the total spend and centered on The contracting authorities that contributed to the above expenditure levels are the Pirkanmaa Hospital District (Pirkanmaan sairaanhoitopiiri) and the Lappeenranta University of Technology, which purchased medical equipment and industrial machinery respectively. This does not mean the institutions or organisations are in general major contributors to ICT-related R&D public procurement contracts in the country. In fact, these might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

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[139] Of which 43.86% is above EU threshold while 56.14% is below.

Table 3.8.c. 2 - Finland ICT –related R&D 2011 – Key contracting authorities

Contracting authorityor entity	Public sector area
Pirkanmaan sairaanhoitopiirin kuntayhtymä (Pirkanmaa Hospital District)	Health
Lappeenrannan Teknillinen Yliopisto (Lappeenranta University of Technology)	Education
Oulun yliopisto, Biocenter Oulu (University of Oulu, Biocenter Oulu)	Education
Itä-Suomen yliopisto (University of Eastern Finland)	Education

3.8.d Collection of procurement data by public authorities

Legal context

Public procurement in Finland is regulated by a number of laws and decrees that transpose the relevant European legislation[140]:

- **Standard procurement regime:**
  - The Public Procurement Act (348/2007)[141],
  - The Government Decree on public procurement (614/2007)[142], which both implement Directive 2004/18/EC.

- **Procurement in the water, energy, transportation and postal sectors:**
  - Act on public contracts in the utility sectors (349/2007)[143], which implements Directive 2004/17/EC.

- **Defence and security procurement:**
  - Act on Public Procurement in Defence and Security (29.12.2011/1531)[144], which implements Directive 2009/81/EC.

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[140]For more details on the legal framework in Finland, see: http://www.finlex.fi/en/. Practical guidance is provided in a manual published by the federal authorities: http://www.publicprocurement.be/portal/page/portal/pubproc/beep%20algemeen/handleiding%20overheidsopdrachten2/manuel23f.doc

[141]http://www.finlex.fi/en/laki/kaannokset/2007/en20070348.pdf

[142]http://www.finlex.fi/fi/esitykset/he/2006/?_offset=220

[143]http://www.finlex.fi/fi/laki/ajantasa/2007/20070349

[144]http://www.finlex.fi/sv/laki/ajantasa/2011/20111531

The standard **national threshold for the publication of public procurement** in Finland is:

- EUR 30 000 for public supply contracts and most public service contracts;
- EUR 100 000 for healthcare, social services and some educational services [contracts]; and
- EUR 150 000 for a public works contract.

Public procurement data collection process

In Finland, data on public procurement is collected and stored in the Public Procurement Register HILMA. HILMA is a project launched by the Ministry of Employment and Economy. The aim of the project is to save costs and enhance competition. The Finnish contracting authorities (including municipalities and even bodies governed by public law) have an obligation to publish all procurement notices concerning public contracts above a certain national threshold (as stated above: EUR 30 000 for supplies and most services, EUR 150 000 for works) via the dedicated HILMA web-based portal[145]. The HILMA portal provides forms for nearly all procurement notices within national procurement legislation and the EU procurement directives. A connection with the TED system is established so that procurement notices made within the HILMA portal are automatically transferred to the TED-system and EU publications office (when contracts are above the thresholds stated in the directives). The HILMA portal keeps all relevant information regarding procurement notices in its databases to which the administrators have access.

The HILMA portal has been designed to allow administrators the possibility of collecting data from the databases using different search criteria, for instance, time frames, types of contracting authorities, types of notices, types of procedures etc. The portal creates an Excel/csv-file based on the search criteria. The datasheet can then be filtered and worked on. These datasheets and the information therein are then used by the government to inform the Commission about Finnish public procurement statistics. This kind of information is also very useful in assessing the economic and statistical effects of different approaches adopted in the procurement legislation.

Historical information on published notices is not generally available. However, historical data from the portal is transferred instead to the FSD (Finnish Social Science Data Archive) located at the University of Tampere.

Coverage of the public procurement database

The HILMA Public Procurement Register covers all contracting authorities, governmental authorities and public departments, local government authorities and departments, legal persons governed by public law, European and international institutions and contracting authorities in utility sectors.

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[145] www.hankintailmoitukset.fi

Publication is obligatory for all contracts with a value above the national threshold in accordance with the Finnish Act on Public Procurement. Breach of the obligation to notify constitutes a substantial procedural defect, which can result in the annulment by the Market Court of a contract. The data is added by individual contracting authorities, which are solely responsible for the correctness of the data. Contract notices published on the HILMA website are either in Finnish or in Swedish.

The HILMA Public Procurement Register covers data regarding defence procurement. Procurement notices in the defence sector have been added to the portal since the entry into force of the new defense procurement legislation,i.e. from 2012. It covers both data regarding EU-wide procurement and procurement that does not exceed the international threshold established periodically by the European Commission pursuant to Article 69 of Directive 2004/17/EC. One limitation regarding the range of information contained in the HILMA portal comes from the scope of application of Finnish procurement legislation: contracts that are excluded from the scope of application, such as contracts in the field of telecommunications, security contracts and contracts awarded pursuant to international rules (see above), are usually not found in the HILMA portal. However, some contracting authorities may still want to publish a contract even when the procurement procedure is connected to a contract that is excluded from the procurement Directives.

Public procurement contracts falling under the national thresholds (see above for a list of national thresholds) are not included in the HILMA Register.

3.8.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

The Public Procurement Advisory Unit[146] is maintained by the Association of Finnish Local and Regional Authorities and the Ministry of Employment and the Economy. The Public Procurement Advisory Unit focuses on providing contracting authorities with information and advice on procurement. It also advises businesses on issues relating to the application of procurement legislation.

There are a number of private providers in Finland that collect and store public procurement data. Since the public authorities were willing to share their data with us, we did not pursue the services of a private provider for Finland.

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[146] http://www.hankinnat.fi

Other information sources: public procurement in the defence sector

According to the data provided by the EDA[147], the 'R&D (including R&T) Expenditure' of Finland was EUR 44,12 million in 2009 and EUR 38,27 million in 2010. According to the same source, in Finland the'Outsourced Defence Expenditure'was EUR 350 million in 2009 and EUR 366 million in 2010.

The study team established contact with the Finnish MoD to gain further information and validate collected data. The Finnish MoD has expressed their willingness to cooperate on this study and to interview with our study team. However, despite regular requests, it was not possible to arrange an interview.

3.8.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Finnish authorities would be willing to provide the European Commission with public procurement data in the future, e.g. on an annual basis. The authorities have stressed, however, that this would require significant resources. At the moment there are no projects planned by the public authorities that would include any measures for ensuring the quality of such data, which has made it impossible for the authorities to provide us with the estimated costs of ensuring the quality of these data.

Data provision by the MoD

The study team established contact with the Finnish MoD in order to gain further information and validate collected data. Unfortunately, the Finnish Mod wasn't available to cooperate with the study.

Data provision by the national statistical institute

Statistics Finland[148] keeps information in accordance with Regulation (EU) 995/2012[149]. However, this information does not include specific procurement expenditure in the area of ICT and there are no plans to extend their surveys. More specifically, for GBAORD statistics, Statistics Finland publishes data according to the NABS classification and its socio-economic objectives. However, again none of those covers ICT.

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[147]Defence Data: EDA participating Member States in 2010.
[148] In Finnish: Tilastokeskus, see: http://www.stat.fi/index_en.html.
[149] Commission Implementing Regulation (EU) No 995/2012 of 26 October 2012 laying down detailed rules for the implementation of Decision No 1608/2003/EC of the European Parliament and of the Council concerning the production and development of Community statistic on science and technology (OJ L 299, 27.10.2012. p. 18) .

Therefore, in order to obtain ICT-related R&D procurement data, a separate question should be added to their annual survey.

Our contacts at Statistics Finland could not give our study team any further input with regard to whether it would be feasible to adapt the methods and tools used to develop statistics to extract (ICT-related) R&D procurement data. In addition, the interviewees could not provide information on any potential process and the expected additional burdens and costs for developing (ICT-related) R&D procurement statistics.

3.9 FRANCE

This chapter presents estimates of the amount of ICT-related (3.9.a), R&D (3.9.b), and ICT-related R&D procurement (3.9.c) in France. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.9.d, while the availability of qualitative information that can complement the estimates presented in the report – including value of defence contracts, when available - is discussed in paragraph 3.9.e.

Full country data set is provided in Excel format (see Annex 3).

3.9.a   Public procurement of ICT

The total value of ICT public procurement contracts in France in 2011 was about **EUR 9.81 billion**[150], 2% less than for 2008.

A breakdown of ICT contract value across different areas of public sector activity for 2008 and 2011 is given in *Table 3.9.a. 1*[151]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national and the regional level.

Table 3.9.a. 1 - France ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	3%	4%	-1,0%
Education	7%	6%	1,8%

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[150] Of which 95.97% is above EU threshold and 1.72% is below.
[151] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
Electricity	5%	13%	-8,6%
Environment	20%	1%	19,0%
Gas, oil and heat	0%	0%	-0,5%
General public services	21%	26%	-5,0%
Health	7%	9%	-2,1%
Other	22%	19%	3,6%
Postal services	1%	2%	-1,7%
Public order and safety	1%	2%	-0,4%
Transport	4%	6%	-1,7%
Unknown	8%	12%	-4,0%
Water	1%	1%	0,5%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.9.a. 2*. Expenditure of these authorities covered 42% of the total spending and centred on transport services and travel agencies services (47% of the total for the key authorities or EUR 1.9 billion), software package and information systems (23%) and construction work (9%). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.9.a. 2 - France ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
MEEDDAT (Ministry of Ecology, Energy, Sustainable Development and Spatial Planning)	Environment
Syndicat Mixte Autolib	Other
Conseil régional de Lorraine (Regional Council of Lorraine)	Education

Contracting authority or entity	Public sector area
Antai (National Agency for automated processing of offenses)	Unknown
Direction générale finances publiques (General Directorate of Finance)	Economic and financial affairs
Pôle emploi DGA SI (Employment center DGA SI)	Other
SNCF	Transport
France Télévisions (France TV)	Other
Ville de Paris (City of Paris)	General public services
Ministère de l'intérieur (Ministry of Interior)	Public order and safety

3.9.b   Public procurement of R&D

The total value of R&D public procurement contracts in France was about **EUR 177.5 million**[152] in 2011, which is 30% more than in 2008. A breakdown of R&D contract value across different areas of public sector activity is given in *Table 3.9.b. 1* for 2011 and 2008.

Table 3.9.b. 1 – France R&D - Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	0%	0%	0,1%
Education	25%	29%	-3,3%
Electricity	1%	0%	1,4%
Environment	3%	1%	1,2%
General public services	1%	0%	0,6%
Health	5%	4%	0,7%

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[152]80.28% is above EU threshold while 3.63% is below. 16.09% is unknown.

Other	51%	61%	-10,8%
Public order and safety	0%	0%	0,4%
Transport	2%	0%	1,6%
Unknown	12%	4%	8,2%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.9.b. 2*. Expenditure of these authorities cover the 49% of the total spend and provide business consultancy services (EUR 32 million, acquired by the National Centre for Space Studies), IT services (EUR 12 million, acquired by the ONERA – French Aerospace Lab, the National Centre for Scientific Research and the Inserm) and repair and maintenance services (EUR 9.1 million). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.9.b. 2 – France R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Centre national d'études spatiales (National Centre for Space Studies)	Other
ONERA - direction des achats (Onera - French Aerospace Lab - Purchasing Department)	Other
CNRS -Centre national de la recherche scientifique - Midi-Pyrénées (National Centre for Scientific Research)	Other
Andra (National Agency for Radioactive Waste Management)	Environment
Synchrotron Soleil	Other
Université Joseph Fourier (Joseph Fourier University)	Education
Université Paris-Sud 11	Education

(Paris-Sud 11 University)

Inserm	Health
Inserm délégation régionale PACAC (Inserm Regional Delegation)	Health
Université François Rabelais (F. Rabelais University)	Education

3.9.c   Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in France was about **EUR 79.2 million**[153] in 2011, compared to **EUR 43.2 million** in 2008. A breakdown of ICT-related R&D contracts value across different areas of public sector activity for 2008 and 2011 is given in *Table 3.9.c 1*.

Table 3.9.c 1- France ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	39%	38%	1,4%
Environment	1%	0%	0,5%
Health	6%	4%	2,4%
Other	44%	59%	-15,4%
Public order and safety	0%	0%	0,1%
Unknown	11%	0%	11,0%
Total	100%	100%	

The key contracting authorities, which contributed most to expenditure in 2011, are listed in *Table 3.9.c 2*. Expenditure of these authorities cover the 36% of the total spend and provide laboratory, optical and precision equipment, e.g. microscopes and scientific equipment for the needs of the University of Reims Champagne Ardenne and F. Rabelais University respectively, IT services and repair and maintenance services. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major

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[153] 77.04% is above EU threshold while 3.85% is below. 19.11% is unknown.

contributor to the total value of ICT-related R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.9.c 2 -France ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
ONERA - direction des achats (Onera - Purchasing Department)	Other
Inserm	Health
Synchrotron Soleil	Other
Université Joseph Fourier (Joseph Fourier University)	Education
Université Paris-Sud 11 (Paris-Sud 11 University)	Education
Université de Poitiers (University of Poitiers)	Education
Université François Rabelais (F. Rabelais University)	Education
Université d'Orléans (University of Orléans)	Education
Université de Provence (University of Provence)	Education
Université de Reims Champagne Ardenne (University of Reims Champagne Ardenne)	Education

3.9.d Collection of procurement data by public authorities

Legal context

Public procurement in France is regulated by a number of laws and decrees transposing the relevant European legislation[154]:

- **Standard procurement regime (Directive 2004/18/EC):**

o The French Code of public procurement of 1 August 2006 - Décret no 2006-975 du 1er août 2006 portant code des marchés publics – ('Code des Marchés Publics', 'CMP' or 'the Code of public procurement').

o Decree 2004-15 of 7 January 2004 - Décret no 2004-15/7.1 2004.

o Order 2006-649 of 6 June 2005 regarding the public procurement contracts entered into by and between certain categories of private or public entities which do not fall within the scope of the French Code of public procurement - Ordinance no 2005-649/6.6.2005.

- **Procurement in the water, energy, transportation and postal sectors (Directive 2004/17/EC):**

o The Code of public procurement.

o Order 2005-649 - Ordinance no 2005-649.

- **Defence and security procurement (Directive 2009/81/EC):**

o Law 2011-702 of 22 June 2011, on Controlling Import and Export of War Materials and Similar Equipment, Simplifying Transfers of Defence-Related Products Within the European Union, and Defence and Security Markets - Loi no 2011-702 du 22 juin 2011 relative au contrôle des importations et des exportations de matériels de guerre et de matériels assimilés, à la simplification des transferts des produits liés à la défense dans l'Union européenne et aux marchés de défense et de sécurité.

o Decree 2011-1104 of September 14th 2011 on contracts awarded by contracting authorities or entities in the fields of defence and security- Décret no 2011-1104 du 14 septembre 2011 relatif à la passation et à l'exécution des marchés publics de défense ou de sécurité.

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[154]For more details on the legal framework in France see: http://www.legifrance.com or http://www.minefi.gouv.fr/minefi/minefi_ang/entreprise/index.htm

The standard **national threshold for the publication of public procurement** in France is EUR 90 000.

Public procurement data collection process

In France, data on public procurement is stored digitally in the BOAMP common public information system.[155] This official journal is responsible for publishing notices of competitive public tenders and notices of contract awards concluded by national authorities, regional and local authorities as well as their '*établissements publics*' (public bodies that have administrative and financial authority, that perform tasks in the public interest and that are under the control of the public body on which they depend).

The authority responsible for collecting data on public procurement is DILA, which comes under the control of the Prime Minister's office ('Direction d' Administration Centrale des Services du Premier Ministre').[156]

DILA directly collects data on public procurement via an online tool or via XML feeds. The data is stored in DILA's own information system. Depending on the thresholds, the conditions of publicity of procurement contracts differ in France. BOAMP comprises various types of publicity corresponding to the thresholds,i.e. national contracts above a value of EUR 90 000 and European contracts).

In order to describe the process through which data is collected by public authorities, we will distinguish between the rules governing notices of competitive public tenders and those relating to notices of contract awards:

a) Rules governing notices of competitive public tenders

French public procurement law, in *Le Code des Marchés Publics* (CMP), imposes an obligation to publish calls for tenders on public authorities if their contracts exceed certain thresholds. Accordingly, not all calls for tenders are published in BOAMP.

French law makes an important distinction between contracts concluded by contracting authorities and those concluded by contracting entities,i.e. network operators. Below we will describe the rules for contracts concluded by contracting authorities only.

Contracts concluded by contracting authorities

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[155] http://www.boamp.fr/index.html
[156] http://www.dila.premier-ministre.gouv.fr

- Contracts of supplies and services ≥ EUR 750 000[157] and contracts of works ≥ EUR 5 000 000

According to Article 39 CMP (and in accordance with EU law), the contracting authorities must advertise the calls for tenders to the Office for Official Publications of the European Union.

- According to Article 40 CMP, any contract ≥ EUR 15 000 must be subject to publication:

o If the estimated value of the contract is ≥ EUR 15 000 and ≤ EUR 90 000, the contracting authority is free to decide on the conditions of publication.

o If the estimated value of the contract is ≥ EUR 90 000 and ≤ thresholds set out in Article 26 CMP, the contracting authority must advertise the call for tender in its buyer profile and in BOAMP *or* in a newspaper that publishes legal notices. In this case, the contracting authority does not have to provide an estimated value of the contract.

More precisely, this rule applies to the following contracts:

▪ Contracts of supplies and services ≥ EUR 90 000 and ≤ EUR 130 000 if the contracting authority is a national authority or a national *établissement public* or ≤ EUR 200 000 if the contracting authority is a regional or local authority or a health *établissement public* or the *établissement du service de santé des armées* (public body of the health service of the military).

▪ Contracts of supplies in the defence field ≥ EUR 90 000 and ≤ EUR 200 000.

▪ Contracts of R&D ≥ EUR 90 000 and ≤ EUR 200 000 if the contracting authority acquires the exclusive ownership of the project results that it entirely finances.

▪ Contracts of works ≥ EUR 90 000 and ≤ EUR 5 000 000 .

If the estimated value of the contract is superior to the thresholds of Article 26 CMP, the contracting authority must advertise the call for tender in BOAMP, in the OJ in its buyer profile.

b) Rules governing notices of contract awards

Article 133 CMP provides that contracting authorities must publish, within the first quarter of each year, a list of the contracts awarded the year before and the name of the contractors.

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[157]All the values here exclude VAT.

An administrative regulation has also been adopted (the 'Arrêté du 21 juillet 2011 pris en application de l'Article 133 du Code des Marchés Publics et relatif à la liste des marchés conclus l'année précédente par les pouvoirs adjudicateurs et les entités adjudicatrices'). According to Article 1, the contracting authorities may publish the notices of contract awards on any support.

This means that they may be found:

- in BOAMP;

- on the following website, that includes the data related to contracts awarded by *national* authorities (*Plateforme des achats de l'État*)[158];

- on the *sub-national* authorities' (local, regional etc.) own websites.

The notices of contract awards must contain the following elements:

- the nature of the contract (supplies, services, works);

- where the contract stands according to the thresholds described above (whether its estimated value is above EUR 20 000/below EUR 90 000 for instance);

- the subject and the date of the contract, and the name of the contractor, their zip code if established in France and, if not, their country of origin.

For each threshold, a form defines the data that must be published. The BOAMP makes data entry forms available to public authorities. In parallel, DILA has implemented a data exchange system (XML format) to allow public procurement online platforms to transfer the publicity data to BOAMP so that no further entry by public authorities is required. The data is entered by public authorities themselves (direct entry) or by XML transmission (online platform). Online forms and the XML data exchange system have established rules in compliance with the French public procurement code, to ensure the quality of the data entered.

In addition, the Ministry of Economy and Finance (MINEFI) is responsible for the establishment of the framework conditions governing the public procurement system. Additionally, MINEFI executes its own procurement programme of up to EUR 1,9 billion per year, covering five main domains: real estate, IT, postal expenditure, provision of services and general supply.

A sub-entity of the Legal Directorate of the French Ministry of Finance is the PPEO (Public Procurement Economic Observatory - Observatoire Economique de l'Achat Public). The PPEO holds and maintains its own database. The PPEO's

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[158] https://www.marches-publics.gouv.fr/?page=entreprise.EntrepriseHome;

database is not available to the public. Only the parties that use the electronic procedure can have access to it.

The PPEO is currently considering broadening the scope of access to the data. The main difficulty lies in the fact that the PPEO stores privacy-protected data that cannot be published. Another difficulty is that manual data entry, i.e. when contracting parties do not use the electronic procedure, is very time consuming.

The main authority for collecting the information is the PPEO. This entity is in charge of establishing an economic census of public procurement, and works independently from DILA (which deals with the BOAMP).[159]

On top of the obligations of publicity and transparency that must legally be fulfilled, the contracting authorities must provide a set of data to the PPEO once contracts are awarded. This obligation applies to contracts above the national threshold of EUR 90 000. The data include, but are not limited to: type of contract; starting date of the publicity procedure and tendering; CPV codes; tendering procedure; contract value (net of tax); length of contract.

If the contracting authorities use the electronic procedure, then they enter the data into the database themselves. If not, PPEO staff are in charge of entering the data manually into the database.

Coverage of the BOAMP public procurement database

All types of public procurement can be entered into the BOAMP database, including defence procurement. [160]

In practice, many public authorities do not publish their procurement if they are not legally obliged to do so (with regard to specific exemptions under the procurement directives and below-threshold procurement). That said, BOAMP claims it covers 70% of public procurement. All contracts above EUR 90 000 are published in BOAMP and, additionally, BOAMP covers 30% of contracts below EUR 90 000.

Coverage of the PPEO public database

The general rule is that all contracts amounting to more than EUR 90 000 are registered in the database; however it is left to the discretion of the contracting authorities to register contracts with a value below this threshold.

Most defence procurement is included in the database. There is no distinction between procurement of arms, munitions and war material and general contracts

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[159]Please see Décret n°2006-1071 relatif au recensement des marches publics et de certains contrats soumis à des obligations de mise en concurrence and Arrêté du 21 juillet 2011 relatif au recensement économique de l'achat public.

[160]Top-secret defence contracts are excluded. In our interview, DILA underlined that while public authorities have discretionary power to qualify a contract as 'top secret'; they are not aware of the existence of such contracts.

in the defence sector. If security requirements are very high, then the contracts may not be entered into the database, but the Ministry of Finance is not aware of the existence of such contracts. The public authority has the discretion to qualify a contract as secret, but the criteria for such qualification are strictly interpreted.

Contracts in the field of telecommunications are also included, but contracts awarded pursuant to international rules are excluded from the database.

3.9.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

The DILA is the main public organisation in France that collects information concerning public procurement at the local, regional and national level. As mentioned above, the MINEFI keeps another national database. During our interview with both the DILA and the PPEO it became clear that there is no interaction between the two databases.

We are not aware of any other publically available sources of information in France that could lead to a more precise view on public procurement of ICT / R&D / R&D of ICT. There is no other information source from which data on unpublished below-national-threshold procurement could be gathered.

A number of private tender alert providers covering France were identified. From two providers we received completed questionnaires: Dematis (E-MarchesPublics)[161] and Groupe Vecteur Plus.[162] Since we successfully concluded an agreement with BOAMP and received data that is relevant for our study purposes, we did not enter into an agreement with any of the private data providers.

Public procurement in the defence sector

According to the data provided by the EDA[163], the 'R&D (including R&T) Expenditure' of France was EUR 904 million in 2009 and EUR 820 million in 2010. All budgetary data and defence expenditure statistics provided to the EDA are supplied by the Direction Générale de l'Armement at the French Ministry of

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[161]www.e-marchespublics.com
[162]http://www.vecteurplus.com
[163]Defence Data: EDA participating Member States in 2010

Defence, which manages an annual budget of about EUR 10 billion for purchasing, and is also responsible for developing technology and arms programmes. This could not therefore be accessed through the Observatoire Économique de la Defence (OED), which is in charge of economic methodology. The French MoD accounts for the greatest share of the public procurement budget, including technology and innovation intensive equipment and goods. It also funds the greatest share of outsourced R&D, around 67% of the EUR 3,6 billion invested annually in R&D. It is the only ministry that makes extensive use of innovation-related criteria in its procurement and systematically invests in research.

The MOD tends to invest in projects from beginning to end, starting with R&D investment, to manufacturing and maintenance.

Two MOD portals cover defence procurement[164]:

- The 'Achats Defense' portal[165] covers purchases relating to infrastructure, accommodation, administration, fuel and oils, medical, support;

- IXARM[166]covers contracts relating to research and the procurement and in-service support of defence equipment (weapons, munitions and combat equipment).

3.9.f   Future data provision to the European Commission

Data provision by the public authorities

Our contacts at DILA have confirmed that it should be possible to provide similar data to those requested by the study team to the Commission on a yearly basis. However, the database is not an open data system and DILA would probably charge the European Commission to have access to the data. Our three interviewees underlined they cannot qualify ICT/R&D/R&D ICT contracts. Therefore, they could only extract data using keywords and CPV codes – and they said it is difficult to assess the percentage of ICT/R&D/R&D ICT in a procurement contract.

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[164]https://www.ixarm.com/Context?lang=en
[165]www.achats.defense.gouv.fr
[166]https://www.ixarm.com/index_fr?lang=fr

Data provision by the MoD

It is uncertain if the MoD would be able to provide the requested data to the Commission on a yearly basis. The OED works with the Ministry of Research to collate data on R&D using the Frascati Manual, which does not allow ICT-related investment to be specifically identified. The statistics are based on information from surveys sent to different contracting firms. These would need to be reformulated to provide details on different aggregates, in coordination with the Ministry of Research.

Data provision by the national statistical institute

An interview was held with the the Institute National de la Statistique et des Études Économiques (hereinafter: "INSEE"), providing the information listed below.

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

The current survey used in France to measure business R&D – **BERD** – includes a question to identify how much of government-funded R&D was *performed under public procurement contracts* or grants, however there is some lack of clarity as to the distinction between "public procurement" and "grants". ICT-related funding data could be extracted by looking at the type of sector performing the R&D.

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

The French GBAORD statistics do not separately identify public procurement contracts for business enterprises, as the recipients of funding are not covered by the survey. The sources of 'direct funding' can be identified, competitive funding is registered as funding bodies' expenditure.

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

The COFOG classification is close to the national aggregates under GERD (€15m and €16m respectively). R&D data of industrial and commercial public bodies are isolated, but it is not possible to specify ICT funding.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

As far as public research bodies are concerned (questionnaire on resources deployed for R&D), external R&D expenditures going to businesses depends on their sector of economic activity.

In theory, the sector of activity with regard to ICT could be extractable. However, research bodies often only declare a global amount of external R&D expenditures going to businesses, without identifying the business or the sector of activity.

Therefore, it would be better and more accurate to explore public procurement databases in France and to identify therein the ICT-related R&D tenders made by the private sector.

3.10 GERMANY

This chapter presents estimates of the amount of ICT-related (3.10.a), R&D (3.10.b), and ICT-related R&D procurement (3.10.c) in Germany. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED; and (b) below-threshold contracts from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.10.d. The availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.10.e.

Full country data set is provided in Excel format (see Annex 3).

3.10.a   Public procurement of ICT

The total value of ICT public procurement contracts in Germany in 2011 was about **EUR 5.11 billion**[167].

The following table[168] shows the breakdown of the overall ICT contract value, across different areas of public sector activity for 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

Table 3.10.a. 1 - Germany ICT – Contract values by public sector activity

Public Sector Area	2011
Economic and financial affairs	5%
Education	3%
Electricity	0%

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[167] Of which 52.2% is above EU threshold, 21.74% is below and 26.06 % is unknown.

[168] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions are sometimes classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Environment	2%
Gas, oil and heat	0%
General public services	34%
Health	7%
Other	24%
Postal services	0%
Public order and safety	3%
Transport	7%
Unknown	13%
Water	1%
Total	100%

The contracting authorities that primarily contributed to expenditure in 2011 are listed in Table 3.10.a. *2*. Expenditure of the top ten authorities covered 15% of the total spending and centred on IT services, as software development, internet and support (25% of the total for the key authorities), financial and insurance services (19%), architecture, construction and engineering services (4%). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.10.a. 2 - Germany ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
E.ON AG	Other
Fraunhofer Gesellschaft e.V.	Other
Bundesfinanzdirektion Südwest im Auftrag des Zentrum für Informationsverarbeitung und Informationstechnik ZIVIT (Bundesfinanzdirektion Southwest on behalf of the Center for Information Processing and Information Technology)	General public services

Contracting authority or entity	Public sector area
Zentrum für Informationsverarbeitung und Informationstechnik (Center for Information Processing and Information Technology)	Other
Das Land Hessen, vertreten durch die Hessische Zentrale für Datenverarbeitung (Hessian Agency)	General public services
Deutsche Bundesbank (German Bundesbank)	Economic and financial affairs
Stadtentwässerung und Umweltanalytik Nürnberg (Urban Drainage and environmental analysis Nuremberg)	General public services
Beschaffungsamt des BMI (Procurement Office of the BMI)	General public services
Bitmarck Technik GmbH	Other
Vermögen und Bau Baden-Württemberg (Property and Construction Baden-Württemberg)	General public services
Service-Haus der Bundesagentur für Arbeit (Federal Employment Agency)	Other
Zentrum für Informationsverarbeitung und Informationstechnik (ZIVIT)	Other
Rheinisch-Westfälische Technische Hochschule Aachen - RWTH	Education
Deutsche Telekom AG	Other
DB Station & Service AG	Transport
Landesamt für Besoldung und Versorgung Nordrhein-Westfalen	Other
LVR - InfoKom	General public services
Bau- und Liegenschaftsbetrieb NRW	General public services
Bayerischer Rundfunk Anstalt des öffentlichen Rechts	Other
Bundesanstalt für den Digitalfunk der Behörden und Organisationen mit Sicherheitsaufgaben (BDBOS)	Public order and safety

3.10.b   Public procurement of R&D

The total value of R&D public procurement contracts in Germany was about **EUR 543.3 million**[169]. A breakdown of R&D procurement contract value across different areas of public sector activity for 2011 is provided in *Table 3.10.b. 1*.

Table 3.10.b. 1 – Germany R&D - Contract values by public sector activity

Public Sector Area	2011
Economic and financial affairs	2%
Education	18%
Environment	4%
General public services	4%
Health	5%
Other	59%
Unknown	8%
Total	100%

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.10.b. 2*. Expenditure of these authorities cover the 42% of the total spend and centered on architectural, construction, engineering and inspection services (EUR 71 million, of which EUR 25 million for the construction of a university building for the Fraunhofer Society for the Promotion af Applied Research), industrial machinery (EUR 49 million) and laboratory optical and precision equipment (EUR 48 million). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.10.b. 2 – Germany R&D 2011 – Key contracting authorities

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[169] 71.94% is above EU threshold while 22.6% is below and 5.46% is unknown.

Contracting authority or entity	Public sector area
Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. (Fraunhofer Society for the Promotion of Applied Research)	Other
Fraunhofer Gesellschaft e.V.	Other
Forschungszentrum Jülich GmbH	Other
Universität Stuttgart (University of Stuttgart)	Education
Deutsche Forschungsgemeinschaft e.V., Zentrale Beschaffungsstelle (German Research Foundation, Central Procurement)	Other
Umbau/Sanierung eines Zentrums für Systemzuverlässigkeit mit Schwerpunkt Elektromobilität in Darmstadt (Reconstructionor redevelopment of a center for system reliability with focus on electric mobility in Darmstadt)	Other
Westfälische Wilhelms-Universität Münster (University of Münster)	Education
Friedrich-Schiller-Universität Jena (Friedrich-Schiller University Jena)	Education
Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. (Bauabteilung) (Max Planck Society for the Advancement of Science (Building Department))	Other
Umweltbundesamt Referat Umweltschutzprojekte(Federal Environment Agency Unit Environmental Projects)	Environment

3.10.c   Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Germany was about **EUR 268.3 million**[170] in 2011. A breakdown of ICT-related R&D contracts value across different areas of public sector activity for 2011 is given in *Table 3.10.c. 1*.

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[170] 73.33% of the amount is above EU threshold while 20.03% is below and 6.63% is unknown.

Table 3.10.c. 1- Germany ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011
Education	29%
Environment	6%
General public services	2%
Health	6%
Other	49%
Transport	1%
Unknown	8%
Total	100%

The key contracting authorities, which contributed most to expenditure in 2011, are listed in *Table 3.10.c. 2*. Expenditure of these authorities cover the 53% of the total spend and provide laboratory, optical and precision equipment (EUR 58.6 million, e.g. Fraunhofer Gesellschaft e.V. and University of Leipzig), industrial machinery (EUR 19 million, especially for the needs of the Fraunhofer Gesellschaft), research and development services and office and computing machinery. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.10.c. 2 - Germany ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Fraunhofer Gesellschaft e.V.	Other
Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung (Fraunhofer Society for the Promotion of Applied Research)	Other
Universität Stuttgart (University of Stuttgart)	Education

Deutsche Forschungsgemeinschaft e.V. (German Research Foundation, Central Procurement)	Other
Westfälische Wilhelms-Universität Münster (University of Münster)	Education
Friedrich-Schiller-Universität Jena (Friedrich-Schiller University Jena)	Education
Ruhr-Universität Bochum (Ruhr-University Bochum)	Education
Martin-Luther-Universität Halle-Wittenberg (Martin-Luther-University Halle-Wittenberg)	Education
Universität Leipzig (University of Leipzig)	Education
Universität Regensburg (University of Regensburg)	Education

3.10.d Collection of procurement data by public authorities

Legal context

Public procurement in Germany is regulated by a number of laws and decrees that transpose the relevant European legislation:

- **Standard procurement regime**
  - Part IV of the Act against Restraints of Competition - Gesetz gegen Wettbewerbsbeschränkungen.[171]
  - Regulation on the Award of Public Contracts – Verordnung über die Vergabe öffentlicher Aufträge (Vergabeverordnung - VgV)[172].
  - Federal and State Budgetary Regulations – BHO and LHO.

- **Procurement in the water, energy, and transport services sector**
  - Sector Regulation – Sektorenverordnung (2009) – and delegated legislation:

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[171]Gesetz gegen Wettbewerbsbeschränkungen in der Fassung der Bekanntmachung vom 26. Juni 2013 (BGBl. I S.1750, 3245), das zuletzt durch Artikel 2 Absatz 78 des Gesetzes vom 7. August 2013 (BGBl. I S. 3154) geändert worden ist. http://www.gesetze-im-internet.de/bundesrecht/gwb/gesamt.pdf . This act does not apply to contracts below the EU threshold. It is arguably the most important piece of legislation in German procurement law; see Prof. Dr. Martin Burgi, Public Procurement Law in the Federal Republic of Germany annual report - 2012 – Germany, IUS Publicum.

[172] http://www.gesetze-im-internet.de/bundesrecht/vgv_2001/gesamt.pdf.

- o Procurement and Contract Procedures for public works - Vergabe- und Vertragsordnung für Bauleistungen (VOB/A).[173]
- o Procurement and Contract Procedures for public supplies and services - Vergabe- und Vertragsordnung für Leistungen (VOL/A and B)[174].
- o Procurement and Contract Procedures for professional services - Vergabeordnung für freiberufliche Leistungen (VOF)[175].

- **Defence and security procurement**
  - o Procurement Regulation on Defence and Security - (Vergabeverordnung Verteidigung und Sicherheit - VSVgV)[176] - implements Directive 2009/81/EC on defence and sensitive security procurement (Defence Procurement Directive)

Public procurement data collection process

Data on public procurement is collected and stored in the following database:

http://www.bund.de/DE/Ausschreibungen/ausschreibungen_node.html

The database is run by the 'Bundesverwaltungsamt', i.e. the Federal Office of Administration. Data is collected in two ways. First, data is automatically retrieved from online databases that publish information on public tenders. Second, public institutions have the opportunity to upload tender information directly with the help of a web interface.

Gathering data on public procurement is regulated in the previously mentioned "Vergabe- und Vertragsordnung für Leistungen" (VOL/A), which regulates the procurement of products and services. Article 12 Section 1 states that public tenders, restricted tenders with request for information and direct agreements with request for information have to be announced in newspapers, official or professional journals, or in internet portals. Announcing tenders in internet portals is only permitted if the tender can be found with the help of the search function[177].

The "Vergabe- und Vertragsordnung für Bauleistungen" (VOB/A), which regulates the procurement of construction services, has almost the same regulations in Article 12 Section 1 and 2 of the VOL/A, with the exception that publishing the tender information website is optional. Article 15 EG Section 2 VOL/A (2009), Article 12a Section 2 and Article 9 "Vergabeordnung für freiberufliche Leistungen" (2009) (VOF), which regulates the procurement of freelance

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[173] http://www.bmwi.de/DE/Service/gesetze,did=191326.html.
[174] http://www.bmwi.de/DE/Service/gesetze,did=191324.html.
[175] http://www.bmwi.de/DE/Service/gesetze,did=191328.html
[176]Vergabeverordnung für die Bereiche Verteidigungund Sicherheit zur Umsetzung der Richtlinie2009/81/EG des Europäischen Parlaments und desRates vom 13. Juli 2009 über die Koordinierungder Verfahren zur Vergabe bestimmter Bau-, Liefer- und Dienstleistungsaufträge in denBereichen Verteidigung und Sicherheit undzur Änderung der Richtlinien 2004/17/EG und 2004/18/EG: http://www.gesetze-im-internet.de/bundesrecht/vsvgv/gesamt.pdf.
[177] Available on : www.bund.de

services, further states that EU-wide tenders have to be announced on a dedicated website[178]. The data published on this website, in turn, can be accessed with the help of the search function on www.bund.de.

With regard to the role of public authorities at sub-national level, the above mention website accesses information of internet portals publishing tender information at the federal, but also at the state and municipal level. Article 12 Section 1 of the VOL/A (2009) regulates that states and municipalities not automatically connected to www.bund.de by an internet portal have to upload their data by a web interface. This is done directly by the institution issuing the tender.

Due to the federal structure of Germany, **there is no centralised authority that controls the public procurement process.** Instead, there are audit courts on the federal (1), state (16) and municipal level. These audit courts spot-check public tenders by physically going to the respective institution and by checking the data that is available there,i.e. by checking the files stored in the institution's archives.

Coverage of the public procurement databases

The Bundesverwaltungsamt deletes tender documents after 1-2 months, resulting in the fact that there are virtually no public procurement data on historical contracts. There are some older tender documents on the website, but they seem to be an exception. Additionally, contract award information is not included in the database,i.e., it only holds data on contract notices.

Each of the 16 Länder (Germany's constituent states) maintains their own system or database that is governed by State laws, where public procurement data is collected and stored. Given the fact that there is no centralised database that stores and maintains public procurement data in Germany, data will have to be collected from each of these 16 Länder. Various private providers to which the study team has spoken, state that they are in the process of collecting such data at the State level (by acquiring data from State databases and / or manually extracting data from sub national sources) which is a time consuming and costly process.

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[178] http://simap.europa.eu/index_de.htm

3.10.e Other information sources or qualitative information

Other information sources: Public procurement in all sectors

Due to the spread and difficulties obtaining relevant data in Germany, it has proved to be difficult for private providers to provide relevant public procurement data within the timeframe of this study.

The study team has concluded an agreement with private provider DTAD Deutscher Auftragsdienst AG (DTAD)[179], which has provided the study team with a total of around 30. 000 contract notices (Ausschreibungen/Auftragsbekanntmachung), prior information notices (Vorinformation) and (a limited amount of) contract awards (Vergebene). These were selected on categories provided by DTAD (based on our selected CPV codes) and our keyword list.

Other information sources: Public procurement in the defence sector

Statistics on expenditure provided to the EDA are collated by each organisational unit, and formatted centrally. According to the data for 2011 around EUR 1,06 billion was spent on defence R&D (whereas EUR 1,09 billion was spent in 2009 and EUR 1,45 billion was spent in 2010), all of which was came from external, outsourced services. Internal services within the MOD are not included in EDA figures. The budget management software currently used by the MOD (EMIR - current software used for budget management by the MoD) does not allow for specific focus on ICT-related costs, thus expenditure in this area, as a proportion of overall investment is unknown. Space-related expenditure however is included from the EDA data.

3.10.f Future data provision to the European Commission

Data provision by the public procurement authorities

Taking into account the current situation in Germany, we do not foresee that there will be a situation in the immediate future where it will be possible for either the Federal Republic of Germany or the Länder, to send the European Commission the relevant required data on a yearly basis. The study team understands that the German authorities are aware of the need for a centralised database where relevant national (under EU threshold) public procurement data

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[179]www.dtad.de.

is collected and maintained; however it is unaware of any concrete initiatives to develop such a centralised system.

Data provision by the MoD

According to the German MoD, in order to provide ICT-related data, the budget management system of the MoD would have to be updated, to analyse a large amount of data on public procurement expenditure. In the next few years, the EMIR system will be replaced by SASPF (Standard-Anwendungs-Software-Product-Familien). It is possible this could facilitate the collection of such data; however it is too early to be sure. Collecting the requested data would be costly in terms of time and human resources, but a more precise estimate is difficult at this time.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

According to the German Federal Statistical Office (SB) and the Stifterverband, while the current BERD survey measures how much business R&D is government funded, it does not currently differentiate between awards of public contracts, and other public funding through subsidies and grants. It would, however, be feasible to gather this information via an additional survey question in the future. The current survey does not distinguish either between ICT-related and non ICT-related R&D, or specify which main government departments or agencies paid for publicly funded R&D under procurement contracts; again, the inclusion of such data is possible, though as yet unplanned.

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

In relation to GBAORD indicators, such as that collected by the OECD NESTI Working Party, the German National Statistical Office has data for the past several years that distinguishes between government and business enterprises. However, the NABS classification does not recognise specific ICT-related R&D data, focusing instead on the goals of R&D.

(C) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

Suggested methodology to extract public procurement data on ICT-related R&D expenditure includes an analysis of the federal budget, as well as that of the German state. This data could be collected by the relevant ministries to obtain statistics on an annual basis. However,carrying out this kind of data collection would require substantial administrative changes; namely budget statistics would need to be analysed and each ministry[180] contacted. Data would have to be made available by each ministry, which could be costly.

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[180]Federal ministry plus 16 at state level.

3.11 GREECE

This chapter presents estimates of the amount of ICT-related (3.11.a), R&D (3.11.b), and ICT-related R&D procurement (3.11.c) in Greece. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, as gathered by the private tender alert provider Tender Service Group.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.11.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.11.e.

Full country data set is provided in Excel format (see Annex 3).

3.11.a Public procurement of ICT

The total value of ICT public procurement contracts in Greece in 2011 was about **EUR 184.2 million**[181], 6% more than 2010 - **EUR 172 million**.

A breakdown of ICT contract value across different areas of public sector activity for 2010 and 2011 is given in *Table 3.11.a. 1*[182]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national and the regional level.

Table 3.11.a. 1- *Greece ICT – Contract values by public sector activity*

Public Sector Area	2011	2010	Δ
Economic and financial affairs	6%	2%	3,9%
Education	5%	4%	0,9%

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[181] Of which 63.67% is above EU threshold and 9.9% is below. The remaing 26.41% is unknown.
[182] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2010	Δ
Electricity	5%	10%	-4,8%
Environment	1%	0%	0,5%
Gas, oil and heat	3%	1%	1,3%
General public services	8%	7%	0,8%
Health	7%	16%	-8,6%
Other	51%	51%	-0,1%
Postal services	1%	1%	0,5%
Public order and safety	0%	1%	-0,3%
Transport	3%	1%	1,8%
Unknown	10%	7%	2,8%
Water	1%	0%	1,2%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.11.a. 2*. Expenditure of these authorities covered 44% of the total spending and centred on architectural, construction, engineering and inspection services (27% of the total for the key authorities, e.g. marine surveying acquired by IGI-Poseidon), supporting and auxiliary transport services (14%, e.g. highway toll services acquired by Egnatia Motorway), postal and telecommunications services (12%, e.g. Social Insurance Institute), business services (10%, e.g. law, marketing,consulting and recruitment); office and computing machinery, equipment and supplies (8%, e.g. computer equipment purchased by the Ministry of Development, Competitiveness and Shipping). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.11.a. 2- Greece ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Κτηματολόγιο ΑΕ (Land SA)	Other
ΕγνατίαΟδόςΑΕ (Egnatia Odos SA)	Other
ΊδρυμαΚοινωνικώνΑσφαλίσεων - ΕνιαίοΤαμείοΑσφάλισηςΜισθωτών (IKA-ETAM) (Social Insurance Institute)	Other
IGI-Poseidon S.A.	Other
ΚοινωνίατηςΠληροφορίαςΑΕ (ΚτΠΑΕ) (Information Society SA)	Other
ΕλληνικάΤουριστικάΑκίνηταΑΕ (Greek Tourist Properties)	Other
ΕταιρείαΠαροχήςΑερίουΑττικήςΑΕ (Attiki Gas Supply Company SA)	Gas, oil and heat
ΥπουργείοΑνάπτυξηςΑνταγωνιστικότητας&Ναυτιλίας (Ministry of Development, Competitiveness and Shipping)	Other
Athens International Airport SA	Transport
ΥπουργείοΟικονομικών, ΓενικήΔ/νσηΔιοικητικήςΥποστηρίξης (Ministry of Finance)	General public services

3.11.b   Public procurement of R&D

The total value of R&D public procurement contracts in Greece was about **EUR 21.5 million**[183] in 2011, 61% more than in 2010, **EUR 13.3 million**. A breakdown of R&D contract value across different areas of public sector activity is given in *Table 3.11.b. 1* for 2010 and 2011.

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[183] 26.78% of the amount is above and 49.74% is below the threshold. The remaining 23.48% is unknown.

Table 3.11.b. 1- *Greece R&D – Contract values by public sector activity*

Public Sector Area	2011	2010	Δ
Education	2%	3%	-1,3%
Environment	1%	0%	1,0%
Health	1%	2%	-1,0%
Other	93%	67%	25,8%
Transport	0%	0%	0,5%
Unknown	3%	28%	-25,0%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.11.b. 2*. Expenditure of these authorities cover the 48% of the total spend and centered on laboratory, optical and precision equipment (EUR 1.4 million), medical equipment, pharmaceutical and personal care products (EUR 1.3 million, e.g. diagnostic agents for the use of the Foundation for Biomedical Research of the Academy of Athens) and research and development services (EUR 0.7 million, acquired by the National Research Network).

Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.11.b. 2- *Greece R&D 2011 – Key contracting authorities*

Contracting authority or entity	Public sector area
ΥΠΟΥΡΓΕΙΟΥΠΟΔΟΜΩΝ, ΜΕΤΑΦΟΡΩΝΚΑΙΔΙΚΤΥΩΝ (MINISTRY OF INFRASTRUCTURE, TRANSPORT AND NETWORKS)	Other
ΕΘΝΙΚΟΚΑΙΚΑΠΟΔΙΣΤΡΙΑΚΟΠΑΝΕΠΙΣΤΗΜΙΟΑΘΗΝΩΝ (UNIVERSITY OF ATHENS)	Other
ΊδρυμαΙατροβιολογικώνΕρευνώντηςΑκαδημίαςΑθηνών - IIBEAA (Foundation for Biomedical Research of the Academy of Athens - BRFAA)	Other

ΕθνικόΔικτύοΈρευναςκαιΤεχνολογίας - ΕΔΕΤΑΕ (National Research Network - GRNET)	Other
ΑΡΙΣΤΟΤΕΛΕΙΟΠΑΝΕΠΙΣΤΗΜΙΟΘΕΣΣΑΛΟΝΙΚΗΣ/ ΕΙΔΙΚΟΣΛΟΓΑΡΙΑΣΜΟΣΚΟΝΔΥΛΙΩΝΕΡΕΥΝΑΣ (ARISTOTLE UNIVERSITY OF THESSALONIKI)	Other
ΕλληνικόΚέντροΘαλασσίωνΕρευνών (Greek Centre for Marine Research - HCMR)	Other
ΕΘΝΙΚΟΚΕΝΤΡΟΤΕΚΜΗΡΙΩΣΗΣ/ΕΘΝΙΚΟΙΔΡΥΜΑΕΡΕΥΝΩΝ (National Documentation Centre / National Hellenic Research Foundation)	Other
ΕρευνητικόΚέντροΒιοϊατρικώνΕπιστημών «ΑλέξανδροςΦλέμιγκ» (Biomedical Sciences Research Center 'Alexander Fleming')	Other
ΕΡΕΥΝΗΤΙΚΟΙΝΣΤΙΤΟΥΤΟΧΗΜΙΚΗΣΜΗΧΑΝΙΚΗΣΚΑΙΧΗΜΙΚΩΝΔΙΕΡΓΑΣΙΩΝΥΨΗΛΗΣΘΕΡΜΟΚΡΑΣΙΑΣ (RESEARCH INSTITUTE OF CHEMICAL ENGINEERING AND CHEMICAL PROCESSES OF HIGH TEMPERATURE)	Other
ΙΔΡΥΜΑΤΕΧΝΟΛΟΠΑΣΕΡΕΥΝΑΣΕΡΕΥΝΗΤΙΚΟΙΝΣΤΙΤΟΥΤΟΧΗΜΙΚΗΣΜΗΧΑΝΙΚΗΣΚΑΙΧΗΜΙΚΩΝΔΙΕΡΓΑΣΙΩΝΥΨΗΛΗΣΘΕΡΜΟΚΡΑΣΙΑΣΠΛΑΤΑΝΙ, ΠΑΤΡΑ (TECHNOLOPAS RESEARCH FOUNDATION RESEARCH INSTITUTE OF CHEMICAL ENGINEERING AND CHEMICAL PROCESSES OF HIGH TEMPERATURE PLATANI)	Other

3.11.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Greece was about **EUR 9.3 million**[184] in 2011, compared to **EUR 5.5 million** in 2010. *Table 3.11.c. 1* provides a breakdown of ICT-related R&D contracts value across different areas of public sector activity for 2010 and 2011.

Table 3.11.c. 1- *Greece ICT –related R&D – Contract values by public sector activity*

Public Sector Area	2011	2010	Δ
Health	1%	4%	-3,5%
Other	95%	94%	1,1%

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[184] 43.64% of the amount is above Eu threshold while 26.25% is below. 30.11% is unknown.

Unknown	5%	2%	2,5%
Total	100%	100%	

The key contracting authorities, which contributed considerably most to expenditure in 2011, are listed in *Table 3.11.c.2*. Expenditure of these authorities covered 57% of the total spending and centred on[185] laboratory, optical and precision equipment, e.g. Greek Centre for Marine Research –HCMR, research and development services and postal and telecommunications services, e.g. National Research and Education Network – GRNET. Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT-related R&D contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.11.c.2 - Greece ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
ΑΡΙΣΤΟΤΕΛΕΙΟΠΑΝΕΠΙΣΤΗΜΙΟΘΕΣΣΑΛΟΝΙΚΗΣ/ΕΙΔΙΚΟΣΛΟΓΑΡΙΑΣΜΟΣΚΟΝΔΥΛΙΩΝΕΡΕΥΝΑΣ (ARISTOTLE UNIVERSITY OF THESSALONIKI)	Other
ΕθνικόΔικτύοΈρευναςκαιΤεχνολογίας - ΕΔΕΤΑΕ (National Research Network - GRNET)	Other
Greek Research and Technology Network (GRNET)	Other
ΕλληνικόΚέντροΘαλασσίωνΕρευνών (ΕΛΚΕΘΕ) (Greek Centre for Marine Research - HCMR)	Other
ΕΘΝΙΚΟΚΑΙΚΑΠΟΔΙΣΤΡΙΑΚΟΠΑΝΕΠΙΣΤΗΜΙΟΑΘΗΝΩΝ(UNIVERSITY OF ATHENS)	Other
ΕρευνητικόΚέντροΒιοϊατρικώνΕπιστημών «ΑλέξανδροςΦλέμιγκ» (Biomedical Sciences Research Center 'Alexander Fleming')	Other
ΕΡΕΥΝΗΤΙΚΟΙΝΣΤΙΤΟΥΤΟΧΗΜΙΚΗΣΜΗΧΑΝΙΚΗΣΚΑΙΧΗΜΙΚΩΝΔΙΕΡΓΑΣΙΩΝΥΨΗΛΗΣΘΕΡΜΟΚΡΑΣΙΑΣ (RESEARCH INSTITUTE OF CHEMICAL ENGINEERING AND CHEMICAL PROCESSES OF HIGH TEMPERATURE)	Other

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[185]Since the national database of public procurement contracts does not include CPV codes, it is impossible to provide a more comprehensive overview of the expenditures by object of the procurement.

ΙΔΡΥΜΑΤΕΧΝΟΛΟΠΑΣΕΡΕΥΝΑΣΕΡΕΥΝΗΤΙΚΟΙΝΣΤΙΤΟΥΤΟΧΗΜΙΚΗΣΜΗΧΑΝΙ ΚΗΣΚΑΙΧΗΜΙΚΩΝΔΙΕΡΓΑΣΙΩΝΥΨΗΛΗΣΘΕΡΜΟΚΡΑΣΙΑΣΠΛΑΤΑΝΙ, ΠΑΤΡΑ (TECHNOLOPAS RESEARCH FOUNDATION RESEARCH INSTITUTE OF CHEMICAL ENGINEERING AND CHEMICAL PROCESSES OF HIGH TEMPERATURE PLATANI)	Other
Παρατηρητήριογιατην ΨηφιακήΕλλάδα (Greek Centre for Digital)	Unknown
ΕΛΛΗΝΙΚΟΙΝΣΤΙΤΟΥΤΟΠΑΣΤΕΡ (GREEK INSTITUTE PASTEUR)	Other

3.11.d Collection of procurement data by public authorities

Legal context

Public procurement in Greece is regulated by a number of laws and decrees transposing the relevant European legislation[186]:

- **Standard procurement regime:**

o   Presidential Decree 60/2007 regarding the coordination of contractual procedures in the field of public contracts regarding public projects, supplies and services (Government Gazette A/64 of 16.3.2007), which implements Directive 2004/18/EC.

- **Procurement in the water, energy, transportation and postal sectors:**

o   Presidential Decree 59/2007 regarding the procurement of supplies and services and the award of public works contracts in the field of water, energy, transport and post utilities (Government Gazette A/63 of 16.3.2007), which implements Directive 2004/17/EC.

- **Defence and security procurement:**

o   Law 3978/2011 on Public Procurement in the field of Defence and Security (Government Gazette A/137 of 16.6.2011), which implements Directive 2009/81/EC.

The standard **national threshold for the publication of public procurement** in Greece is **EUR** 1 000.[187]

Public procurement data collection process

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[186]For more details on the legal framework in Greece see: http://www.gge.gr/3/sub.asp?119
[187]PursuantArticle 2 of Law 4013/2011 as amended by Article 10 of Law 4038/2012.

The authority responsible for collecting procurement data in Greece is the Ministry of Development, Competitiveness and Shipping.[188]

Until recently, no comprehensive information system for public procurement existed. Contracts awarded[189], tenders[190] and other information[191] were published on the web site of the Directorate for Public procurement of the Ministry of Development, Competitiveness and Shipping. The information is available in excel worksheets, pdf and doc files.

Currently, and in accordance with Law 4013/2011 (Article 11), data procurement is collected and stored in a common public information system, the Central Electronic Register of Public Contracts ('the Register')[192].The Register is not yet fully operable, but it is publicly available in its pilot phase.

The procedure for collecting data is described in previously mentioned Article 11 of Law 4013/2011. In brief, there are two subsystems in the Register, namely:

    a. the register of Electronic Registration of Requests that stores all the requests made by public authorities for public procurement[193] and

    b. the register for Public Contracts, in which all public contracts are stored with the responsibility of the competent authority and before any payment is made

The Register is governed by the so called 'Cl@rity Programme', which is part of the Transparency and Openness Policies of the Greek Government[194] and the Register of Obligations of the Greek Treasury.

There are no public authorities involved in data collection at sub-national level.

There is no specific mechanism in place, in addition to the use of standard forms to ensure the quality of the data gathered.

Coverage of the public procurement database

The data is entered in the Register by the individual contracting authorities as defined in Article 11 (2) of Law 4013/2011.

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[188]http://www.ypoian.gr/.
[189]http://www.gge.gr/3/sub.asp?123
[190]http://www.gge.gr/3/sub.asp?121
[191]http://www.gge.gr/3/
[192]Available on: http://staging.agora.gov.gr/
[193]This includes the following information: (a) name of authority;(b) tax identification number;(c) procurement type;(d) budget;(e) technical specifications;(f) commitment number;(g) the inclusion in the common programme for public procurement.
[194]All Ministries in Greece are obliged to upload their decisions on the Internet, through the 'Cl@rity' programme. Cl@rity is one of the major transparency initiatives of the Ministry of the Interior, Decentralization and e-Government. Henceforth, the decisions of the public entities cannot be implemented if they are not uploaded on the Clarity websites. Each document is digitally signed and automatically assigned aunique transaction number by the system.Clarity will cover all public institutions, regulatory authorities and local government. Clarity introduces, for the first time in Greece, the obligation to publish all decisions on the Internet, with the exception of decisions that contain sensitive personal data and/or information on national security.See:http://diavgeia.gov.gr/en

The data collected on the new national public procurement portal includes the names of contracting parties; their tax identification number; type of contract; the subject of the contract with reference to quantity and the CPV; the value of the contract; information on public contracts including the number and date of the decision on payment commitment and the registration number in the book of payment approvals and orders[195]; form and the amount of payment.

Exemptions under EU Directives are excluded from data collection in the Register under Greek law.

3.11.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

There are no other sources other than the abovementioned governmental data sources, which include:

a)   The Directorate for Public Procurement in the Ministry of Development[196]:
b)   The Independent Authority for Public Procurement[197]:
c)   The new information system[198]:

The study team has concluded a cooperation agreement with the Tender Service Group, a pan-European private tender alert provider, which holds public procurement data for Greece. Tender Service Group has provided the study team with relevant public procurement data for Greece, covering 2009 and 2011. The data has been analysed as described in the methodological section, using both CPV-based and keyword-based searches.

Other information sources: public procurement in the defence sector:

According to the data provided by the EDA[199], the 'R&D (including R&T) Expenditure' of Greece was EUR 4,68 million in 2009 and EUR 10,43 million in 2010. Greece did not report any 'Outsourced Defence Expenditure' for 2009 or 2010. The expenditure is calculated and classified on the basis of existing accounting information. The General Directorate for Defence Investments and Armaments (GDDIA) and the Hellenic Ministry of National Defence (HMoND) agencies that are involved in defence contracts and expenditure send the pertinent expenditure information relevant to their own domain or responsibility to the Hellenic National Defence General Staff (HNDGS), on an annual basis. In

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[195]See para. 3 of art.4 P.D. 113/2010.
[196] http://www.gge.gr/3/
[197] http://gge.gov.gr/?p=3135
[198] http://staging.agora.gov.gr/
[199]Defence Data: EDA participating Member States in 2010.

turn, the HNDGS, after gathering all this information, provides the total defence expenditure statistics to the EDA, on behalf of the HMoND.

Based on data available to GDDIA, for the years 2007 to 2011, the expenditure on R&D in the defence sector, was as follows:

YEAR	R&D EXPENDITURE (EUR)
2007	7.396.254
2008	10.827.278
2009	3.628.899
2010	9.734.836
2011	4.175.450

Please note that the total amount spent is 'outsourced'.

Based on data available to GDDIA, for the years 2007 to 2011 the 'outsourced' R&D defence expenditure on ICT was:

YEAR	R&D ICT EXPENDITURE (EUROs)
2007	4.050.000
2008	0
2009	590.000
2010	0
2011	0

In addition to the above mentioned data (R&D 'outsourced defence expenditure', ICT expenditure), based on data available to GDDIA between 1997 and today, the non-R&D'outsourced' defence expenditure spent on ICT was 1,07% of the total defence expenditure for procurement of military equipment. Please note that this non R&D 'outsourced' ICT data does not cover expenditure through government-to-government agreements.

No other national data sources on defence ICT / defence R&D / defence R&D of ICT procurement are available.

If or when such space-related programmes and expenditure exist on an annual basis, this would be included in the national data provided to EDA, in accordance with the procedure described above.

3.11.f Future data provision to the European Commission

Data provision by the public procurement authorities

In the future, it will be possible to collect data from the public authorities on public procurement on an annual basis, since the data is now centralised through a new portal[200]. However, since the information system is not yet fully operable and a Ministerial Decision describing its function has not yet been issued, it is not possible to foresee how the quality assurance will be organised, and whether costs will be incurred.

Data provision by the MoD

The Greek MoD considers that the most relevant difficulties in providing defence ICT / defence R&D / defence R&D of ICT procurement data on a regular basis would be:

a) data security restrictions;

b) requirement for additional effort/work and coordination between stakeholders;

c) adoption of common semantics by the relevant stakeholders.

d) The most relevant costs of providing such data would be:

e) information technology infrastructure - designing information material;

f) training members and employees.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

The current survey in Greece to measure business R&D – BERD – does not include a question to identify how much of government-funded R&D was *performed under public procurement contracts* or grants. However, according to our contact at the Greek Statistical Board it is considered feasible to include it in the future. It is also considered feasible to further distinguish *ICT-related from non-ICT-related* R&D performed under public procurement contracts in the questionnaire and also to collect data on which main government departments or

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[200] http://staging.agora.gov.gr/

agencies paid for the R&D performed under public procurement contracts. Since this *was the way it was done in Greece until 2009, the procedure is familiar.*

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

The Greek statistical board has stated that it would be able to provide information on the identification of modes of public funding of R&D based on **GBAORD**. They would also be able to separately identify public procurement contracts to business enterprises in this breakdown and to further distinguish how much of these contracts is ICT-related.

However, it is not possible to classify public procurement contracts awarded by higher education institutions and public research organisations in a breakdown of GBAORD, since this does not exist in Greece at this moment. It would thus be necessary to add a relevant question in the BERD survey.

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

It will be very difficult to differentiate R&D expenditure from other government expenditure in the COFOG classification, for bureaucratic reasons. It would be difficult or impossible to identify R&D expenditure that is not carried out in the framework of a project or programme, unless it concerns an organisation or institution that is defined in its statute as a research body,e.g. Demokritos.

It would currently be impossible to differentiate ICT-related expenditure. A specific methodology would have to be designed and applied.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

The Greek Statistical Board could not propose any alternative approaches. Any alterations or additions to the current system would require a reinforcement of personnel capacity and accordingly an increase of the appropriate budget.

3.12 HUNGARY

This chapter presents estimates of the amount of ICT-related (3.12.a), R&D (3.12.b), and ICT-related R&D procurement (3.12.c) in Hungary. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.12.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.12.e.

Full country data set is provided in Excel format (see Annex 3).

3.12.a   Public procurement of ICT

The total value of ICT public procurement contracts in Hungary in 2011 was about **EUR 673.2 million**[201], a decrease of 39% compared to 2009 - **EUR 1.1 billion**.

A breakdown of ICT contract value across different areas of public sector activity for 2009 and 2011 is given in *Table 3.12.a.1*[202]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national and the regional level.

Table 3.12.a.1- Hungary ICT – Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Economic and financial affairs	1%	1%	0,1%
Education	5%	2%	2,5%

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[201] 84.73% is above EU threshold and 14.02% is below.

[202] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2009	Δ
Electricity	3%	14%	-10,7%
Environment	1%	3%	-2,3%
Gas, oil and heat	1%	0%	0,6%
General public services	9%	4%	4,9%
Health	3%	2%	0,7%
Other	68%	56%	11,7%
Postal services	3%	1%	1,5%
Public order and safety	1%	4%	-2,8%
Transport	2%	10%	-7,7%
Unknown	3%	1%	1,4%
Water	0%	0%	0,0%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in Table 3.12.a.2. Expenditure of these authorities covered 68% of the total spending and centred on office and computing machinery (27% of the total for the key authorities, e.g. purchase of computers, databases and software by the General Directorate for Public works and Supply), postal and telecommunication services (26%), IT services (13%), construction work (12%) and software package and information systems (11%). Contracts of the key authorities also include services related to television and radio broadcasting (8%, e.g. Media Service Support and Asset Management Fund). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.12.a.2- Hungary ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Közbeszerzési és Ellátási Főigazgatóság (General Directorate for Public works and Supply)	Other
Médiaszolgáltatás- támogató és Vagyonkezelő Alap (Media Service Support and Asset Management Fund)	Other
Nemzeti Infrastruktúra Fejlesztő Zrt. (National Infrastructure Development Corporation)	Other
Magyar Posta Zrt.	Postal Services
ELMŰ Hálózati Kft. (ELMŰ Network Ltd)	Electricity
Nemzeti Fejlesztési Minisztérium (Ministry of National Development)	Other
E.ON Gazdasági Szolgáltató Kft. (E. Economic Services Ltd.)	Electricity
Országos Rendőr-főkapitányság (National Police)	Public order and safety
Országos Igazságszolgáltatási Tanács Hivatala (National Council of Justice)	Other
Fővárosi Önkormányzat Bajcsy Zsilinszky Kórház és Rendelőintézet (Main Bajcsy Zs Hospital and Clinic)	Health

3.12.b   Public procurement of R&D

The total value of R&D public procurement contracts in Hungary was about **EUR 11.9 million**[203] in 2011, compared to **EUR 24.6 million** in 2009. A breakdown of R&D contract value across different areas of public sector activity for 2009 and 2011 is given in *Table 3.12.b. 1*.

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[203] 17.63% is above EU threshold and 78.67% is below. 3.7% is unknown.

Table 3.12.b. 1- Hungary R&D – Overall contract value by areas of public sector activity

Public Sector Area	2011	2009	Δ
Economic and financial affairs	0%	0%	-0,4%
Education	19%	26%	-7,0%
Environment	2%	0%	1,2%
General public services	0%	1%	-0,7%
Health	1%	1%	0,1%
Other	77%	17%	60,3%
Unknown	1%	55%	-53,5%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in Table 3.12.b. 2. Expenditure of these authorities covered 71% of the total spending and centred on construction work (EUR 2.9 million, commissioned by the Institute of Nuclear Research), laboratory, optical and precision equipment (EUR 2.3 million) and business services (EUR 1.3 million, e.g. law, marketing, consulting, recruitment, printing and security). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.12.b. 2- Hungary R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
MTA Atommagkutató Intézete (Institute of Nuclear Research)	Other
ELI-HU Kutatási és Fejlesztési Nonprofit Közhasznú Kft. (ELI-HU Research and Development Research and Consultancy)	Other
Szegedi Tudományegyetem (University of Szeged)	Education

Magyar Tudományos Akadémia Kémiai Kutatóközpont (Chemical Research Center, Hungarian Academy of Sciences)	Other
Miskolci Egyetem (University of Miskolc)	Education
Eötvös Loránd Tudományegyetem (Eötvös Loránd University)	Education
Igazságügyi Szakértői és Kutató Intézetek (Forensic and Research Institutes)	Other
MTA Mezőgazdasági Kutatóintézete (Agricultural Research Institute)	Other
UNI- FLEXYS Egyetemi Innovációs Kutató és Fejlesztő Közhasznú Nonprofit Kft. (UNI-FLEXYS University Innovation Research and Development Coordination Agency)	Other
Széchenyi István Egyetem (Széchenyi István University)	Other

3.12.c Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Hungary was about **EUR 4.6 million**[204] in 2011, compared to **EUR 8.2 million** in 2009. A breakdown of of ICT-related R&D overall contract value across different areas of public sector activity for 2009 and 2011 is given in *Table 3.12.c. 1*.

Table 3.12.c. 1- *Hungary ICT –related R&D – Contract values by public sector activity*

Public Sector Area	2011	2009	Δ
Economic and financial affairs	0%	1%	-1,3%
Education	48%	74%	-25,9%
Environment	2%	0%	2,0%
Health	0%	3%	-2,8%
Other	46%	22%	24,2%

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[204] 8.77% is above EU threshold while 84.38% is below and 6.84% is unknown.

Unknown	4%	0%	3,9%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.12.c.2*. Expenditure of these authorities covered 76% of the total spending and centred on laboratory, optical and precision equipment, e.g. mass spectrometer purchased by SOLVO Biotechnology, laboratory tools and instruments acquired by the Bay Zoltan Foundation for Applied Research. Additionally, expenditure centred on construction work and office and computing machinery. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.12.c.2 - Hungary ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Szegedi Tudományegyetem (University of Szeged)	Education
Magyar Tudományos Akadémia Kémiai Kutatóközpont (Chemical Research Center, Hungarian Academy of Sciences)	Other
Miskolci Egyetem (University of Miskolc)	Education
Eötvös Loránd Tudományegyetem (Eötvös Loránd University)	Education
Széchenyi István Egyetem (Széchenyi István University)	Other
Debreceni Egyetem (University of Debrecen)	Education
Igazságügyi Szakértői és Kutató Intézetek (Forensic and Research Institutes)	Other
BAY ZOLTÁN ALKALMAZOTT KUTATÁSI KÖZALAPÍTVÁNY (Bay Zoltan Foundation for Applied Research)	Other
Solvo Biotechnológiai Zrt. (SOLVO Biotechnology)	Unknown

Bay Zoltán Alkalmazott Kutatási Közalapítvány Logisztikai és
Gyártástechnikai Intézet (Bay Zoltan Foundation for Applied   Other
Research Logistics and Production Systems)

3.12.d Collection of procurement data by public authorities

Legal context

Public procurement in Hungary is regulated by a number of laws and decrees, which partially transpose the relevant European legislation[205]:

- **Standard procurement regime:**
  o Act CVIII of 2011 on Public Procurement (20 July 2011)[206]
  o Government Decree 310/2011 (23 December 2011) on the certification of suitability and verification of the non-existence of the grounds for exclusion and the definition of public procurement technical specifications in contract award procedures.
  o Government Decree 306/2011 (23 December 2011) on the detailed rules pertaining to public works contracts.

- **Procurement in the water, energy, transportation and postal sectors:**
  o Government Decree 289/2011 (22 December 2011) on the specific rules pertaining to the public procurement in the utilities sector.

- **Defence and security procurement:**
  o Government Decree 228/2004 (30 July 2004) on the specific rules pertaining to the procurement of goods and services in the defence sector, concerning fundamental safety interests, explicitly military, and security goods and services.
  o Government Decree 218/2011 (19 October 2011) on the specific rules pertaining to procurement concerning qualified data, fundamental safety, national security interests of the country or procurement requiring specific safety measures.

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[205]The implementation of the public procurement directives was completed before the official date of Hungary's accession (Hungary became a member of the EU on 1 May 2004),since the new Act on Public Procurement entered into force on 1 January 2004. During the last seven years, the players in the domestic public procurement market gradually learned the European procedures. The regulatory environment proved to be extremely variable and resulted in legal uncertainty (six modifications of the Act on PP on average/annum). The market tried to adapt to the over-regulatory approach of the law and began to use the latitudes it provided.For instance, the activity for seeking legal remedies continually increased. On the other hand, the size of the overall public procurement market remained relatively small: 5-7% of the GDP (see Official Reports on Public Procurement to the Parliament – Public Procurement Authority 2004-2011). The entire Hungarian regulatory environment was changed in 2012. The Act CVIII of 2011 on Public Procurement was issued recently under the effect of Directives2004/17/EC and 2004/18/EC. The much shorter Act is accompanied by a number of Government Decrees. Procurementin special policy areas such as construction and the procurement of public utility companies is regulated in separate Decrees. The regulations on minimum requirements and on technical specifications are included in different Decrees. This codification technique may increase regulatory uncertainty.
[206]Please see http://www.kozbeszerzes.hu/static/uploaded/document/PPA%202012_011.pdf. It entered into force on 1 January 2012.

o   Government Decree 109/2012 (1 June 2012) on specific rules pertaining to the procurement of NATO Security Investment Programme.

The standard **national thresholds for the publication of public procurement** in Hungary are:

•   Procurement of goods and services under the standard regime: EUR 28 488 (HUF 8 million);
•   Procurement of works under the standard regime: EUR 53 415 (HUF 15 million);
•   Procurement of goods and services under the utilities regime: EUR 176 951 (HUF 50 million);
•   Procurement of works under the utilities regime: EUR 353 902. (HUF 100 million)[207]

Public procurement data collection process

Data on public procurement is collected and stored in the IT system of the Public Procurement Authority ('the Authority'). The Hungarian Public Procurement Act CVIII of 2011 ('the PPA') allocates the responsibility to publish notices of the Hungarian public procurement market to the Authority.[208]

A special government decree regulates the notices that launch public procurement procedures. The Authority reviews each tender notice and completes the documents, if needed. In the event that the Authority does not accept a notice, it can launch remedial proceedings. The fee of the compulsory procedure amounts to a minimum of HUF 230 000 (EUR 820) per procedure. Furthermore, this approach is enhanced by the multiple regulations within the PPA that determine the content of the notices, ensuring the notices are detailed and informative.

The Authority has not yet made the database public in its entirety as the database is still under construction; however there is an ongoing process to renew the services of the official website and to publish more information from the database by the end of 2012.

The procurement data are collected in a national centralised system[209]. Government Decree (310/2011) details the manner and form of data collection and storage. The legal experts of the Authority check each notice for completeness and to see if it adheres to all the requirements. Each contracting entity has to pay a fee for this quality control system. They can only publish their notices via the Authority's website. Without payment to or the quality check by the Authority, notices cannot be published on the official public procurement

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[207]The amounts in EUR may not be 100 % correct as they are converted from the Hungarian HUF.
[208]The Authority is the onlyindependent organisation responsible for collecting public procurement informationand creating official statistics concerning the public procurement market in Hungary. The Authority has an obligation to report to the Parliament annually.
[209] Available on: www.kozbeszerzes.hu

website of the Authority or in TED. Quality control of the data is done manually by the Authority.

Coverage of the public procurement database

In principle, all procurement data above the European and national thresholds is collected in the national centralised system. Contracting authorities of all levels are covered in the system.

Pursuant to Government Decrees 228/2004 and 218/2011, contracting authorities are allowed to publish data on defence concerning contracts above the EU threshold via SIMAP (Systeme d'information pour les marches publics - under which TED is published)/TED, avoiding the Hungarian IT system of the PP Authority. For below EU threshold notices, there is no obligation to publish on the public database, but only via the contracting entities' website.

The PPA includes the following additional exclusions for contracts below the EU thresholds, which may be relevant for this study:

'This Act shall not apply to the following procurement that does not reach EU thresholds:

[...];

(c) hotel and catering services, entertainment, cultural and sport services specified in Annex 4;

(f) in case of a public service aimed at the creation of a literary (technical, scientific) work, or involving consulting or personal interpreting activity necessary for the performance of the contracting authority's core activity.

(g) public procurement consultancy activities;

(h) Article 3(e)(f)(i)(k) of the Act LXXIV of 1999 on the management and organization of the prevention of disasters and prevention of major accidents involving dangerous substances; as well as, in case of a crisis, emergency or serious situation, to public procurement carried out with the aim of preventing epidemic diseases in animals, directly preventing or avoiding damage caused by serious industrial or traffic accidents or by water, preventing adverse impacts on water quality, as well as for the purposes of protective preparedness or the subsequent reconstruction;

(i) the procurement of goods made, services provided and works executed in the framework of obligatory employment of prisoners;

(j) the procurement of goods made, services provided and works executed in the framework of public work employment relationship;

(k) the raising of a loan and obtaining of credit pursuant to the Act CXII of 1996 on Credit Institutions and Financial Enterprises.'

3.12.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

Statistical and in depth analysis of Hungarian public procurement data is scheduled for the coming years.

Each contracting authority has to provide a statistical summary to the Authority on a yearly basis. The report, which is publically available in Hungarian, summarises all the public procurement expenditure. There is no quality check system in place to ensure the correctness of this data. The system only collects the data, and uses it to report on various issues,i.e. environmental, social aspects, which are included in the Authority's Report to the Parliament.

Other information sources: public procurement in the defence sector

As mentioned above, defence data (contracts above the EU threshold) can be published directly through SIMAP, which means they will not be included in the Hungarian national system. Below the EU threshold, notices have to be published via the contracting entities' website.

The Armament and Quartermaster Office of the Hungarian MoD Procurement Directorate ('the MoD Procurement Directorate') collects and stores defence procurement data in its own database. The database has been developed over the last 10 years and contains each (outsourced) defence procurement contract of the Hungarian MoD. The database is independent from the database of the Authority. The centralised procurement system of the MoD makes it possible to continuously update the data supplied by contracting entities. In case of framework contracts, the MoD Procurement Directorate updates the annual value every year and estimates the value of the contract and year. Administratively the Directorate has to complete the set of information on each framework contract, assigning the value and year for the contract. Using templates, CPV codes, and detailed guidelines or procedures help the MoD Procurement Directorate unify the methodology behind the database.

According to the data provided by the EDA[210], the 'R&D (including R&T) Expenditure' of Hungary was EUR 3,5 million in 2009 and EUR 250 000 in 2010. Hungary did not report any'Outsourced Defence Expenditure'for 2009 and 2010. Our contact persons at the Armament and Quartermaster Office of the Hungarian MoD Procurement Directorate informed the project team that the entire amount of R&D expenditure was outsourced. The MOD Procurement Directorate forwards its estimated data to the MoD. Subsequently, the Department of Defence Planning of the MoD forwards the complete set of data directly to EDA. The

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[210]Defence Data: EDA participating Member States in 2010.

reported data concerning R&D is the estimated portion of the R&D Expenditure of this national budget.

The R&D outsourced defence expenditure based on the Armament and Quartermaster Office of the Hungarian MOD Procurement Directorate, is as follows:

Year	Estimated contract values	Real value based on the contract values
2010	HUF 93 500 000	HUF 74 000 000 – EUR 250 000
2011	HUF 100 000 000	HUF 46 000 000– EUR 140 000
2012	HUF 105 000 000	HUF 93 000 000– EUR 310 000
2013	HUF 255 000 000	-

The table below shows what portion of the 'outsourced' R&D defence expenditure is spent on ICT:

Year	Real value based on the contract values
2010	HUF 20 000 000-EUR 660 000
2011	HUF 21 000 000 – EUR 70 000
2012	HUF 50 000 000 – EUR 160 000
2013	HUF 100 000 000 – EUR 330 000

Of the total 'outsourced' defence expenditure the following amounts are spent on ICT:

Year	Real value based on the contract values
2010	HUF 1 293 624 412 – EUR 4,31 million
2011	HUF 6 974 387 688 – EUR 23,3 million
2012	HUF 1 517 810 698– EUR 5,06 million

There is no space-related expenditure in the Hungarian MoD.

3.12.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Hungarian authorities, which have provided the requested data to the project team, are willing to provide the European Commission with public procurement data in the future, as well as on an annual basis. The authorities have stressed, however, that they will have issues with the translation or interpretation of the CPV codes.

In addition, quality assurance of the data may generate additional costs, but it is not possible for the Authority to provide an estimate. The Authority will not have the budget to use for this.

Data provision by the MoD

Our contact persons at the MOD Procurement Directorate have informed the study team that the data security restrictions are equal to the general MoD minimum security standards, which means in practical terms that the data sets in their raw form are not freely accessible. In addition, the long planning periods and the annually overlapping periods of contracts complicate the provision of data and estimates for the coming years. Furthermore, the expenditure-based method of data collection requires a specific type of data analysis. Although there is willingness to cooperate with future data provision, it is impossible to estimate the cost of possible future data provision to the Commission.

Data provision by the national statistical institute

The Hungarian Central Statistical Office uses performance expenditure-based R&D indicators for R&D statistics, which may also include some information on where funds originate from. However, there are no data for public procurement in the R&D statistics and national accounts.

The data on intermediate consumption, gross fixed capital formation and social transfer in kind for the government sector are available for Hungary and the COFOG classification has been applied for 2010 data.

Furthermore, the procurement data in the Eurostat database are also available for Hungary, although the Hungarian Statistical Office is not responsible for these data.

There are no more details on R&D activities and according to ESA95, R&D does not have to be accounted for as gross fixed capital formation yet, so the GFCF (gross fixed capital formation) data do not contain any R&D activities. According to the new standard (ESA2010) the R&D activities have to be included in the GFCF figures from 2014.The Hungarian Central Statistical Office will adopt the new international standard of ESA2010 in the near future. There are no other plans to extend the R&D statistics.

3.13 IRELAND

This chapter presents estimates of the amount of ICT-related (3.13.a), R&D (3.13.b), and ICT-related R&D procurement (3.13.c) in Ireland. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.13.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.13.e.

Full country data set is provided in Excel format (see Annex 3).

3.13.a   Public procurement of ICT

The total value of ICT public procurement contracts in Ireland in 2011 was about **EUR 162.2 million**[211], with a 75% decrease compared to 2008 - **EUR 665 million**.

A breakdown of ICT contract value across different areas of public sector activity for 2008 and 2011 is given in *Table 3.13.a. 1*[212]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

Table 3.13.a. 1- Ireland ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	2%	3%	-1,5%
Education	22%	16%	5,7%

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[211] Of which 61.88% is above EU threshold and 26.79% is below.
[212] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
Electricity	5%	11%	-6,4%
Environment	1%	2%	-0,9%
Gas, oil and heat	2%	0%	2,2%
General public services	17%	16%	1,1%
Health	4%	6%	-2,1%
Other	27%	16%	11,6%
Postal services	1%	1%	-0,3%
Public order and safety	0%	1%	-0,9%
Transport	11%	24%	-13,0%
Unknown	7%	2%	4,3%
Water	1%	1%	0,1%
Total	100%	100%	

The contracting authorities that primarily contributed to the expenditure in 2011 are listed *Table 3.13.a. 2*. Expenditure of these authorities covered 27% of the total spending and centred on office and computing machinery, equipment and supplies (18% of the total for the key authorities), radio, television, (tele)communications equipment (18%), and construction work (16%).Examples of supplies and services purchased by the authorities include a database type system to ensure optimal management and condition assessment of the rolling stock (Irish Rail), maintenance and repair of computer equipment (Department of Agriculture, Fisheries & Food), television production services (Houses of the Oireachtas Service). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.13.a. 2- Ireland ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
University College Cork	Education
Houses of the Oireachtas Service	Other
HEAnet Limited	Other
Iarnród Éireann-Irish Rail	Transport
Raidio Teilifis Eireann	Other
Electricity Supply Board	Electricity
Dublin Airport Authority plc	Transport
University College Dublin	Education
Dublin City Council	General public services
ESB Networks	Electricity

3.13.b   Public procurement of R&D

The total value of R&D public procurement contracts in Ireland was about **EUR 83.8 million**[213] in 2011, compared to **EUR 49 million** in 2008. A breakdown of R&D contract value across different areas of public sector activity for 2008 and 2011 is given in *Table 3.13.b. 1*.

Table 3.13.b. 1- Ireland R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	84%	79%	5,3%
Environment	0%	0%	-0,4%
Other	12%	19%	-6,4%
Unknown	4%	2%	1,5%
Total	100%	100%	

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[213] 74.35% is above the EU threshold while 19.46 is below. The remaining 6.18% is unknown.

The contracting authorities that primarily contributed to the expenditure in 2011 are listed in *Table 3.13.b. 2*. Contracts of these authorities centred on supplies[214] (98.8% of the total for the key authorities) such as chemical products (EUR 60 million, purchase of a wide range of laboratory or research chemicals and reagents for the use of the University College Dublin) and on construction work (EUR 1.7 million, e.g. plumbing and mechanical services for the National University of Ireland). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.13.b. 2- Ireland R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
University College Dublin (UCD)	Education
Teagasc	Other
The University of Dublin Trinity College	Education
National University of Ireland, Maynooth (NUI Maynooth-NUIM)	Education
University of Limerick	Education
National Institute for Bioprocessing Research and Training	Unknown
University College Cork (UCC)	Education
Marine Institute	Other
National University of Ireland, Galway (NUI Galway-NUIG)	Education
Dublin City University (DCU)	Unknown

3.13.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Ireland was about **EUR 13.6 million**[215] in 2011, compared to **EUR 29 million** in 2008. A

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[214]Since the national database of public procurement contracts does not include CPV codes, it is impossible to provide a more detailed breakdown of the expenditures by object of the procurement.
[215] 13.65% is above EU threshold while 51.18% is below and 35.17% is unknown.

breakdown of ICT-related R&D overall contract value across different areas of public sector activity for 2008 and 2011 is given in *Table 3.13.c. 1.*

Table 3.13.c. 1- Ireland ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	71%	88%	-17,0%
Other	9%	10%	-0,6%
Unknown	20%	2%	17,6%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.13.c. 2*. Expenditure of these authorities cover the 100% of the total spend and centered on laboratory, optical and precision equipment[216] and medical equipment. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.13.c. 2- Ireland ICT –related R&D 2011 – Key contracting authorities

Contracting authorityor entity	Public sector area
National University of Ireland, Maynooth (NUI Maynooth-NUIM)	Education
The University of Dublin Trinity College	Education
University College Dublin (UCD)	Education
University of Limerick	Education
National Institute for Bioprocessing Research and Training	Unknown

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[216]However, since the national database of public procurement contracts does not include CPV codes, assessment only partically covers national ICT-related R&D spending.

University College Cork (UCC)	Education
National University of Ireland, Galway (NUI Galway-NUIG)	Education
Marine Institute	Other
Dublin City University (DCU)	Unknown
Teagasc	Other

3.13.d Collection of procurement data by public authorities

Legal context

Public procurement in Ireland is regulated by a number of laws and decrees transposing the relevant European legislation[217]:

- **Standard procurement regime:**
o   The European Communities (Award of Public Authorities' Contracts) Regulations 2006, SI No 329 of 2006 ('the Public Sector Regulations'), which implements Directive 2004/18/EC[218].

- **Procurement in the water, energy, transportation and postal sectors:**
o   The European Communities (Award of Contracts by Utility Undertakings) Regulations 2007, SI No 50 of 2007[219] ('the Utilities Regulations'), which implements Directive 2004/17/EC.

- **Defence and security procurement:**
o   The European Union (Award of Contracts relating to Defence and Security) Regulations 2012, SI No 62 of 2012[220], which implements Directive 2009/81/EC.

Procurement below the EU thresholds is governed by non-binding non-legislative guidelines issued by the Department of Finance, including the General Public

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[217]For more details on the legal framework in Ireland see: http://www.irishstatutebook.ie.

[218] http://www.irishstatutebook.ie/2006/en/si/0329.html.

[219] http://www.finance.gov.ie/documents/publications/statutoryinstruments/S.INo._50of2007.pdf.

[220] http://www.irishstatutebook.ie/2012/en/si/0062.html.

Procurement Guidelines, most recently updated in 2009 ('the 2009 Guidelines')[221], and more specific guidelines, including the Guidelines on Use of Generic ICT Specifications published in 2006 ('the ICT Guidelines')[222]and the Guidelines for Facilitating SME Participation in Public Procurement published in 2010 ('the SME Guidelines').[223]

The boards of state bodies ('the Boards') are responsible for complying with the provisions of the Public Sector and Utilities Regulations. Even though the procurement guidelines issued by the Department of Finance are non-binding, due to the Treaty principle of non–discrimination, equal treatment, transparency, mutual recognition, proportionality, freedom to provide service and freedom of establishment, there is a 'strongly implied requirement [on the Boards] to publicise contracts of significant value to a degree that allows parties in other Member States the opportunity to express an interest or to submit tenders' which would include publication on www.etenders.gov.ie.[224]

The standard **national thresholds for the publication of public** procurement in Ireland are as follows:

- All contracts for supplies and general services: EUR 25 000[225];

- All contracts for works and related services: EUR 50 000.[226]

Public procurement data collection process

The Irish Government has developed the website www.eTenders.gov.ie as part of the Strategy for the Implementation of eProcurement in the Irish Public Sector. The site is designed to be a central facility for all public sector contracting authorities to advertise procurement opportunities and award notices. The site is managed by the National Procurement Service ('NPS')[227] of the Office of Public Works ('OPW')[228], which is an operational arm of the Government and falls under the Minister of State (at the Department of Public Expenditure and Reform). The NPS sets the policy on content and functionality of the site; however, day-to-day management and maintenance, as well as development, of the site has been outsourced to a private company, EU-Supply (until recently: Millstream).

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[221] http://www.etenders.gov.ie/generalprocguide.aspx.
[222]http://etenders.gov.ie/Media/Default/SiteContent/LegislationGuides/5.%20Guidelines%20on%20Use%20of%20Generic%20ICT%20Specifications.pdf.
[223] http://www.procurement.ie/sites/default/files/circular_10-10_guidance_for_public_contracting_authorities.pdf.
[224]See the Code of Practice for the Governance of State Bodies, 2009.
[225]See the SME Guidelines.
[226] Contracts with these values and above must be published on www.eTenders.gov.Contracts of a lower value are not required to be published on www.eTenders.gov but doing so is encouraged where it would be useful.Additional guidance is published in circulars, including, for example, the Department of Finance Circular 2/09: Arrangements for ICT Expenditure in the Civil and Public Service.
[227] http://www.procurement.ie.
[228] http://www.opw.ie/en/.

The site displays, on a daily basis, all Irish public sector procurement opportunities currently being advertised in the OJ, as well as other lower-value contracts uploaded to the site from awarding authorities. At any given time it will contain all open opportunities in the form of Tender Notices, Prior Indicative Notices and Contract Award Notices. It also provides associated tender documents (where available), which can be downloaded from the site.

Each of the approximately 300 contracting authorities and their approximately 6000 buyers are registered with the etenders website. This allows them to access the etenders website directly, to create and upload the relevant documentation. The site has the functionality to allow awarding authorities to publish notices on the site, which will then be sent to the OJ automatically. Other functionality includes: facility for conducting online clarifications via a Q&A facility; online submission of tenders; user and notice management facilities to awarding authorities; email alerts and response management facilities to suppliers. There are also a comprehensive notice search function, as well as a help function. The website www.eTenders.gov.ie also provides comprehensive information on procurement rules and guidelines.

There is no charge to contracting authorities or suppliers for this service; the site is also freely available for use by the public.

Coverage of the public procurement database

The website www.etenders.gov provides information on Irish contracting authorities of all levels, from the federal level to the local level, and includes universities and TV channels. All contracting authorities are responsible for uploading tender information to eTenders.gov, which they may do following registration with the Site.

eTenders.gov.ie contains information on defence procurement; both contracts above and below the EU Thresholds are included.

There is no mechanism to guarantee quality of documents or data uploaded by the buyers, but the OPW runs training courses for buyers. This training covers: how best to use the system, what kind of data to upload, how to build the requests for tenders. There is a 'golden rule book' , a set of guidelines available from OPW and National Public Procurement Unit within the Department of finance. This is available on the etenders website and it provided to all buyers to use.

3.13.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

The Central Statistics Office Ireland ('CSO')[229] publishes information only on general governmental expenses. Very general information on R&D and ICT use and expenditure is also available, but there is no information particular to publically-funded expenditure in these categories.

Other information sources: public procurement in the defence sector:

Defence expenditure statistics provided to the EDA are taken from centrally-held accounting data; the codes used are general accounting codes, with NATO codes being used if necessary. There are no separate defence institutions to take into account.

According to the data provided by the EDA[230], the 'R&D (including R&T) Expenditure' of Ireland was 0 million EUR in 2009 and 2010. The Irish MoD has confirmed that there is indeed no spending on R&D in EDA categorisation.

The total 'Outsourced Defence Expenditure' in Ireland was EUR 26 million in 2009 and EUR 21 million in 2010. As it is now possible to breakdown the figures, the MoD could not tell us how much of the total defence expenditure 'outsourced' is spent on ICT.

The Irish MoD has no space-related expenditure.

There are no other data available on Irish defence ICT/ defence R&D / defence R&D of ICT procurement; if other bodies play a role in procurement, the function and result will always come back to defence HQ.

3.13.f Future data provision to the European Commission

Data provision by the Public Procurement authorities

The Irish Government would be happy to provide the relevant data on a regular basis in the future, particularly given the fact that they are moving to a new system and will have better data and better access to the data. The Head of eProcurement does not consider there to be any problems concerning quality control, since training will be provided to the officers in charge of data extraction. There would probably not be any significant extra costs involved.

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[229] http://www.cso.ie/en/index.html.
[230]Defence Data: EDA participating Member States in 2010.

Data provision by the MoD

For the MoD, the principal difficulties in providing the same data we requested on a regular basis would be the security concerns in terms of disclosure. Our contact person considered that there would be many procurement statistics that would be non-discloseable for this reason. However, there would be no need for additional training or adjusting of existing data in order to obtain the information. The MoD considers that all the data would be easy to obtain, and all the necessary systems, categorisations and modes of working are already in place.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

Currently, the Central Statistics Office (CSO) already conducts a survey on business expenditure on R&D; this survey includes two questions on ICT software. The survey takes place every second year and is conducted jointly with Forfás.[231]

Our contact person at the CSO has informed us that the current survey that is used to measure business R&D includes a question on the source of funding for in-house R&D. It asks if the funding comes from government grants or other public funding. For funding outside Ireland, the survey asks if the European Commission or other international organisations provide funding. It is not specified whether there are public procurement contracts involved. Based on existing results, it can be said that the majority of enterprises who raised funds for R&D did so from their own resources, however there was still a significant amount of enterprises who raised funds from government grants.

The survey form can be found here:

http://cso.ie/en/media/csoie/surveysandmethodologies/surveyforms/documents/multisectoral/berd11_12.pdf

The ICT-specific questions are as follows:

'2.1 Please specify your expenditure in 2011 on in-house R&D under each of the following headings …Software purchased (acquired wholly for R&D purposes), and Software developed by your company in-house and used in-house (developed for R&D purposes)'

'2.2 Please specify your ESTIMATED expenditure in 2012 on in-house R&D under each of the following headings… Software purchased (acquired wholly for R&D purposes), and Software developed by your company in-house and used in-house (developed for R&D purposes)'

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[231]Forfás is Ireland's policy advisory board for enterprise, trade, science, technology and innovation.

The survey is sent to each enterprise employing more than 10 persons in the R&D field generally. Although it is a 'compulsory' survey, there is only a 77% response rate. Other limitations with regard to this survey are:

- Confidentiality, particularly with regard to the level of detail; e.g. if an enterprise is dominant. Some tables are by sector. The categories are quite broad and may be published at a relatively high level.
- Accuracy relating to the data itself. This depends on whether they are gathered based on estimates or historical data; if based on 'real time' data, it has to be a 'guesstimate'.[232]

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

Identification of the specific government agencies and departments that funded public procurement is possible. According to Forfás, this data could be sourced but it would require changes to the existing data collection system.

Information for Forfás surveys is collected at project level, thus it is possible to identify how much expenditure is for ICT-related contracts. However, as noted, public procurement contracts are not currently specified, therefore the specific funder is not identified.

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

According to another CSO representative, in the National Accounts, as currently compiled under the rules of the ESA95 regulation, expenditure on R&D is considered part of current costs for the business sector, i.e. part of Intermediate Consumption. Such expenditure on R&D is not separately identified.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

A new set of rules is being finalised for the presentation of national accounts (called ESA 2010). These new rules will apply from late 2014 onwards and expenditure on R&D will be regarded as part of capital investment. However, there are no plans to distinguish expenditure on R&D related to ICT separately. National accounts will be dependent on the data in the R&D surveys to provide data on investment on R&D.

The Forfás representative also noted that increased dialogue with survey respondents could improve the accuracy and specificity of data on ICT-related

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[232]According to the CSO, the biggest issue would be accuracy. There would be a trade-off between the accuracy and the timeliness of data.

R&D. The prospect of training has also been raised within the organisation as a potential method of improving responses to GovERD surveys.

3.14 ITALY

This chapter presents estimates of the amount of ICT-related (3.14.a), R&D (3.14.b), and ICT-related R&D procurement (3.14.c) in Italy. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts from the national public procurement database.

Procurement contract data collected by the national public authorities is illustrated in paragraph 3.14.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.14.e.

Full country data set is provided in Excel format (see Annex 3).

3.14.a   Public procurement of ICT

The total value of ICT public procurement contracts in Italy in 2011 was about **EUR 4.69 billion**[233], with a 39% increase compared to 2008 - **EUR 3.3 billion**.

A breakdown of ICT overall contract value across different areas of public sector activities given in *Table 3.14.a. 1* for the years 2008 and 2011[234]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national or the local level.

Table 3.14.a. 1–Italy ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	1%	1%	-0,6%
Education	4%	2%	2,2%

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[233] Of which 90.81% is above EU threshold and 7.19% is below.
[234] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
Electricity	7%	12%	-4,1%
Environment	1%	4%	-2,6%
Gas, oil and heat	4%	4%	0,2%
General public services	19%	27%	-7,9%
Health	7%	11%	-3,3%
Other	13%	22%	-8,2%
Postal services	3%	2%	1,4%
Public order and safety	0%	0%	-0,1%
Transport	32%	10%	21,5%
Unknown	6%	5%	1,2%
Water	1%	0%	0,2%
Total	100%	100%	

The contracting authorities that primarily contributed to the expenditure in 2011 are listed in *Table 3.14.a. 2*. Expenditure of these authorities covered 56% of the total spending and centred on IT services (70% of the total for the key authorities), postal and telecommunication equipment (20%),radio, television and communication equipment (4%) and printed matter and related products (2%).Examples of supplies and services purchased by the authorities also include business services and office and computing machinery. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.14.a. 2– Italy ICT – Key contracting authorities

Contracting authority or entity	Public sector area
Ferservizi SpA (Railways Service Spa)	Transport
ENEL servizi SRL (Enel Service Ltd)	Electricity
Consip S.p.A. (Consip SpA - Ministry of Economy and Finance)	General public services
DigitPA	General public services
Inpdap (National Institute of welfare and assistance for employees of the public administration)	Other
ENI SpA (National Hydrocarbon Corporation Spa)	Gas, oil and heat
Poste italiane SpA (Italian Post SpA)	Postal Services
Infratel Italia SpA (Infratel Italy SpA)	Other
Giunta regionale della Lombardia (Regional Government of Lombardy)	General public services
Università degli studi di Modena e Reggio Emilia (University of Modena and Reggio Emilia)	Education

3.14.b   Public procurement of R&D

The total value of R&D public procurement contracts in Italy was about **EUR 181.9 million**[235] in 2011, 57% more than in 2008, **EUR 115 million**. A breakdown of R&D contract value across different areas of public sector activity is given in for 2008 and 2011.

Table 3.14.b. 1 – Italy R&D - Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	1%	8%	-7,3%
Education	37%	9%	27,7%

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[235] 31.01% is above EU threshold while 41.56% is below. 27.43% is unknown.

Electricity	14%	10%	3,5%
Environment	1%	1%	-0,3%
Gas, oil and heat	0%	0%	0,1%
General public services	1%	4%	-3,2%
Health	6%	15%	-9,4%
Other	29%	50%	-20,8%
Public order and safety	1%	0%	0,7%
Transport	6%	0%	5,4%
Unknown	5%	1%	3,5%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.14.a. 2*. Contracts of these authorities covered 32% of the total amount and provide research and development services and related consultancy services (about EUR 27 million), construction work (EUR 10 million) and laboratory optical and precision equipment (EUR 4.9 million). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.14.b. 2 – Italy R&D – Key contracting authorities

Contracting authority or entity	Public sector area
UNIVERSITA' DEGLI STUDI DI PISA (University of Pisa)	Education
INFN ISTITUTO NAZIONALE DI FISICA NUCLEARE (INFN - Nationa Institute of Nuclear Physics)	Other
CIRA CENTRO ITALIANO RICERCHE AEROSPAZIALI (CIRA - Italian Centre for Aerospace Reasearch)	Other
ENEA ENTE PER LE NUOVE TECNOLOGIE L'ENERGIA E L'AMBIENTE (Enea - Institute for New Technology on Energy and Envronment)	Other

Fondazione Istituto italiano di tecnologia (Foundation Italian Institute of Technology)	Other
ISS ISTITUTO SUPERIORE DI SANITA' (Higher Institute of Health)	Health
UNIVERSITA' DEGLI STUDI DI PERUGIA (University of Perugia)	Education
Fondazione IRCCS Istituto nazionale dei tumori (IRCCS Foundation - National Cancer Institute)	Health
UNIVERSITA' DEGLI STUDI DI BRESCIA (University of Brescia)	Education
ISTITUTO GIANNINA GASLINI, GENOVA (Institute Giannina Gaslini, Genova)	Health

3.14.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Italy was about **EUR 50.2 million**[236] in 2011, compared to **EUR 41.6 million** in 2008. A breakdown of of ICT-related R&D overall contract value across different areas of public sector activity for 2008 and 2011 is given in *Table 3.14.c. 1*.

Table 3.14.c. 1- Italy ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	71%	88%	-17,0%
Other	9%	10%	-0,6%
Unknown	20%	2%	17,6%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.14.c. 2*. Expenditure of these authorities covered 37% of the

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[236] 38.27% is above EU threshold while 31.14% is below and 30.59% is unknown.

total spending and centred on construction work (EUR 10 million), laboratory, optical and precision equipment, e.g. Italian Institute of Technology and medical equipment. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.14.c. 2 -Italy ICT –related R&D 2011 – Key contracting authorities

Contracting authorityor entity	Public sector area
INFN ISTITUTO NAZIONALE DI FISICA NUCLEARE (INFN - Nationa Institute of Nuclear Physics)	Other
UNIVERSITA' DEGLI STUDI DI PISA (University of Pisa)	Education
UNIVERSITA' DEGLI STUDI DI PERUGIA (University of Perugia)	Education
Istituto italiano di tecnologia (Italian Institute of Technology)	Other
Fondazione IRCCS Istituto nazionale dei tumori (IRCCS Foundation - National Cancer Institute)	Health
UNIVERSITA' DEGLI STUDI DI BARI (University of Bari)	Education
Fondazione Istituto italiano di tecnologia (Foundation Italian Institute of Technology)	Other
UNIVERSITA' DEGLI STUDI DI MESSINA (University of Messina)	Education
CIRA CENTRO ITALIANO RICERCHE AEROSPAZIALI (CIRA - Italian Centre for Aerospace Reasearch)	Other
POLITECNICO DI BARI (Polythecnic University of Bari)	Unknown

3.14.d Collection of procurement data by public authorities

Legal context

Public procurement in Italy is regulated by a number of laws and decrees transposing the relevant European legislation:

- **Standard procurement regime (Directive 2004/18/EC):**

o *Decreto Legislativo 163/2006, Codice degli Appalti* (Legislative Decree 163/2006, Italian Public Procurement Code).[237]

- **Procurement in the water, energy, transportation and postal sectors (Directive 2004/17/EC):**

o Legislative Decree 163/2006.

- **Procurement in [the domains of] defence and security (Directive 2009/81/EC):**

o *Decreto Legislativo 208/2011, Lavori, Servizi e Forniture Difesa e Sicurezza* Legislative Decree 208/2011.[238]

- **Additional legislation:**

o *Decreto20/2001 Ministero delle Infrastrutture e Trasporti* (Decree 20/2001 adopted by the Italian Ministry for Infrastructures and Transport).[239]

The standard **national threshold for the publication of public procurement** in Italy is **EUR** 150 000.

Public procurement data collection process

In Italy, two public authorities at the national level are in charge of collecting and storing data on public procurement contracts: the Ministry of Infrastructure and Transport (*Ministero delle Infrastrutture e Trasporti*)[240] and the Authority for Public Procurement Supervision (*Autorità per la Vigilanza sui Contratti*

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[237]http://documents.ct.infn.it/record/364/files/D_Lgs_163-06%20CODICE%20DEGLI%20APPALTI%20%28coordinato%29.pdf
[238]http://www.altalex.com/index.php?idnot=16568
[239]https://www.serviziocontrattipubblici.it/informazioni/doc/decreto060401_nw2.pdf
[240]https://www.serviziocontrattipubblici.it/informazioni/index_info.aspx

Pubblici,(AVCP).[241] In addition, each region has established an Observatory on Public Procurement Contracts (Osservatorio Regionale Contratti Pubblici).[242]

A.   The online database of the Ministry of Infrastructure[and Transport] was established in 2001 by Decree n. 20 of the Minister for Infrastructure [and Transport]. Under Article 2 of Decree 20/2001, local and national granting authorities have the duty to inform the Ministry of Infrastructure [and Transport] in relation to every new public tender. After registering on the website of the Ministry of Infrastructure [and Transport], the representative of each public contractor can directly upload the tender notice in the database of the Ministry of Infrastructure [and Transport]. This data is later publicly accessible online.

B.   In 2006, Legislative Decree n. 163/2006 (Italian Public Procurement Code) established the AVCP. Under Article 7 of the Decree, the AVCP collects data on public tenders, which are later included in its database and freely accessible online.

Article 7(1) of the Decree also established the regional Observatories on Public Procurement Contracts ('the Observatories'). These are localised offices of the AVCP, which have the task of collecting information on public procurement notices from local and regional contractors. Most of the Observatories have established their own online database; users can search information concerning tender notices organised by public contractors, which operate within each Observatory's . Moreover, under Article 7(6) of the Decree, each Observatory transmits the data to the central office of the AVCP in Rome. The latter includes the data within its online database, which covers both national and regional/local tenders.

Data on public procurement is collected by the AVCP using two methods:

1)   <u>Directly sent to the AVCP by single tender authorities</u>: tender authorities directly submit information concerning the tender notice to the AVCP when the tender is of national interest. The tender authorities request an identification code(*Codice Identificativo Gara, CIG)* for the single tender from the AVCP. Once the CIG is assigned by the AVCP, the tender authority can upload the information concerning the tender notice into the AVCP database;

2)   <u>Collected by regional Observatories for Public Procurement Contracts</u>: local and regional tender authorities usually submit the tender information to the regional public tender Observatory, which later forwards the information to the AVCP.

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[241]http://bandigara.avcp.it/AVCP-ConsultazioneBandiGara/SelectCpv.action?cpvId=64000000-6%20-%20SERVIZI%20DI%20POSTE%20E%20TELECOMUNICAZIONI
[242]https://www.serviziocontrattipubblici.it/informazioni/bp_link_regioni.aspx

The two systems of data collection described above are complementary. While tender authorities usually submit information directly to the AVCP concerning the tender notice, the regional Observatories mainly submit information concerning the adjudication of the contract to the AVCP at the end of the tender proceedings.

We are not aware of any system of data quality control carried out by the AVCP to verify the data uploaded by the tender authorities into the AVCP database. Once the tender authorities receive the CIG, they upload the information concerning the tender. Similarly, the AVCP receives the data forwarded by the regional Observatories, but it does not systematically verify the type of data quality control carried out by the Observatories.

Coverage of the AVCP public procurement database

All types of public procurement contracts can be entered into the ACPV database. In practice, many public authorities do not publish their contracts if they are not legally obliged to do so (with regard to specific exemptions under the procurement Directives and below-threshold procurement).

Under Article. 7(8) of the Decree, tender authorities have the duty to notify to the AVCP of new tender notices related to contracts which have a value above EUR 150000. In December 2010, the President of the AVCP adopted a Communication, decreasing this threshold to EUR 40 000. The Communication has been in force since 2011. The collection of data concerning tenders with a value between EUR 40 000 and EUR 150 000 is still not systematic, due to the relatively recent implementation of this Communication. In addition, in spite of the Communication, Article 7(8) continues to remain in force. In order to solve this legislative discrepancy, the Government is currently discussing the possibility of amending Article 7(8) to decrease the threshold of notification to EUR 50 000.

3.14.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

The AVCP is the main organisation in Italy that collects information concerning public procurement at the local, regional and national level. As mentioned above, the Italian Ministry of Infrastructure and Transport keeps another national

database. During our interview with the AVCP, it became clear that there is no interaction between the two databases.

Four private tender alert providers covering Italy were identified: Banchedati bizz,[243] InfoPlus,[244] Telemat[245] and TeliTel[246], two of which best matched the study requirements (InfoPlus and Telemat). Estimates were requested from both providers. The data coverage of both data providers was rather similar, with the exception that the Infoplus database contains a large number tenders divided by industry category, but that do not have an indication of precise value from the tender notice.

Taking into account that the ACPV would not be able to share their database with us within the required timeframe for the Interim Report, and the lower price of data from Telemat, we acquired data from Telemat.

Other information sources: public procurement in the defence sector

Articles 195 and 196 of the Italian Public Procurement Code provide a number of exemptions regarding the duty of communication to the AVCP with regard to public tenders in the defence sector. In the past, due to this exemption, the AVCP was not notified of most of these public tenders in the defence sector , even in cases of contracts that were not strictly linked to issues of national defence[247].

Legislative Decree 208/2011 was adopted in order to implement Directive 2009/81/EC. This differentiates between public tenders that are exempt from the AVCP notification requirement due to reasons of public security, and those tenders that concern the provision of goods, services and work to the MoD, which should be advertised on the AVCP database, since they do not affect national security. Given the relatively recent entry into force of Legislative Decree 208/2011, the AVCP database includes limited data concerning tenders related to the defence sector.

It should be noted that the study team filed an official interview request (in accordance with MoD regulations) to the Italian MoD in order to further complete the information gathered in interviews with procurement officers at the AVCP and

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[243] http://www.banchedati.biz/
[244] http://www.infoplus.gare.it/
[245] http://www.telemat.it/
[246] http://www.telitel.it/
[247] Legislative Decree 208/2011

the NSI. Our contact point at the Italian MoD demonstrated willingness to cooperate; however, after repeated requests, we did not receive the required formal approval for the interview.

According to data provided by the EDA[248], 'R&D (including R&T) Expenditure' was 64 million EUR in 2010.

3.14.f Future data provision to the European Commission

Future data provision by the public procurement authorities

Since 2008, the AVCP has communicated statistical data to DG market on an annual basis (these reports are not public). The datasets refer to public procurement in Italy over the previous year and consist of statistics on tender values of each industry based on CPV codes. The reports include the identification of tender authorities, CPV codes, a list of tenders which fall in 'special' sectors, and the nationality of the company that wins the contract.

The AVCP could provide data to DG CONNECT for a distinct purpose, but as it already provides one set to DG market, this would be seen as an additional burden for the national authorities.

Future data provision by the national statistical institute

The Istituto Nazionale di Statistica[249] (ISTAT) Department for Information Technology and Communications carries out surveys on public procurement in Italy, which examine:

- R&D expenditure compared to GDP;
- the number of employees working in R&D;
- the principal sectors affected by R&D expenditure.

The most recent survey published in December 2011 covers the period 2009-2011. ISTAT surveys do not specifically look at ICT-related expenditure.

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

According to ISTAT, performer-based indicators would be unsuitable for the extraction of ICT-related R&D expenditure data. The principal limitation of such a method is the difficulty of systemic collection of data by private undertakings.

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[248]Defence Data: EDA participating Member States in 2010.
[249]http://www.istat.it/it/

The experience of ISTAT thus far has shown that private bodies are more reluctant than public institutions to respond to questionnaires. There is also no homogeneity in the way private undertakings classify procurement data, which provides an additional obstacle to the consistent collection of data.

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

Funder-based indicators are viewed as the most appropriate tool. Public institutions in general have a better response rate than their private counterparts, and qualify public procurement expenditure in the same way.

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

It would also be difficult to use national accounts data to extract ICT-related R&D expenditure. This is because the national accounts are aggregated statistics which would have to be 'disaggregated' to identify the relevant data.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

The funder-based measurement preferred by ISTAT could be feasible in around one month, since the expertise and human resources required exists already in the ISTAT organisation. The Department for Information Technology and Communications could detail research methodology, collect data, and aggregate statistics. The length of time would depend on both the methodology used and the length of time covered by the survey. Contacts that ISTAT already has with local and central public administrations in Italy would enable it to collect data relatively quickly. The principal limitation would be the additional burden of data collection for ISTAT.

3.15 LATVIA

This section presents estimates of the amount of ICT-related (sub-section 3.15.a), R&D (sub-section 3.15.b), and ICT-related R&D procurement (sub-section 3.15.c) in Latvia. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in sub-section 3.15.d, while the availability of qualitative information, which can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in sub-section 3.15.e.

Full country data set is provided in Excel format (see Annex 3).

3.15.a   Public procurement of ICT

The total value of ICT public procurement contracts in Latvia in 2011 was about **EUR 159.8 million**[250], a 4% increase compared to 2010, **EUR 152 million**.

A breakdown of ICT overall contract value across different areas of public sector activity is given in *Table 3.15.a. 1.* The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national or the local level.

Table 3.15.a. 1 - *Latvia ICT – Contract values by public sector activity*

Public Sector Area	2011	2010	Δ
Economic and financial affairs	13%	7%	6,4%
Education	18%	6%	12,2%
Electricity	2%	2%	0,3%
Environment	2%	3%	-0,6%

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[250] 76.26% is above EU threshold and 19.04% is below.

Public Sector Area	2011	2010	Δ
Gas, oil and heat	0%	2%	-1,7%
General public services	13%	14%	-1,0%
Health	9%	9%	-0,3%
Other	27%	36%	-8,8%
Public order and safety	3%	7%	-3,9%
Transport	2%	4%	-1,8%
Unknown	11%	5%	6,6%
Water	0%	7%	-7,4%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 58% of the total spending and centred on IT services, (46% of the total for the key authorities, e.g. consulting, software development, Internet and support), office and computing machinery, equipment and supplies (35%) and software package and information systems (8%). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.15.a. 2 – Latvia ICT – Key contracting authorities

Contracting authority or entity	Public sector area
Valsts reģionālās attīstības aģentūra (The State Regional Development Agency)	Other
Izglītības un zinātnes ministrija (Ministry of Education)	Education
Valsts ieņēmumu dienests (The State Revenue Service)	Economic and financial affairs
Valsts zemes dienests (The State Land Service)	General public services
Tiesu administrācija (Court Administration)	Other

Contracting authority or entity	Public sector area
Rīgas domes Informācijas tehnoloģiju centrs (Riga City Council's Information Technology Center)	General public services
Akciju sabiedrība Latvenergo (Joint stock company Latvenergo)	Electricity
Neatliekamās medicīniskās palīdzības dienests (Emergency Medical Service)	Health
Latvijas Universitāte (Latvian University)	Education
LR IeM Pilsonības un migrācijas lietu pārvalde (Ministry of Citizenship and Migration Affairs)	General public services

3.15.b   Public procurement of R&D

The total value of R&D public procurement contracts in Latvia was about **EUR 10.4 million**[251] in 2011, compared to **EUR 5 million** in 2010. A breakdown of R&D contract value across different areas of public sector activity for 2010 and 2011 is given in *Table 3.15.b. 1*.

Table 3.15.b. 1 – Latvia R&D - Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	87%	55%	31,8%
Environment	0%	0%	0,2%
Health	7%	40%	-32,7%
Other	4%	1%	3,0%
Unknown	1%	3%	-2,2%
Total	100%	100%	

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[251] Of which 56.85% is above the EU threshold while 30.99% is below and 12.16% is unknown.

The contracting authorities that primarily contributed to the expenditure in 2011 are listed in *Table 3.15.b. 2*. Contracts of these authorities centred on supplies[252] (87% of the total for the key authorities) such as laboratory optical and precision equipment (EUR 6.2 million, especially for the need of the Daugavpils University), medical equipment, pharmaceuticals and personal care products (EUR 13 million) and research and development services and related consultancy services (EUR 1 million).

Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.15.b. 2 – Latvia R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Daugavpils Universitāte (Daugavpils University)	Education
Latvijas Universitāte (Latvian University)	Education
Latvijas Lauksaimniecības universitāte (Latvian University of Agriculture)	Education
Rīgas Tehniskā universitāte (Riga Technical University)	Education
SIA Rīgas Austrumu klīniskā universitātes slimnīca (SIA Riga Eastern Clinical University Hospital)	Health
Valsts sabiedrība ar ierobežotu atbildību Paula Stradiņa klīniskā universitātes slimnīca (Public company with limited liability P.Stradins's Hospital)	Health
Rīgas Stradiņa universitāte (Riga Stradiņš University)	Education
Latvijas Universitātes aģentūra - Latvijas Universitātes Cietvielu fizikas institūts (Latvian University Agency - Latvian Institute of Solid State Physics)	Education
Latvijas Valsts mežzinātnes institūts Silava (Latvian State Forest Research Institute Silava)	Other

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[252]Since the national database of public procurement contracts does not include CPV codes, it is impossible to provide a more detailed breakdown of the expenditures by subject of the procurement.

Atvasināta Publiska PersonaLatvijas Valsts Augļkopības Institūts
(National Institute of Fruit)

Other

3.15.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Latvia was about **EUR 4.6 million**[253] in 2011, compared to **EUR 2.8 million** in 2008. A breakdown of of ICT-related R&D overall contract value across different areas of public sector activity for 2008 and 2011 is given in *Table 3.15.c. 1*.

Table 3.15.c. 1- Latvia ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	81%	34%	47,0%
Environment	0%	0%	0,4%
Health	14%	64%	-50,3%
Other	3%	2%	1,3%
Unknown	2%	0%	1,6%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.15.c. 2*. Expenditure of these authorities covered 90% of the total spending and centred on laboratory, optical and precision equipment,e.g. Daugavpils University, medical equipment,e.g. Latvian University and research and development services. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

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[253] 49.34% is above EU threshold while 32.83% is below and 17.83% is unknown.

Table 3.15.c. 2 -Latvia ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Daugavpils Universitāte (Daugavpils University)	Education
Latvijas Universitāte (Latvian University)	Education
SIA Rīgas Austrumu klīniskā universitātes slimnīca (SIA Riga Eastern Clinical University Hospital)	Health
Latvijas Lauksaimniecības universitāte (Latvian University of Agriculture)	Education
Latvijas Universitātes Cietvielu fizikas institūts (Latvian Institute of Solid State Physics)	Education
Rīgas Tehniskā universitāte (Riga Technical University)	Education
Paula Stradiņa klīniskā universitātes (P.Stradins's Hospital)	Health
Atvasināta Publiska PersonaLatvijas Valsts Augļkopības Institūts (National Institute of Fruit)	Other
Rīgas Stradiņa universitāte (University of Riga)	Education
SIA Biomehānikas un fizikālo pētījumu institūts (Biomechanics and physical research institute)	Other

3.15.d Collection of procurement data by public authorities

Legal context

Public procurement in Latvia is regulated by a number of laws and decrees[254] which transpose the relevant European legislation on public procurement:

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[254] For more information on the legal framework in Latvia and links to the primary sources, please refer to: http://www.iub.gov.lv/node/55

- **Public Procurement Law**[255] (*'Publisko iepirkumu likums', effective from 1 May 2006, last amended on 21 June 2012) for 'classical' public procurement;*

- **Law on the Procurement of Public Service Providers**[256] (*'Sabiedrisko pakalpojumu sniedzēju iepirkumu likums', effective from 4 September 2010) for procurement by utilities;*

- **Defence and Security Procurement Law**[257] (*'Aizsardzības un drošības jomas iepirkumu likums', effective from 16 November 2011);*

- **Law on Public-Private Partnership**[258](*'Publiskās un privātās partnerības likums', effective from 1 October 2009, last amended on 25 August 2010) for public service and works concessions.*

In addition, some **Regulations of the Cabinet of Ministers**[259] set technical implementing rules such as value thresholds, procurement processes, communication obligations, etc.

The general **thresholds for the publication of public procurement** in Latvia have been defined by the before mentioned laws as well as *Cabinet of Ministers Regulation No. 519 of 8 June 2010 (amended by Cabinet of Ministers Regulation No. 1040 of 27 December 2011 and Cabinet of Ministers Regulation No. 631 of 18 September 2012)*[260] for 'classical' procurement, *Cabinet of Ministers Regulation No. 840 of 7 September 2010 (amended by Cabinet of Ministers Regulation No. 1039 of 27 December 2011)*[261] for procurement by utilities, *Cabinet of Ministers Regulation No. 937 of 6 December 2011 (amended by Cabinet of Ministers Regulation No. 1041 of 27 December 2011)*[262] for defence and security procurement, and *Cabinet of Ministers Regulation No. 1068 of 22 September 2009 (amended by Cabinet of Ministers Regulation No. 14 of 5 January 2010 and Cabinet of Ministers Regulation No. 1042 of 27 December 2012)*[263]for public service and works concessions.

http://europa.eu/youreurope/business/profiting-from-eu-market/benefiting-from-public-contracts/latvia/index_en.htm

[255]http://www.iub.gov.lv/files/upload/pil01.04.2013.pdf

[256]http://www.iub.gov.lv/files/upload/SPSIL_04092010.pdf

[257]http://www.iub.gov.lv/files/upload/ADIL_16.11.2011.pdf

[258]http://www.iub.gov.lv/files/upload/puppl01.10.2010_0.pdf

[259]http://www.iub.gov.lv/node/56

[260]http://www.iub.gov.lv/files/upload/MK519_10_22.09.2012.pdf

[261]http://www.iub.gov.lv/files/upload/MK840_10_31.12.2011.pdf

[262]http://www.iub.gov.lv/files/upload/MK937_11_31.12.011.pdf

[263]http://www.iub.gov.lv/files/upload/MK1068_09_31.12.2011.pdf

The table below provides an overview of the main publication thresholds for 'classical' public procurement:

European thresholds that require publication in the national public procurement database and in OJ / TED [264]
Works: equal or exceeding LVL 3 540 500 (excluding VAT)   **Supplies and services:** equal or exceeding LVL 92 053 (excluding VAT)
National thresholds that require publication in the national public procurement database *(Section 8 paragraph 2 Public Procurement Law)*
Works: equal or exceeding LVL 120 000 (excluding VAT)   **Supplies and services:** equal or exceeding LVL 20 000 (excluding VAT)
National thresholds that require publication in the national public procurement database based on simplified procedures and reporting requirements *(Section 8 paragraph 2 Public Procurement Law)*
Works: equal or exceeding LVL 10 000 (excluding VAT)   **Supplies and services:** equal or exceeding LVL 3 000 (excluding VAT)

The table below provides an overview of the **main publication thresholds for 'utilities'procurement**:

European thresholds that require a publication in the national public procurement database and in the OJ / TED
Works: equal or exceeding LVL 3 540 500 (excl. VAT)   **Supplies and services:** equal or exceeding LVL 283 240(excl. VAT)

The table below provides an overview of the **main publication thresholds for 'defence'procurement**:

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[264]http://ec.europa.eu/internal_market/publicprocurement/rules/current/index_en.htm

European thresholds that require publication in the national public procurement database and in the OJ / TED
Works: equal or exceeding LVL 3 540 500 (excluding VAT)   **Supplies and services:** equal or exceeding LVL 283 240(excluding VAT)

National thresholds that require publication in the national public procurement database by contracting authority according to Public Procurement Law *(Section 6 paragraph 1 Defence and Security Procurement Law)*
Works: equal or exceeding LVL 120 000 (excluding VAT)   **Supplies and services:** equal or exceeding LVL 20 000 (excluding VAT)

The table below provides an overview of the **main publication threshold for 'concessions'procurement**:

European threshold that require a publication in the national public procurement database and in the OJ / TED
Works: equal or exceeding LVL 3 540 500 (excl. VAT)

The Latvian public procurement policy is coordinated by the Ministry of Finance of the Republic of Latvia[265]. The Latvian Procurement Monitoring Bureau[266] is a subordinate entity of the Ministry of Finance supporting policy implementation and control procedures in the area of public procurement.

Public procurement data collection process

In Latvia, public procurement data is collected and stored digitally on one common portal that covers the different levels of government: the **database of the Procurement Monitoring Bureau of Latvia** (*Iepirkumu uzraudzības birojs (IUB)[267].* The processing of notices is conducted via Publication Management System (*Publikāciju vadības sistēma (PVS)*) where, after registration, users have access to their accounts to perform activities, such asentering, editing, and publishing procurement notices according to laws and regulations.

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[265]http://www.fm.gov.lv/en/
[266]http://www.iub.gov.lv
[267] http://www.iub.gov.lv

The Procurement Monitoring Bureau ensures the functioning of the so-called PVS and the storage of data. The contracting authorities and entities are responsible for publishing notices and reliability of information provided in them. The notices are directly entered by individual contracting authorities and entities into the PVS, except for notices submitted by public partners or public partner representatives under the Law on Public-Private Partnership, in which case the notices are entered into the PVSby the staff of the Procurement Monitoring Bureau.

Contracting authorities are obliged by the Public Procurement Law to publish contract (award) notices for above national and EU threshold procurement. After authorisation in the Publication Management System[268], the relevant information is directly entered 'step-by-step'by contracting authorities into the system based on online forms that have been filled out, taking into account the European TED templates. The content of notices and procedure for their preparation is stipulated by *Cabinet of Ministers Regulation No. 698 of 27 July 2010 (amended by Cabinet of Ministers Regulation No. 155 of 26 March 2013)[269]*. The notices for procurement based on simplified procedures (works: equal or exceeding LVL 10 000; supplies and services: equal or exceeding LVL 3 000) are published online directly after contracting authorities have entered information and approved the publication. The notices for procurement above national and EU thresholds (works: equal or exceeding LVL 120 000; supplies and services: equal or exceeding LVL 20 000) are submitted to the Procurement Monitoring Bureau for verification. If there are any amendments, the notice is sent back to the contracting authority for editing. After the notice is verified, the data is published online on the portal and, where relevant, also submitted to TED via eSender for Europe-wide publication.

Contracting entities are obliged by the Law on the Procurement of Public Service Providers to publish contract (award) notices for above EU threshold procurement. After authorisation in the Publication Management System, the relevant information is directly entered 'step-by-step' by contracting entities into the system based on online forms that have been filled out, taking into account the European TED templates. The content of notices and procedure for their preparation is stipulated by *Cabinet of Ministers Regulation No. 842 of 7 September 2010[270]*. The notices for procurement above EU thresholds (works: equal or exceeding LVL 3 540 500; supplies and services: equal or exceeding LVL 283 240) are submitted to the Procurement Monitoring Bureau for verification. If there are any amendments, the notice is sent back to the contracting entity for editing. After the notice is verified, the data is published online on the portal and, where relevant, also submitted to TED via eSender for Europe-wide publication.

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[268] http://www.iub.gov.lv/pvs/users/login
[269] http://www.iub.gov.lv/files/upload/MK698_10_01.04.2013.pdf
[270] http://www.iub.gov.lv/files/upload/MK842_10_22.09.2010.pdf

Contracting authorities or entities are obliged by the Defence and Security Procurement Law to publish contract (award) notices for above national and EU threshold procurement. After authorisation in the Publication Management System, the relevant information is directly entered 'step-by-step' by contracting authorities or entities into the system based on online forms that have been filled out, taking into account the European TED templates. The content of notices and procedure for their preparation is stipulated by *Cabinet of Ministers Regulation No. 927 of 6 December 2011*[271]. The notices for procurement above national and EU thresholds (works: equal or exceeding LVL 120 000; supplies and services: equal or exceeding LVL 20 000) are published online directly after contracting authorities or entities have entered information and approved the publication, and, where relevant, also submitted by the Procurement Monitoring Bureau to TED via eSender for a Europe-wide publication.

Public partners or public partner representatives are obliged by the Law on Public-Private Partnership to publish contract (award) notices for public-private partnership procurement procedures. The content and forms of notices and procedure for their submission is stipulated by *Cabinet of Ministers Regulation No. 904 of 28 September 2010*[272]. The notices are completed by public partners or public partner representatives and submitted to the Procurement Monitoring Bureau for verification via fax, post or email if electronically signed. If there are any amendments, the edited notice is re-sent to the Procurement Monitoring Bureau for verification, entered into the PVS and published online on the portal and, where relevant, also submitted to TED via eSender for Europe-wide publication.

Contracting authorities or entities are obliged by the Public Procurement Law, the Law on the Procurement of Public Service Providers and the Defence and Security Procurement Law to submit annual statistical reports to the Procurement Monitoring Bureau. The data then are summarised in statistical forms and submitted to the European Commission[273]. In addition, the Procurement Monitoring Bureau regularly compiles detailed annual statistical reports based on its database, as well as provides the most recent statistical information on the notices published on ww.iub.gov.lv[274].

Predefined step–by-step templates, automatic data checks (where possible), user manuals and a helpdesk ensure the quality of the data entered into the PVS. Where stipulated by law, the Procurement Monitoring Bureau provides verification of data provided in the submitted notices. Although data quality on the portal is also monitored by the Procurement Monitoring Bureau, on principle,

[271] http://www.iub.gov.lv/files/upload/MK927_11_09.12.2011.pdf
[272] http://www.iub.gov.lv/files/upload/MK904_10_01.10.2010.pdf
[273] http://www.iub.gov.lv/node/52
[274] http://www.iub.gov.lv/node/48

the contracting authorities remain solely responsible for the quality and completeness of their publications on the portal.

Coverage of the public procurement database

Latvian authorities at all levels of government are covered by the database. Potentially all types of public procurement can be entered into the national public procurement portal. However, there are exceptions in the law stating the types of procurement that are excluded from the publication (only a voluntary *ex ante* transparency notice might be published if the contracting authority or entity decides to do so).

For instance, the <u>Public Procurement Law</u>[275] (section 3) foresees several **exceptions to the application of this law**, such as in the area of broadcasting and the purchase or lease of land. In line with the WTO GPA, the exemption on R&D services shall not be applicable if the following conditions exist concurrently: (a) only the commissioning party will benefit from the results of the service provided, using these results only for the needs thereof, and (b) the commissioning party will fully pay for the service provided.

Furthermore, **exceptions to the application of the procurement procedures** by Public Procurement Law (cf. section 5) inter alia apply if the contract price is less than LVL 70000. In such cases only voluntary ex ante transparency notice might be published if contracting authority decides so.

In their turn, general **exceptions** to the application of Law on the Procurement of Public Service Providers are stated in Section 9 and 10[276]; exceptions to the application of Defence and Security Procurement Law are stated in Section 4[277]; and exceptions to the application of Law on Public-Private Partnership are stated in Section 3[278]. Defence and security procurement is listed in the database as a specific category.

Public procurement of R&D / ICT / R&D of ICT is <u>not</u> published in a specific category on the national public procurement portal.

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[275] [Public Procurement Law of 16 July 2009; amended 20 May 2010; amended 21 June 2012], http://www.vvc.gov.lv/export/sites/default/docs/LRTA/Likumi/Public_Procurement_Law.doc
[276] http://www.vvc.gov.lv/export/sites/default/docs/LRTA/Likumi/Procurement_of_Public_Service_Providers_Law.doc
[277] http://www.iub.gov.lv/files/upload/ADIL_16.11.2011.pdf
[278] http://www.vvc.gov.lv/export/sites/default/docs/LRTA/Likumi/Law_On_PublicxPrivate_Partnership.doc

3.15.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

The State Audit Office of the Republic of Latvia each year provides opinions for the Saeima regarding the correctness of the preparation of annual reports by ministries and other central State institutions; however, information on secret contracts and contracts requiring special security measures is not available publicly.

Other information sources: public procurement in the defence sector

According to the data provided by the EDA, the 'R&D (including R&T) Expenditure' of Latvia was EUR 160 000 in 2009 and EUR 30 000 in 2010. The 'Outsourced Defence Expenditure' of Latvia in 2009 and 2010 was not communicated.

No additional information on public procurement in the defence sector in Latvia could be obtained from the Latvian MoD.

3.15.f Future data provision to the European Commission

Data provision by the public procurement authorities

With regard to a potential future data provision to the European Commission, the Latvian Procurement Monitoring Bureau declared that '[this] would be difficult, since there are a lot of notices which under the Public Procurement Law include sensitive personal information that is not published in the public domain but is accessed only by the staff of the Procurement Monitoring Bureau and particularly monitored by the Competition Council of Latvia. In order to present the raw data, the Procurement Monitoring Bureau needs to commission such work from the developer and manager of the Publication Management System (database at www.iub.gov.lv). Taking into account that the process would be both very time-consuming (there is a great amount of notices to be processed manually) and resource-consuming (for commissioning such work financial resources have to be

provided for in the annual budget of the Procurement Monitoring Bureau), we do not see the possibility of providing raw data with our limited resources. [… In sum,] taking into account our very limited resources we do not see the possibility of providing raw data nor ensuring their quality.'

Data provision by the MoD

Any data provision on public procurement in the defence sector in Latvia would have to be agreed with the Latvian MoD.

Data provision by the national statistical office

The Central Statistical Bureau of Latvia publishes national R&D expenditure data for Latvia on its website on an annual basis.[279] Yet, these statistics do not differentiate between R&D grants and procurement. No additional information could be obtained from the Central Statistical Bureau of Latvia.

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[279]http://www.csb.gov.lv/en/statistikas-temas/science-key-indicators-30753.html and http://data.csb.gov.lv/Menu.aspx?selection=zin%5cZin%c4%81tne&tablelist=true&px_language=en&px_type=PX&px_db=zin&rxid=992a0682-2c7d-4148-b242-7b48ff9fe0c2

3.16 LITHUANIA

This chapter presents estimates of the amount of ICT-related (3.16.a), R&D (3.16.b), and ICT-related R&D procurement (3.16.c) in Lithuania. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.16.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.16.e.

Full country data set is provided in Excel format (see Annex 3).

3.16.a   Public procurement of ICT

The total value of ICT public procurement contracts in Lithuania in 2011 was about **EUR 205.9 million**[280], with a decrease of 3% compared to 2008 - **EUR 213 million**.

A breakdown of ICT overall contract value across different areas of public sector activity is given in *Table 3.16.a. 1*for the years 2008 and 2011[281].The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national or the local level.

Table 3.16.a. 1- Lithuania ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	7%	12%	-5,6%
Education	27%	4%	23,3%

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[280] 80.51% of the total amount is above EU threshold while 16.41% is below.
[281] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
Electricity	1%	1%	0,4%
Environment	4%	4%	-0,5%
Gas, oil and heat	1%	0%	1,0%
General public services	15%	19%	-4,3%
Health	11%	7%	4,1%
Other	15%	19%	-4,7%
Postal services	2%	1%	1,0%
Public order and safety	4%	2%	2,5%
Transport	8%	30%	-21,5%
Unknown	4%	1%	3,3%
Water	1%	0%	1,0%
Total	100%	100%	

The contracting authorities that primarily contributed to the expenditure in 2011 are listed in *Table 3.16.a. 2*. Expenditure of these authorities covered 40% of the total spending and centred on IT services (65% of the total for the key authorities), such as programming services, custom software development services, and software maintenance and repair services, e.g. State Social Insurance Fund, Vilnius College. Examples of supplies and services purchased by the authorities include also medical equipment, pharmaceuticals and personal care products (8%) and software package and information system (6%). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.16.a. 2- Lithuania ICT 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Vilniaus kolegija (Vilnius College)	Education
AB Klaipėdos nafta (Klaipeda Oil AB)	Transport
Valstybinio socialinio draudimo fondo valdyba (State Social Insurance Fund Board)	Other
VšĮ Kauno medicinos universiteto klinikos (Kaunas Medical University Hospital)	Health
Valstybinė mokesčių inspekcija prie Lietuvos Respublikos finansų ministerijos (State Tax Inspectorat)	Economic and financial affairs
Lietuvos Respublikos aplinkos ministerija (Ministry of Environment)	Environment
Viešoji įstaiga PlaCCiajuostis internetas (Public office PlaCCiajuostis Internet)	General public services
Lietuvos sveikatos mokslų universitetas (Lithuanian University of Health Science)	Education
Nacionalinė mokėjimo agentūra prie Žemės ūkio ministerijos (National Paying Agency under the Ministry of Agriculture)	General public services
Priešgaisrinės apsaugos ir gelbėjimo departamentas prie Vidaus reikalų ministerijos (Fire and Rescue Department under Ministry of Internal Affairs)	Public order and safety

3.16.b   Public procurement of R&D

The total value of R&D public procurement contracts in Lithuania was about **EUR 15.8 million**[282] in 2011, compared to **EUR 2.6 million** in 2008.

A breakdown of overall R&D contract value across different areas of public sector activity is give in *Table 3.16.b. 1* for 2008 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national or the local level.

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[282] 80.96% of the amount is above EU threshold and 12.96% is below. 6.08% is unknown.

Table 3.16.b. 1- Lithuania R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	0%	0%	0,2%
Education	69%	24%	44,7%
Electricity	4%	0%	3,8%
Environment	2%	1%	0,9%
General public services	7%	33%	-25,5%
Health	2%	0%	1,5%
Other	14%	27%	-12,9%
Unknown	1%	15%	-13,6%
Water	1%	0%	0,9%
Total	100%	100%	

The contracting authorities that contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 93% of the total spending and centred on laboratory, optical and precision equipment (EUR 9.5 million, e.g. microscopes and detection and analysis apparatus for the use of the National Research Institute Physical Sciences and Technology Center and the Nature Research Center), medical equipment, pharmaceuticals and personal care products (EUR 2.3 million, e.g. toxins and patient-monitoring system for the use of the State Research Institute Centre for Innovative Medicine) and construction work (EUR 1.1million). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.16.b. 2- Lithuania R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Valstybinis mokslinių tyrimų institutas Fizinių ir technologijos mokslų centras (National Research Institute for Physical Sciences and Technology Center)	Education
Valstybinis mokslinių tyrimų institutas Inovatyvios medicinos centras (National Research Institute of Innovative Medical Center)	Education
Nacionalinis maisto ir veterinarijos rizikos vertinimo institutas (National Food and Veterinary Risk Assessment Institute)	General Public Services
Lietuvos sveikatos mokslų universitetas (Lithuanian University of Health Sciences)	Education
AB LESTO	Electricity
Klaipėdos universitetas (Klaipeda University)	Education
Lietuvos agrarinių ir miškų mokslų centras (Lithuanian Agriculture and Forestry Sciences Centre)	Other
Gamtos tyrimų centras (Nature Research Centre)	Other
Lietuvos agrarinių ir miškų mokslų centras (Lithuanian Agriculture and Forestry Sciences Center)	Other
Aplinkos apsaugos agentūra (The Environmental Protection Agency)	Environment

3.16.c   *Public procurement of R&D ICT*

The total value of R&D ICT-related public procurement contracts in Lithuania was about **EUR 4.6 million**[283] in 2011, compared to **EUR 0.7 million** in 2008.

A breakdown of the overall ICT-related R&D contract value across different areas of public sector activity is given in *Table 3.16.c. 1* for 2008 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national and the local level.

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[283] 83.99% is above EU threshold while 5% is below and 11.01% is unknown.

Table 3.16.c. 1- Lithuania ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	90%	31%	59,1%
Environment	5%	0%	5,2%
General public services	0%	51%	-51,0%
Health	3%	0%	3,3%
Other	2%	11%	-9,2%
Unknown	0%	7%	-7,3%
Total	100%	100%	

The contracting authorities that contributed to the expenditure in 2011 are listed in *Table 3.16.c. 2*. Expenditure of these authorities cover the 100% of the total spend and supply laboratory, optical and precision equipment (EUR 2.4 million, e.g. Lithuanian University of Health Sciences), medical equipment (EUR 1.9 million, e.g. medical equipments and technologies to the Centre for Innovative Medicine). Inclusion on the list of key contracting authorities does not mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.16.c. 2- Lithuania ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Valstybinis mokslinių tyrimų institutas Inovatyvios medicinos centras (National Research Institute of Innovative Medical Center)	Education
Lietuvos sveikatos mokslų universitetas (Lithuanian University of Health Sciences)	Education
Valstybinis mokslinių tyrimų institutas Fizinių ir technologijos mokslų centras (National Research Institute for Physical Sciences and Technology Center)	Education
Gamtos tyrimų centras (Nature Research Centre)	Other

Aplinkos apsaugos agentūra (The Environmental Protection Agency)	Environment
Klaipėdos universitetas (Klaipeda University)	Education
VšĮ Vilniaus miesto universitetinė ligoninė (Vilnius City University Hospital)	Health
Lietuvos mokslų akademija (Lithuanian Academy of Sciences)	Other
Vilniaus universitetas (University of Vilniaus)	Other

3.16.d Collection of procurement data by public authorities

Legal context

Public procurement in Lithuania is regulated by a number of laws and decrees (partly) transposing the relevant European legislation[284]; the most relevant ones are listed below:

- **Standard procurement regime:**

o   Law on Public Procurement of the Republic of Lithuania No I-1491 (*Official gazette*, 1996 No 84-2000; 2006, No 4-102) ('the Law on Public Procurement').

o   Order of Minister of Environment *On the approval of means for green procurement for period 2012-2015* No D1-973 (*Official gazette*, 2011 No 157-7449).

o   Order of the head of the Public Procurement Office *On the approval of inventory of notice submission procedures for the Public Procurement Office and of requirements for the advertised information of simplified public procurement procedures and approval typical notice forms for simplified public procurement procedures* No 1S-184 (*Official gazette*, 2011 No 157-7463; 2012, No 8).

o   Order of the head of the Public Procurement Office *On the approval of requirements for typical notice forms and published public procurement information* No 1S-2 (*Official gazette*, 2004 No 62-2229).

o   Order of the head of the Public Procurement Office *On the approval of public procurement report preparation and submission procedure and public procurement report forms* No 1S-4 (*Official gazette*, 2006 No 9-344).

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[284]For more details on the legal framework see:
http://www.vpt.lt/rtmp8/dtd/index.php?pid=121189211185&cid=1138611715&sid=1&lan=LT

o   Order of the head of the Public Procurement Office *On the definition of abnormally low price of goods, services or works specified in the proposal* No 1S-96 (*Official gazette*, 2009 No 119-5131).

o   Order of the head of the Public Procurement Office *On the approval of recommendations for grounding the abnormally low price of goods, services or works specified in the proposal* No 1S-122 (*Official gazette*, 2009 No 136-5965).

o   Order of the head of the Public Procurement Office *On the approval of methodology for setting value of goods and service procurement* No 1S-26 (*Official gazette*, 2009 No 22-949).

- **Procurement in the water, energy, transportation and postal sectors:**

o   Order of Minister of Energy *Regarding approval of goods to which energy efficiency of requirements are applied during procurement and list of such energy efficiency requirements* No 1-266 (*Official gazette*, 2011 No 131-6249).

- **Defence and security procurement:**

o   Law on Public procurement in the domain of defence and security No XI-1491 (*Official gazette, 2011 No 85-4135)*.

o   Law on statutory and state secrets No VIII-1443 (*Official gazette,* 1999 No 105-3019).

o   Order of the head of the Public Procurement Office *On the approval of inventory of information submission for the Public Procurement Office of international public Defence and security procurement* No 1S-268 (*Official gazette, 2012 No 132-6745)*.

o   Order of the head of the Public Procurement Office *On approval of list of companies and institutions of the Republic of Lithuania, that are competent to issue documents, specified in the Art 33 Part 3 of the Law on Public procurement in the domain of defence and security* No 1S-142 (*Official gazette*, 2011 No 120-5690).

The standard **national threshold for the publication of public procurement** in Lithuania is organised as follows:

- Procurement of goods and services (under the standard and utilities regime): approx. EUR 29 000 (LTL 100 000);
- Procurement of works (under the standard and utilities regime): approx. EUR 145 000 (LTL 500 000);
- If similar goods, services or works are procured in separate lots, a contract is to be concluded for each of those lots and the value of each lot is no bigger than 10 per cent of the original contract but not exceeding EUR 29 000 (LTL 100

000); in case of goods and services, or no bigger than 1,5 per cent but not exceeding EUR 145 000 (LTL 500 000) in case of works.[285]

Public procurement data collection process

In Lithuania, data on public procurement has been collected and stored in a public information system since 2002. The current information system is the Central Public Procurement Information System (CVP IS) – was launched at the end of 2008[286]. The data of the previous information system was transferred to this system. It became publicly accessible by amendments to the Law on Public Procurement adopted in 2009.

The CVP IS is an information system, administrated by the Public Procurement Office, which stores public procurement data centrally. It also makes it possible for contracting authorities to organise an entire public procurement cycle by electronic means and makes participation in tenders easy, simple and based on a 'one-stop shop' principle for suppliers. It is thus an instrument for e-procurement activities. Currently it is compulsory for contracting authorities to conduct at least 50% of their procurement via this system. According to the Strategy on Public Procurement,[287] it is expected that by 2013 about 70% of all tenders will be conducted through this digital system. The information will be visible in the profiles of the contracting authorities in the system. Moreover, all contracting authorities have to submit annual reports about the performed procurement to the Public Procurement Office.

The main authority responsible for collecting the information is the Public Procurement Office. Until recently it fell under Ministry of Economy; however in 2012 it became an independent institution.

The Public Procurement Office collects, stores and analyses information about planned and ongoing procurement, concluded contracts and the results of performed contracts as well as violations of public procurement procedures, their character, and decisions or sanctions adopted. This information, unless specified as confidential, is presented to governmental and municipal institutions, offices, and is presented publically under Article 8(1)(5) of the Public Procurement Law.

Data collection is mainly done by the contracting authorities, which are obliged to submit respective reports to the Public Procurement Office. The Public Procurement Office consequently publishes the data on the Central Public Procurement Portal[288].

The quality of the collected data is partly ensured by a standardised and rigid registration system. Certain fields are, for instance, set as mandatory and if they

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[285]Goods are considered similar if first three digits of their CPV codes are the same.Services are considered similar if the service provider is able to provide all types of services procured, works are considered similar if they are related to same subject,e.g. design and construction of the building.
[286] https://pirkimai.eviesiejipirkimai.lt
[287]Adopted by the Government of the Republic of Lithuania under resolution No 1332 of 14 October 2009.
[288] www.cvpp.lt

are left blank, the notice or report cannot be submitted, e. g. if a contract award notice is being prepared, the contract value has to be specified or if procurement of works is selected. CPV codes of goods and services cannot be selected.

Coverage of the public procurement database

Collection and submission of data to the Public Procurement Office by the contracting authorities is regulated by Articles 19, 22, 23 and 27 of the Law on Public Procurement. These regulate the submission of contract notices, procurement reports and procurement documentation. Institutions, if considered to be contracting authorities under Article 4 of Law on Public Procurement, are also participants in the public procurement data collection process at the national and regional or municipal levels. The CVP IS is not connected to any database at regional and or municipal level. The data is collected in two ways. Firstly, if public procurement is performed in the standard way, the contracting authority has to submit a contract notice via the CVP IS, providing all information necessary for the procurement: type of procurement procedure, goods, services and works that are procured. If the procurement itself is performed digitally, all documentation has to be submitted via the CVP IS. In addition, contracting authorities have to submit information about procurement they are planning to perform each year.

Data on procurement subject to the EU Public procurement directives and procurement falling under the national threshold ('simplified procurement') are collected and stored in the CVP IS. When presenting reports on conducted simplified procurement, contracting authorities are only obliged to submit the total annual amount spent, while for all other procurement, the contracting authority has to submit information about each procurement separately.

Information on defence procurement, if not considered secret, is stored in the CVP IS and is published in the same way as information of any other public procurement. Currently, contracting authorities have not submitted any information regarding defence procurement that is considered secret and requiring special security measures. If such information will be submitted, it will be stored in accordance with legal acts regulating storage of secret information.

3.16.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

There are no other sources of public procurement data in Lithuania other than the national CVP IS. Contracting authorities only submit their notices and reports through this system.

Other information sources: public procurement in the defence sector

According to the data provided by the EDA, in Lithuania the 'R&D (including R&T) Expenditure' in both 2009 and 2010 was LTL 0 million. The same source does not hold any information for Lithuania on 'Outsourced Defence Expenditure'.

Defence expenditure statistics are calculated on the basis of existing and planned accounting information from the annual amount of Governmental budget allocations for the MoD and according to the existing defence programme structure[289].

The expenditure spent on R&D varies each year, depending on the overall defence budget had a noticeable, slight tendency towards increases in expenditure. According to the representative of the Lithuanian MoD, the following (approximate) amount was spent on defence R&D: 2012 – EUR 190 000; 2011 – EUR 140 000, 2010 – EUR 80 000. The R&D expenditure related to the security programs by other ministries (Ministry Internal Affairs, Ministry Foreign Affairs) is not included.

Roughly about 15-20 % of the total amount of R&D expenditure was spent on ICT (for the period 2010-2012).

Roughly about 0,02% of the total defence expenditure outsourced was spent on ICT.

Space-related R&D expenditure was not included in the data provided to the EDA. Moreover MOD does not keep separate data on this.

3.16.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Public Procurement Office would be willing to cooperate and provide the European Commission with public procurement data in future, e.g. on an annual basis. However, the Public Procurement Office would experience certain difficulties due to the lack of human resources. The cost of ensuring the quality of data would also be related to the need for additional human resources.

Data provision by the MoD

According to the representative of the MoD in Lithuania, the most relevant difficulties in providing data on a regular basis, in the future would be:

a)   the use of common semantics;

b)   the adoption of the semantics by the relevant stakeholders;

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[289]Interview was held with the Planning and Project Management section of Armament and Control Systems.

c)   data security restrictions.

Similar data is already being provided to the different stakeholders such as NATO HQ (Defence Planning Questionnaire), EDA, SIPRI (Stockholm International Peace Research Institute), etc. The MOD in Lithuania would therefore prefer to a common questionnaire template was adopted that would be submitted once a year.

Data provision would require: (a) familiarisation with the information requirements; (b) designing information material; and (c) training members and employees. The MoD cannot give an indication of the additional cost can be given at this moment.

Data provision by the National Statistical Institute

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

In Lithuania, statistical data is currently based on surveys that are submitted by national undertakings on an annual basis. In order to extract ICT-related R&D procurement statistics via R&D surveys, additional questions should be included in the current national R&D questionnaire. This would be considered as an issue because of the increasing burden for survey respondents. In addition, such inclusion of new questions currently has no direct basis in the Lithuanian legal framework.

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

Statistics Lithuania is of the opinion that funder-based R&D indicators – in particular GBAORD – to extract ICT-related R&D procurement statistics, cannot be used in Lithuania since such data is not available in the budgetary accounts. The only way to implement these methods would be to organise an additional survey, specifically designed to gather this information.

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

Statistics Lithuania[290] does not consider it feasible to extract ICT-related R&D procurement statistics using national account aggregates.

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[290]The National Account Department.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

The most suitable method to extract ICT-related R&D procurement statistics, according to Statistics Lithuanian would be to request this information from the National Procurement Monitoring Authority (Public Procurement Office) and subsequently to analyse procurement applications and to extract ICT-related R&D procurement statistics. This process would require a considerable amount of human and financial resources. The Government Finance Statistics division of Statistics Lithuania could liaise with the Public Procurement Office and cooperate with them to organise the data extraction and analysis.

3.17 LUXEMBOURG

The section presents estimates of the amount of ICT-related (sub-section 3.17.a), R&D (sub-section 3.17.b), and ICT-related R&D procurement (sub-section 3.17.c) in Luxembourg. The figures do not include the value of defence contracts, and are based on data concerning EU-regulated contracts published in the OJ/TED.

Procurement contract data collection by the national public authorities is illustrated in sub-section 3.17.d, while the availability of qualitative information, which can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in sub-section 3.17.e.

Full country data set is provided in Excel format (see Annex 3).

3.17.a   Public procurement of ICT

The total value of ICT public procurement contracts in Luxembourg in 2011 was about **EUR 28.3 million**[291], which is almost six times the expenditure for 2008, **EUR 5 million.**

A breakdown of ICT overall contract value across different areas of public sector activity is given in *Table 3.17.a. 1* for 2008 and 2011[292]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national or the local level.

Table 3.17.a. 1 – Luxembourg ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Economic and financial affairs	5%	12%	-6,3%
Education	2%	7%	-5,0%
General public services	5%	77%	-72,5%

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[291] 99.39% of the total amount is above EU threshold. The remaining 0.61% is unknown.
[292] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
Health	2%	0%	2,4%
Other	8%	0%	8,3%
Transport	75%	0%	74,6%
Unknown	2%	4%	-1,4%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 93% of the total spending and centred on transport equipment and auxiliary products to transportation (82% of the total for the key authorities), IT services (5%), radio television and communication equipment (4%), office and computing machinery and equipment (4%). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.17.a. 2 – Luxembourg ICT – Key contracting authorities

Contracting authority or entity	Public sector area
Société nationale des chemins de fer luxembourgeois (National Society of Luxembourg railways)	Transport
Banque centrale du Luxembourg (Central Bank of Luxembourg)	Economic and financial affairs
Centre national sportif et culturel - D'Coque CNSC (National Sports and Cultural Centre - D'Coque CNSC)	Other
Ministère du développement durable et des infrastructures (Ministry of Sustainable Development and Infrastructure)	General public services
Centre de recherche public - Gabriel Lippmann (Public Research Centre)	Other
Ministère de l'économie et du commerce extérieur, Statec (Ministry of Economy and Foreign Trade)	Economic and financial affairs

Contracting authority or entity	Public sector area
Ministère de l'éducation nationale et de la formation professionnelle, centre de technologie de l'éducation (Ministry of National Education and Vocational Training center technology education)	Education
Université du Luxembourg (University of Luxembourg)	Education
Ministère de la Fonction publique et de la Réforme administrative (Department of Public Service and Administrative Reform)	General public services
Ministère des finances, administration du cadastre et de la topographie (Ministry of Finance)	General public services

3.17.b   Public procurement of R&D

The total value of R&D public procurement contracts in Luxembourg was about **EUR 3.2 million**[293] in 2011, compared to **EUR 389 500** in 2008. A breakdown of R&D contract value across different areas of public sector activity for 2008 and 2011 is given in *Table 3.17.b. 1*.

Table 3.17.b. 1 – Luxembourg R&D - Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Health	0%	38%	-38,4%
Other	100%	62%	38,4%
Total	100%	100%	

The contracting authorities that contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 100% of the total spending and centred on laboratory, optical and precision equipment (EUR 2 million, e.g. the purchase of a mass spectrometer for the use of the Institute of Nuclear Research), industrial machinery (EUR 0.7 million) and office furniture.

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[293] 94.7% is above the threshold while 5.3% is unknown.

Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.17.b. 2 – Luxembourg R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Centre de Recherche Public - Gabriel Lippmann (Centre of Public Research - Gabriel Lippmann)	Other

3.17.c   Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Luxembourg was about **EUR 172 100**[294] in 2011. A breakdown of ICT-related R&D overall contract value across different areas of public sector activity for 2011 is given in *Table 3.17.c. 1*.

Table 3.17.c. 1- Luxembourg ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011
Other	100%
Total	100%

The contracting authorities that contributed to the expenditure in 2011 are listed in the *Table 3.17.c. 2*. Expenditure of these authorities cover the 100% of the total spend and supply office and computing machinery, e.g. micro computer hardware for the use of the Centre of Public Research. Inclusion on the list of key contracting authorities does not mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

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[294] 100% of the total amount is classified as unknown.

Contracting authority or entity	Public sector area
Centre de Recherche Public - Gabriel Lippmann (Centre of Public Research - Gabriel Lippmann)	Other

3.17.d Collection of procurement data by public authorities

Legal context

Public procurement in Luxembourg is regulated by a number of laws and decrees[295], which transpose the relevant European legislation on public procurement:

- **Loi sur les marchés publics du 25 juin 2009** (Mémorial A n° 172 du 29 juillet 2009) as amended by article 56, Loi du 18 décembre 2009 concernant le budget des recettes et des dépenses de l'Etat pour l'exercice 2010 and article 23 paragraphe (5) point a), troisième alinéa, Loi du 30 juin 2003 sur les marchés publics;
- **Règlement grand-ducal du 3 août 2009 portant exécution de la loi du 25 juin 2009 sur les marchés publics** (Mémorial A n° 180 du 11 août 2009);
- Règlement grand-ducal du 18 mars 2009 portant modification des articles 103, 156 et 161 du règlement grand-ducal portant exécution de la loi modifiée du 30 juin 2003 sur les marchés publics et portant modification du seuil prévu à l'article 106 point 10° de la loi communale modifiée du 13 décembre 1988 (Mémorial A n° 59 du 26 mars 2009);
- Loi modifiée du 30 juin 2003 sur les marchés publics (Mémorial A n° 93 du 10 juillet 2003; Mémorial A n° 204 du 28 décembre 2004);
- Règlement grand-ducal du 7 juillet 2003 portant exécution de la loi du 30 juin 2003 sur les marchés publics et portant modification du seuil prévu à l'article 106 point 10° de la loi communale du 13 décembre 1988 (Mémorial A n°93 du 10 juillet 2003);
- Règlement grand-ducal du 8 juillet 2003 portant standardisation des cahiers spéciaux des charges en matière de marchés publics (Mémorial A n°93 du 10 juillet 2003);
- Loi du 27 juillet 1997 relative à l'exécution en droit luxembourgeois de la Directive du Conseil N°92/13/CEE du 25 février 1992, portant coordination des dispositions législatives, réglementaires et administratives relatives à l'application des règles communautaires sur les procédures de passation

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[295] For more information on the legal framework in Luxembourg and links to the primary sources, please refer to: http://www.marches.public.lu/fr/legislation/index.html

des marchés et des entités opérant dans les secteurs de l'eau, de l'énergie, des transports et des télécommunications (Mémorial A n°55 du 8 août 1997).

The general **thresholds for the publication of public procurement** in Luxembourg in force since 1 January 2012 are defined as follows[296]:

1) National thresholds in the standard procurement regime	
Procurement by central government contracting authorities	
Supplies and Services	EUR 130 000 (excl. VAT)
Works	EUR 5 000 000 (excl. VAT)
Procurement by other contracting authorities	
Supplies and Services	EUR 200 000 (excl. VAT)
Works	EUR 5 000 000 (excl. VAT)
2) National thresholds for procurement in the water, energy, transportation and postal sectors	
Supplies and Services	EUR 400 000 (excl. VAT)
Works	EUR 5 000 000 (excl. VAT)
3) National thresholds for Defence and security procurement[297]	
Supplies and Services	EUR 200 000 (excl. VAT)

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[296] Please note that several exceptions to these general thresholds exist.
Mémorial B n° 106 du 22/12/2011, Communication du Ministre du Développement durable et des Infrastructures concernant la fixation des seuils en euros applicables aux marchés publics couverts par les directives 2004/17/CE et 2004/18/CE, 14th December 2011, http://www.legilux.public.lu/adm/b/archives/2011/0106/b106.pdf
[297] Annex V of the *Loi sur les marchés publics du 25 juin 2009* lists those goods and services that are excluded from the publication obligations, http://www.legilux.public.lu/leg/a/archives/2009/0172/a172.pdf#page=2

Works	EUR 5 000 000 (excl. VAT)

Public procurement data collection process

In Luxembourg, public procurement data is collected and stored digitally on one common portal that covers the different levels of government[298]

The national public procurement platform is operated jointly by the Ministry for Sustainable Development and Infrastructure, Department for Public Works, Directorate for Public Procurement (*Ministère du Développement durable et des Infrastructures, Département des travaux publics, Direction des marchés publics*)[299] and the Centre for Information Technology of the State (*Centre des Technologies de l'Information de l'Etat*)[300]. The Luxembourg one-stop portal has been online since 2006. It offers both e-notification and e-procurement functions.[301]

Contracting authorities are obliged by law to publish contract (award) notices for above national and EU threshold procurement. The relevant information is directly entered by contracting authorities into the e portal based on online-forms that have been filled out based on the European TED templates. After verification, the data is published online on the portal and, where relevant, also submitted to TED for Europe-wide publication.

Predefined templates, automatic data checks, user manuals and a helpdesk ensure the quality of the data. Data quality on the portal is also monitored by the Directorate for Public Procurement of the Ministry for Sustainable Development and Infrastructure; yet, on principle, the contracting authorities remain solely responsible for the quality and completeness of their publications on the portal.

Consultative supervision is made by the National Public Procurement Committee ('*Commission des soumissions*')[302], which is comprised of contracting authorities and representatives of the Chamber of Handicrafts and Chamber of Commerce equally.

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[298] https://pmp.b2g.etat.lu
[299] http://www.mtp.public.lu/marches-publics/index.html
[300] http://www.fonction-publique.public.lu/fr/structure-organisationnelle/ctie/index.html
[301] For a detailed description of the functions of the portal, see
http://www.marches.public.lu/fr/acteurs/direction/portail-marches-publics/index.html
[302] http://www.marches.public.lu/fr/acteurs/commission/index.html

Coverage of the public procurement database

Luxembourg authorities at all levels of government are covered by the database.

Potentially all types of public procurement can be entered into the national public procurement portal; no types of procurement are excluded from the publication. However, in practice many public authorities do not publish their procurement if they are not legally obliged to do so. This concerns both the specific exemptions under the procurement directives and below national threshold procurement. Public procurement of R&D / ICT / R&D of ICT is not published in a specific category on the national public procurement portal.

3.17.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

There are no other information sources with regard to public procurement data for Luxembourg other than the national public procurement portal.

There are no private tender alert providers that cover below EU and national threshold procurement in Luxembourg.

Other information sources: public procurement in the defence sector

According to the data provided by the EDA, the 'R&D (including R&T) Expenditure' of Luxembourg was EUR 1,60 million in 2009 and EUR 2,10 million in 2010. Further, the 'Outsourced Defence Expenditure' of Luxembourg is reported to be EUR 81 million in 2009 and EUR 103 million in 2010.

The Luxembourg Ministry of Foreign Affairs, Directorate for Defence, Procurement Office, declared that Luxembourg has undertaken almost no defence R&D on its own due to the lack of critical numbers of the Luxembourg Armed Forces (about 1000 FTEs) and MoD (about 15 FTEs). Wherever possible, off-the-shelf solutions are purchased.

Luxembourg's defence R&D efforts are mainly undertaken in the framework of international armament programmes managed through the EDA, ESA and NATO. An example is Luxembourg's contribution in the development of the A400M airplane.

The budget of the Luxembourg Ministry of Foreign Affairs, Directorate for Defence, includes no specific budget line for R&D or for ICT.

The expenditure data, e.g. 'R&D (including R&T) Expenditure' and 'Outsourced Defence Expenditure') communicated to the EDA is based on estimates of the Luxembourg Ministry of Foreign Affairs, Directorate for Defence.

The Luxembourg Ministry of Foreign Affairs, Directorate for Defence, Procurement Office, further explained that Luxembourg has had some delays in transposing Directive (EU) No 2009/81/EC. As a result, the procurement data published by the Luxembourg Ministry of Foreign Affairs, Directorate for Defence, on the national public procurement portal[303] is likely to be incomplete until mid-2013. There is no intention to complete the historic data. However, since mid-2013, all relevant procurement is published according to the rules of the transposed Directive (EU) No 2009/81/EC.

With regard to ICT, the Luxembourg Ministry of Foreign Affairs, Directorate for Defence, Procurement Office, explains that most developments are done in-house or provided by the inter-ministerial IT-service. R&D of ICT procurement by the Ministry of Foreign Affairs, Directorate for Defence are extremely rare.

3.17.f Future data provision to the European Commission

Data provision by the public procurement authorities

The potential future provision of public procurement data for Luxembourg from the platform 'Marches Publics Du Grand-Duche de Luxembourg'[304] to the European Commission would have to be negotiated with the Luxembourg Ministry for Sustainable Development and Infrastructure, Department for Public Works, Directorate for Public Procurement[305]. The Luxembourg authorities have not been willing to provide such data for this study.

Data provision by the MoD

The Luxembourg Ministry of Foreign Affairs, Directorate for Defence, Procurement Office, is willing to negotiate the provision data with regard to defence procurement in Luxembourg to the European Commission in the future.

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[303] https://pmp.b2g.etat.lu
[304] https://pmp.b2g.etat.lu
[305] http://www.etat.lu/annuaire/index.php?idMin=5274

The European Commission should clearly specify what the data requirements (going beyond those of the EDA) are.

Data provision by the national statistical office

The Luxembourg national statistical office (STATEC) regularly publishes detailed statistics on R&D expenditure in Luxembourg on its website.[306]However, these statistics do not differentiate between R&D grants and procurement. No additional information could be obtained from STATEC.

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[306]http://www.statistiques.public.lu/stat/ReportFolders/ReportFolder.aspx?IF_Language=fra&MainTheme=4&FldrName=8&RFPath=2222

3.18 MALTA

This chapter presents estimates of the amount of ICT-related (3.18.a), R&D (3.18.b), and ICT-related R&D procurement (0) in Malta. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.18.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.18.e.

Full country data set is provided in Excel format (see Annex 3).

3.18.a   Public procurement of ICT

The total value of ICT public procurement contracts in Malta in 2011 was about **EUR 19.1 million**[307], with a decrease of about 32% compared to 2008, **EUR 28 million.**

A breakdown of ICT overall contract value across different areas of public sector activity is given in *Table 3.18.a. 1* for the years 2008 and 2011[308]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national or the local level.

Table 3.18.a. 1 - Malta ICT – Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	21%	0%	21,1%
Electricity	3%	0%	3,3%
Environment	6%	0%	6,0%

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[307] 78.54% is above EU threshold while 3.98% is below.

[308] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011	2008	Δ
General public services	1%	10%	-9,3%
Health	4%	0%	3,6%
Other	62%	87%	-25,5%
Public order and safety	2%	1%	0,9%
Unknown	2%	2%	-0,1%
Total	100%	100%	

The contracting authorities that primarily contributed to the expenditure in 2011 are listed in *Table 3.18.a. 2*. Expenditure of these authorities covered 93% of the total spending and centred on education and training services (37% of the total for the key authorities), electrical machinery, apparatus and equipment (15%) and radio, television, communications and telecommunication equipment (9%). Examples of supplies and services purchased by the authorities include also laboratory, optical and precision equipment (6%) and medical equipment (4%). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.18.a. 2 – Malta ICT – Key contracting authorities

Contracting authority or entity	Public sector area
Malta Information Technology Agency (MITA)	Other
Office of the Prime Minister	Other
Malta College of Arts, Science and Technology	Education
Malta Environment and Planning Authority	Environment
Government Pharmaceuticals Services	Health
Agriculture and Fisheries Regulation Department	Other
University of Malta	Education
Enemalta Corporation	Electricity

Contracting authority or entity	Public sector area
National Library of Malta	Other
Malta Communications Authority	Other

3.18.b   Public procurement of R&D

The total value of R&D public procurement contracts in Malta was about **EUR 503 500**[309] in 2011. A breakdown of R&D contract value across different areas of public sector activity is given in for 2011.

Table 3.18.b. 1 – Malta R&D - Contract values by public sector activity

Public Sector Area	2011
Education	100%
Total	100%

The contracting authorities that contributed to expenditure in 2011 are listed in the table below. The contract of the unique authority provides office and computing machinery, equipment and supplies for the use of the University of Malta (EUR 5 million). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authoritiesor entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.18.b. 2 – Malta R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
University of Malta	Education

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[309] 100% of the amount is above EU threshold.

3.18.c Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Malta was about **EUR 503 500**[310] in 2011. A breakdown of ICT-related R&D overall contract value across different areas of public sector activity for 2011 is given in *Table 3.18.c.1*.[311]

Table 3.18.c.1- Malta ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011
Education	100%
Total	100%

The contracting authorities that primarily contributed to expenditure in 2011 are listed in *Table 3.18.c.2*. Expenditure of these authorities centred on office and computing machinery acquired by the University of Malta. Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.18.c.2 - Malta ICT –related R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
University of Malta	Education

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[310] 100% of the amount is above EU threshold.
[311] The amount of ICT related R&D procurement is the same as the total amount of R&D procurement as it refers to the same single contract.

3.18.d Collection of procurement data by public authorities

Legal context

Public procurement in Malta is regulated by a number of laws that transpose the relevant European legislation on public procurement[312]:

- **Standard procurement regime:**
  o The Public Procurement Regulations (Legal Notice 296 of 2010).

- **Procurement in the water, energy, transportation and postal sectors:**
  o The Public Procurement Regulations, part Part VII: Public procurement of entities operating in the water, energy, transport and postal services (Legal Notice 178 of 2005, as amended),

which are collectively called 'the Regulations'.[313]

- **Defence and security procurement:**
  o The Public Procurement Regulations (as above).

The standard **national threshold system** for the publication of public procurement in Malta is as follows:

- Where the estimated value is greater than EUR 6 000 but lower than EUR 120 000 contracts may be awarded after either: (a) a departmental call for tenders; or (b) publishing a call for quotations in the *Malta Government Gazette*[314] ('the Gazette').

- Contracts of estimated value between EUR 120 000 and the EU thresholds, may be awarded after a call for tenders published in the Gazette.[315]

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[312]Provisions of a generic nature on the procurement by local councils and certain Maltese authorities may be found in the special laws governing them, such as the Local Councils (Tendering) Regulations (Legal Notice 255 of 2009), the Authority for Transport in Malta Act (Chapter 499 of the Laws of Malta) and the Malta Travel and Tourism Services Act (Chapter 409 of the Laws of Malta).

[313]http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=9532&l=1.

[314]Available at www.doi.gov.mt/en/gazetteonline

[315]Under the Regulations, certain listed Government departments may issue, administer and determine tenders for contracts estimated above the EUR 120000 value threshold within the department (including, for example, the Malta Information Technology Agency (MITA) and the Malta Government Technology Investments Limited (MGTIL)), while most others must have such tenders issued, administered and determined by the Department of Contracts on their behalf.

- Tenders in the field of defence also have to be communicated to the Department of Contracts. However, the threshold for notification is higher: EUR 193 000 rather than EUR 120 000.

Public procurement data collection process

In July 2011, the Government of Malta (Ministry of Finance, the Economy and Investment) launched the Electronic Public Procurement System ('EPPS') contained on a new website on which, eventually, all data on public procurement will be collected and stored[316]. Previously, information on tenders was available online on departmental websites, the Department of Information website, and the Department of Contracts website[317].

The MITA (Malta Information Technology Agency) was involved in the process of establishment of the EPPS, and currently manages the functioning of the database.[318] In addition, as the central ICT agency of the Government, MITA publishes tender notices with regard to the ICT sector, but not with regard to the R&D sector, in EPPS. On the other hand, the Department of Contracts takes care of the 'content' in the EPPS, uploading new tender notices on the EPPS, and managing the access to the database.[319]

The EPPS was designed by European Dynamics, a private ICT consultancy that also designed the databases for the UK and Belgium public tender authorities.[320] The EPPS uses CPV codes and is in English.

The Department of Contracts directly includes notices in the EPPS, thus undertaking a quality check on the data. The only exception is represented by MITA, which directly uploads its tender notices to the EPPS.

Departments and organisations will gradually start using EPPS. For example, according to EPPS information, as the Department of Contracts transitions away from using www.contracts.gov.mt, it will issue more tenders on the EPPS as take-up and familiarity increases'.

Before the introduction of the EPPS, MITA and the Department of Contracts published tender notices separately on their websites. In particular, MITA has been publishing tender notices for the supply of ICT-related equipment and

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[316] www.etenders.gov.mt
[317] www.contracts.gov.mt
[318] https://www.mita.gov.mt/page.aspx?pageid=652
[319] https://secure2.gov.mt/eprocurement/contact-us?l=1
[320] http://www.eurodyn.com/

services since 2006.[321] The MITA database does not rely on CPV codes, and it had not been updated since the introduction of the EPPS in July 2011. The Department of Contracts, on the other hand, still keeps a public database on its website.[322] The database of the Department of Contracts pre-dates the EPPS,i.e. it should include tender notices dating back to 2009 and 2010). The database relies on CPV codes, and it includes the tender notices that were notified to the Department of Contracts by other Government and local agencies during the last years.

Coverage of the public procurement database

The coverage of the EPPS has progressively increased, but it still not complete. MITA has been uploading tender notices in the EPPS since July 2011. On the other hand, other government agencies have been more reluctant to give notification with regard to their tender notices to the Department of Contracts, in order to be published on the EPPS. Last year the Department of Contracts issued a notice, requiring all the public tender providers to give notice of every tender with a value above EUR 120000 from 1 January 2013. However, it is unclear whether every public authority complies with such a requirement.

In principle, each contracting authority must publish in the Gazette (and therefore online) the details of public contracts it has awarded.

The study team has been in contact with the public authority responsible for the collection and storage of public procurement data, the Ministry of Finance, Economy and Investment, to try to collect the data that matches the requirements of this study. This has proven to be difficult, since Malta has only recently moved to a central system. In addition, the Ministry claims that they do not hold any R&D and / or ICT related procurement in their archives. The study team has, however, received a pdf file with a list of data between 2008 and 2011 from MITA. They include national and EU data and cover both ICT and R&D. We have also received some relevant data from the Contracts Department, consisting of their archives of awards for 2009 and2011. The datasets from these two sources contain different data (as described above) and can therefore be regarded as complementary to each other.

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[321]https://www.mita.gov.mt/tenders.aspx?past=true&pageid=39
[322]https://secure2.gov.mt/eprocurement/tenders?l=1

3.18.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

The National Statistics Office ('the NSO')[323] publishes general information on governmental expenses. It also published information on expenditure on Research and Development in the General Government Sector (2008-2010), but does not specify ICT expenditure.

Other information sources: public procurement in the defence sector:

According to the data provided by the EDA[324], the 'R&D (including R&T) Expenditure' of Malta was EUR 0 in both 2009 and 2010. Malta did not report any 'Outsourced Defence Expenditure' for 2009 or 2010.

Public procurement in defence (including for arms supplies) is regulated by Commission Regulation (EC) No 296/2006[325], requiring the AFM (Armed Forces of Malta) to notify the Department of Contracts of tender notices above EUR 120 000. These are advertised on the e-PPS database (set up in 2011). Tender notices below this threshold may only be advertised on the AFM database. Tenders for ICT equipment, however, are usually conducted through MITA on behalf of all public institutions and are also published on the e-PPS database. ICT equipment for military purposes (radio and communications) are undertaken by the AFM subject to the same tender procedure described above and those over EUR 120 000 are published on the e-PPS database. Regarding data provided to the EDA, the AFM collects information on a biannual basis, which is submitted to the EU via the Department of Contracts.

EDA statistics show the AFM budget for R&D varies (it may be EUR 0), and usually funds just one or two projects, mostly consultancy services (as opposed to technology; other R&D is largely undertaken by the Procurement and Logistics Section of the AFM). All expenditure is outsourced since services are provided through public procurement tender procedures. Between 2008-2011, ICT-related public procurement projects consisted of: (a) the supply, installation and

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[323]http://www.nso.gov.mt/site/page.aspx

[324]Defence Data: EDA participating Member States in 2010.
[325]Commission Regulation (EC) No 296/2006 of 17 February 2006 fixing the maximum aid for concentrated butter for the 3rd individual invitation to tender opened under the standing invitation to tender provided for in Regulation (EC) No 1898/2005 (OJ L 48, 18.2.2006, p. 11).

commissioning of GMDSS equipment for the Maritime Coast Station; and (b) the supply of a CCTV system.

The AFM could not provide specific statistics on outsourced ICT-related R&D expenditure, as this also varies. Malta does not contribute to projects undertaken by the European Space Agency.

3.18.f Future data provision to the European Commission

Data provision by the public procurement authorities

According to our contact at the MITA, it should not be problematic for the Department of Contracts to provide the requested information to the European Commission on an annual basis, since the public tender notices are now uploaded on the EPPS in accordance with the CPV codes.

The main difficulty identified by MITA in transferring the requested data to the Commission on an annual basis concerned possible requests for 'old' data (i.e. prior to the establishment of the EPPS in June 2011). Before the establishment of the EPPS there was no common database of public tenders in Malta. Every government agency kept its own database,i.e. the case of MITA and the Department of Contracts databases mentioned above, and not all of the databases relied on the CPV classification. Consequently, providing the Commission with statistics concerning public tenders in the ICT and R&D sectors before June 2011 would be quite difficult for the Maltese authorities.

On the other hand, since the upload of the tender notices on the EPPS is 'centralised',i.e. it is carried out by the Department of Contracts, MITA did not see other types of costs or difficulties in cooperating with the EU Commission,i.e. checking the quality of the data, training the employees of the other government agencies.

Data provision by the MoD

According to our contact at the AFM, in terms of the provision of annual data, given the fact that the AFM already publishes tenders on the e-PPS system, and provides statistics to the EDA, it is unlikely that there would be any logistical or policy problems in accessing information, even relating to the defence sector. No particular costs of doing so are currently foreseen.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

The NSO identified a potential problem in utilising BERD methods, namely limited observation of the private sector (only certain enterprises were surveyed) and the inclusion of national companies only, not foreign businesses.

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

The Malta National Statistical Office (NSO) carried out a study in 2012 on public (through procurement contracts) and private expenditure on R&D. This was done through a GBAORD survey sent to government units and businesses in R&D. The selection of private enterprises was carried out by the Malta Council of Science and Technology and the Council of Enterprises, which identified recipients of European and national grants or tenders for R&D activities. The study also identified government expenditure for R&D in different socio-economic areas, including transport and telecoms, which could further be categorised according to ICT-related funding.

The 2012 study was the first using GBAORD's fund-based methods. Given the relatively small size of Malta's public administration, there were no real difficulties in collecting data directly from government sources.

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

It is not considered feasible, however, to use national account aggregates to collect R&D procurement statistics as a percentage of total public procurement. GBAORD is preferred to provide the most reliable and complete picture.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

Producing annual data on public procurement expenditure in Malta would be feasible. The Department of Contracts with which the NSO cooperates could provide information on R&D tenders above EUR 120 000, while lower-value tenders could be identified using the GBAORD methodology. The NSO did, however, recognise the potential obstacles of additional costs and pressure on human resources, and suggested the provision of this data could be facilitated by European support.

3.19 NETHERLANDS

This chapter presents estimates of the amount of ICT-related (3.19.a), R&D (3.19.b), and ICT-related R&D procurement (0) in the Netherlands. The figures do not include the value of defence contracts, and are based on data concerning: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.19.d, while the availability of qualitative information that can complement the estimates presented in the report, including value of defence contracts, when available, is discussed in paragraph 3.19.e.

Full country data set is provided in Excel format (see Annex 3).

3.19.a   Public procurement of ICT

The total value of ICT public procurement contracts in the Netherlands in 2011 was about **EUR 1.22 billion**[326], with a 14% increase compared to 2010.

A breakdown of ICT overall contract value across different areas of public sector activity is given in *Table 3.19.a. 1* for the years 2010 and 2011[327]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at both the national or the local level.

Table 3.19.a. 1- Netherlands ICT – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	3%	5%	-1,3%
Education	22%	25%	-3,3%

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[326] The 99.38% is above the threshold while the 0.51% is below.
[327] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities and entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Electricity	2%	0%	1,2%
Environment	1%	0%	1,0%
Gas, oil and heat	0%	1%	-0,6%
General public services	39%	34%	5,2%
Health	4%	2%	2,1%
Other	11%	17%	-5,4%
Public order and safety	4%	5%	-0,4%
Transport	3%	5%	-1,3%
Unknown	6%	5%	1,1%
Water	3%	1%	1,8%
Total	100%	100%	

The contracting authorities that primarily contributed to expenditure in 2011 are listed in Table 3.19.a.2. Expenditure of the top ten authorities covered 23% of the total spending and centred on IT services (32%of the total for the key authorities, e.g. consulting, software development, Internet and support), printed matter and related products (31%) and radio, television, communications and telecommunication equipment (10%). Inclusion on the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authoritiesor entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.19.a.2 – Netherlands ICT – Key contracting authorities

Contracting authority or entity	Public sector area
Belastingdienst/Centrum voor Facilitaire Dienstverlening (Tax Administration / Center for Facility Management)	General public services
SURFnet	Other
ProRail BV	Transport
Vlaamse overheid, Agentschap Maritieme Dienstverlening (Flemish Government, Agency for Maritime Services)	Transport

Contracting authority or entity	Public sector area
Ministerie van Buitenlandse Zaken (Ministry of Foreign Affairs)	General public services
ICTU	General public services
Rijkswaterstaat Dienst Oost-Nederland	General public services
Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (Ministry of Interior and Kingdom Relations)	General public services
Stichting Avans Hogeschool (Avans Foundation)	Education
Evides N.V.	Water
Ministerie van Economische Zaken, Landbouw en Innovatie, Dienst ICT Uitvoering (Ministry of Economics Affairs)	Other
Academisch Medisch Centrum AMC	Health
Gemeente Den Haag Dienst Stadsbeheer	General public services
Albeda College	Education
DCMR Milieudienst Rijnmond (Environmental Protection Agency)	Environment
N.V. Elektriciteits-Produktiemaatschappij Zuid-Nederland	Electricity
Ministerie van Financiën	Economic and Financial Affairs
Provincie Zuid-Holland	General public services
VU Medisch Centrum	Health
Koninklijk Nederlands Meteorologisch Instituut (KNMI) (Royal Netherlands Meteorological Institute)	Other

3.19.b   Public procurement of R&D

The total value of R&D public procurement contracts in the Netherlands was about **EUR 20 million**[328] in 2011, with a 30% decrease compared to 2010, **EUR 29 million**. A breakdown of R&D contract value across different areas of public sector activity is given in *Table 3.19.b. 1*for 2010 and 2011.

Table 3.19.b. 1 – Netherlands R&D - Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	27%	51%	-23,8%
General public services	23%	2%	20,5%
Health	5%	5%	0,1%
Other	40%	6%	34,7%
Unknown	5%	36%	-31,4%
Total	100%	100%	

The contracting authorities that contributed to expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 100% of the total spending and centred on research and development services and related consultancy services (EUR 8,2 million), laboratory, optical and precision equipment(EUR 3.6 million, e.g. mass spectometre and fluorescent microscope for the use of the Technical University of Eindhoven and the University of Twente) and industrial machinery (EUR 1.9 million). Inclusion on the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authoritiesor entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

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[328] 98.97% is above the EU threshold and 0.36% is below. The remaining 0.67% is unknown.

Table 3.19.b. 2 – Netherlands R&D 2011 – Key contracting authorities

Contracting authority or entity	Public sector area
Technische Universiteit Eindhoven (Technical University of Eindhoven)	Education
Stichting ICTU, in deze begeleid door DPA Supply Chain (ICTU, this accompanied by DPA Supply Chain)	Other
Nederlandse organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek (Dutch Organisation for Applied Scientific Research)	Other
Koninklijk Nederlands Meteorologisch Instituut (Royal Dutch Meteorological Institute)	Other
Ministerie van Sociale Zaken en Werkgelegenheid (Ministry of Social Affairs and Employment)	Other
Wageningen Universiteit en Researchcentrum (Wageningen University and Research Centre)	Education
Universiteit Utrecht (Utrecht University)	Education
WaterstofNet vzw (WaterstofNet vzw)	Unknown
Trans European Research and Education Networking Association (Trans-European Research and Education Networking Association)	Other
Universiteit Twente (University of Twente)	Education

3.19.c Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in the Netherlands was about **EUR 7.6 million**[329] in 2011, compared with **EUR 12 million** in 2010. A breakdown of ICT-related R&D overall contract value across different areas of public sector activity for 2010 and 2011 is given in *Table 3.19.c. 1*.

Table 3.19.c. 1- Netherlands ICT−related R&D − Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	38%	100%	-61,6%
Health	14%	0%	13,9%
Other	48%	0%	47,7%
Total	100%	100%	

The contracting authorities that contributed to expenditure in 2011 are listed in the *Table 3.19.c. 2*. Expenditure of these authorities cover the 100% of the total spend and centered on laboratory, optical and precision equipment (EUR 2.9 million, e.g. laser scanning microscope for the use of the Technical University of Eindhoven), research and development services (EUR 2 million, e.g.ICTU) and office and computing machinery (EUR 1.2 million, for the use of the Royal Dutch Meteorological Institute). Inclusion on the list of key contracting authorities does not mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authoritiesor entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.19.c. 2 -Netherlands ICT −related R&D 2011 − Key contracting authorities

Contracting authority or entity	Public sector area
Stichting ICTU, in deze begeleid door DPA Supply Chain (ICTU, this accompanied by DPA Supply Chain)	Other

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[329] 99.03% is above EU threshold while 0.97% is below.

Technische Universiteit Eindhoven (Technical University of Eindhoven)	Education
Koninklijk Nederlands Meteorologisch Instituut (Royal Dutch Meteorological Institute)	Other
Universiteit Utrecht (Utrecht University)	Education
Trans European Research and Education Networking Association	Other
Universiteit Twente (University of Twente)	Education
Universiteit Leiden (Univeristy of Leiden)	Education
Wageningen Universiteit en Researchcentrum (Wageningen University and Research Centre)	Education

3.19.d Collection of procurement data by public authorities

Legal context

Public procurement in the Netherlands is regulated by a number of laws that transpose the relevant European legislation on public procurement:

- **Standard procurement regime:**

o   The Public Procurement Act, which came into force on 1 April 2013, *Aanbestedingswet* [330]– implements the relevant European Directives: Directive (EU) 2004/18 (Consolidated Public Service Directive); Directive (EU) 2004/17 (Utilities Directive), Directive (EU)2007/66/EC (Public Contracts Review Procedures Directive).

o   The Public Procurement Decree – *Aanbestedingsbesluit* - and the Proportionality Guide of July 2012– *Proportionaliteitsgids,* which support the 2013 Act.[331]

- **Procurement in the water, energy, transportation and postal sectors:**

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[330] http://wetten.overheid.nl/BWBR0032203/geldigheidsdatum_07-01-2014
[331] http://www.rijksoverheid.nl/onderwerpen/aanbesteden/documenten-en-publicaties/rapporten/2012/07/10/gids-proportionaliteit.html

o   The Public Procurement Act, see above.

o   The Public procurement Decree, see above.

o   The Proportionality Guide, see above.

- **Defence and security procurement:**

o   Procurement of defence and security Act - *Aanbestedingswet op defensie- en veiligheidsgebied.*[332]

The standard **national threshold for the publication of public procurement** in the Netherlands is ≥ EUR 5 million for works and ≥ EUR 200 000 for services.

Public procurement data collection process

TenderNed is the national system for e-procurement in the Netherlands; from November 2011, all Dutch ministries were required to publish tenders on this platform. The Public Procurement Act made the use of TenderNed compulsory for all Dutch contracting authorities (former legislation on public procurement did impose contracting authorities to publish tender information through any specific medium other than the OJ). The TenderNed service is free to use, and has functionality to support the complete tendering process, from the publication of tender announcements and tender documents by contracting authorities, to submissions and the tender procedure. According to our contact at the Public Procurement Expertise Centre, the collection of public procurement data has been a secondary function of the TenderNed service, its primary function being to provide a platform for e-publishing.

In case of a Europe-wide tender, once the contracting authority has published the information, TenderNed manages publication on TED. Contracting authorities can also publish tenders limited to the national market (mostly used for Annex IIB service contracts).

TenderNed is an initiative of the Dutch Ministry of Economic Affairs. The development and national launch of TenderNed was coordinated by PIANOo, the public procurement expertise centre in the Netherlands.[333]

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[332]Wet van 28 januari 2013 inzake implementatie van richtlijn nr. 2009/81/EG van het Europees Parlement en de Raad van 13 juli 2009 betreffende de coördinatie van de procedures voor het plaatsen door aanbestedende diensten van bepaalde opdrachten voor werken, leveringen en diensten op defensie- en veiligheidsgebied, en tot wijziging van richtlijnen 2004/17/EG en 2004/18/EG, see https://zoek.officielebekendmakingen.nl/stb-2013-44.html.
[333] http://www.pianoo.nl/

Before TenderNed came into use, de Aanbestedingskalender[334], now operated by a foundation (CROW) in which the Dutch government participates along with economic operators in the field of infrastructure, transport, traffic and spacial planning, was the tool used to publish information on tenders by the contracting authorities. Aanbestedingskalender, although built with a substantial share of public money, can be now considered a private player.

Public procurement data collection coverage

All individual procurement is classified using CPV and includes: the name and type of contracting authority, sector classification, project title, initial estimated total excluding VAT, and total final value excluding VAT. TenderNed data does not distinguish R&D, ICT, and R&D ICT procurement. Information is freely searchable in a workable format after registration. Data is provided by contracting authorities of different levels: ministries and governmental agencies, provinces and municipalities, regional water authorities and educational institutions such as universities and scientific centres and autonomous administrative authorities.

The service also includes information on tenders below the European thresholds, but is not obligatory, and thus less common. It is up to the discretion of the contracting authorities whether TenderNed or other means, such as their own website or branch journals, are used. TenderNed only provides for publications throughout Europe or for the Dutch [national] market.

3.19.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

The Dutch Central Bureau of Statistics only has data available on governmental expenses in general, without specifying categories such as R&D or ICT. There are (global) numbers available on R&D expenses (but not specifically on ICT) that were supplied by economic operators, but the statistics do not specify whether they are government or privately funded.

The Ministry of Economic Affairs periodically conducts a survey on innovation through public procurement. This survey is sample-based and focuses on quality aspects. A monitor on sustainability through procurement is also carried out. In

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[334] http://aanbestedingskalender.nl/

addition, the Ministry of Economic Affairs has commissioned[335] a survey on compliance by public contractors with the public procurement directives. It would be possible in the future to add ICT R&D as a subject of the survey, although it has not been included in the past.

The study team has established contact with various private data providers, of which de Aanbestedingskalender came out to be the most relevant provider, holding an archive of public procurement data which previously belonged to the Dutch government containing the largest archive of tender notices and awards in the Netherlands. The study team thus concluded a contract with de Aanbestedingskalender.

Other information sources: public procurement in the defence sector

According to the data provided by the EDA, the 'R&D (including R&T) Expenditure' of the Netherlands was EUR 105 million in 2009 and EUR 74 million in 2010.

The study team has requested additional relevant information from the Dutch MoD in order to get better insight and details regarding defence expenditure in R&D and ICT, but has not received any feed back.

3.19.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Dutch public procurement authorities would, in principle, be willing to provide the required data on a yearly basis. However, as described above, there is very little data available on under-EU-threshold contracts and thus it is unlikely that the TenderNed data will have much added value to the Commission.

Data provision by the national statistical institute

Our contacts at the Centraal Bureau voor de Statistiek (The Central Statistics Bureau, 'CBS') and the Rathenau Institute informed us as follows:

(A) Performer-based measurement of R&D / ICT / R&D of ICT procurement – BERD

The current survey used in the Netherlands to measure business R&D – BERD does not include a question to identify how much government–funded R&D was

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[335]In 2002, 2004, 2006, 2008 and 2010.

performed under public procurement contracts on the one hand, and how much was performed under grants on the other hand. The survey asks about the amount of money spent by the government on R&D in total, without distinguishing between contracts and grants.In principle, it would be technically possible to adapt the questionnaire to include the question. The respondents could be asked to diversify their answers in order to make the distinction. However, this would mean expanding the questionnaire, which would probably not be welcomed by the respondents, and could result less precise and reliable answers. In addition, any expansion of the set of questions is only acceptable if the importance and necessity of the new question is decisive. In order to include it in our survey, the Directive would have to be adapted, or for example the Minister should decide. Asking this type of detail does not necessarily provide reliable answers. Finally, the structure of the questionnaire does not become more logical by implementing isolated questions on a rather specific subject. In addition, in the current survey, the data are only differentiated at the local and sub-central governmental levels (municipalities and provinces) and governmental institutions. It is not possible to distinguish between individual governmental offices.

(B) Funder-based measurement of R&D / ICT / R&D of ICT procurement – GBAORD

It would not be possible to separately identify *public procurement contracts to business enterprises* in the breakdown. The distinction made in the GBAORD system is between 'grants' and 'projects' while 'projects' include public procurement contracts as well as contributions to, for instance, research institutions, as well as funding reserved for public procurement contracts.

There are very few public procurement contracts awarded by higher education institutions and public research organisations in the Netherlands. The breakdown of GBARD only shows which funding goes to which institutions, but not how such institutions (plan to) spend the funding, whether on grants to other institutions or on public procurement contracts.

(C) National accounts data for the measurement of R&D / ICT / R&D of ICT procurement

The main issue when differentiating R&D expenditure from other government expenditure in the COFOG classification is lack of source data. The data show what the expenditures are on R&D, e.g. universities and higher education institutions, but expenditure spent through contracts by private parties is not visible. Data on expenditure by the central government and higher educational institutions are easier to access and differentiate, but data on local government (or agencies) are not. To further differentiate ICT-related expenditure would be impossible if based on the COFOG structure, as it currently stands. In the opinion of our contacts, it would have to be redesigned and simplified. The current classification structure is not suitable to extract data on ICT-related R&D.

(D) Alternative approaches to the measurement of R&D / ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

Technically, it would be possible to adapt the survey on businesses and institutions to include questions to differentiate between ICT-related R&D expenditure through public procurement. However, a very convincing reason should be given. The reliability could, as mentioned before, be a problem because businesses and institutions already seem to have trouble submitting information, and a more detailed questionnaire would increase the administrative burden on them.

Another way to collect this data could consist of making central governmental agencies responsible for differentiating their expenditure directly when publishing the public procurement notices. In the TED documentation, a special category on ICT-related R&D could be added.

It would not, in principle, be much work to adapt the Dutch statistical survey to include more detailed questions. However, as mentioned before, this would mean an increased administrative burden for businesses and institutions when answering the questionnaire, and it is not easily predictable to determine how reliable the answers would be.

3.20 NORWAY

This chapter presents estimates of the amount of ICT-related (3.20.a), R&D (3.20.b), and ICT-related R&D procurement (3.20.c) in Norway. The figures do not include the value of defence contracts and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Procurement contract data collection by the national public authorities is illustrated in paragraph 3.20.d, while the availability of qualitative information that can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in paragraph 3.20.e.

Full country data set is provided in Excel format (see Annex 3).

3.20.a Public procurement of ICT

The total value of ICT public procurement contracts in Norway in 2011 was about **EUR 1.03 billion**[336], which is more than twice the expenditure for 2008, **EUR 428 million.**

Breakdown of ICT procurement contract value across different areas of public sector activity is given in *Table 3.20.a. 1*[337]for 2008 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[336] Of which 92.39% is above the threshold and 6.89% is below.
[337] The breakdown is primarily based on sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact thatcontracting authorities or entities performing similar functions can sometimes be classified differently. For example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.20.a. 1- *Norway ICT, Contract values by public sector activity*

Public Sector Area	2011	2008	Δ
Economic and financial affairs	9%	3%	5,6%
Education	7%	5%	2,5%
Electricity	0%	0%	-0,3%
Environment	0%	0%	0,1%
General public services	48%	62%	-13,9%
Health	7%	7%	0,6%
Other	13%	12%	1,0%
Postal services	0%	0%	-0,2%
Public order and safety	5%	4%	1,4%
Transport	6%	3%	3,2%
Unknown	3%	3%	0,1%
Total	100%	100%	

The contracting authorities that contributed most to expenditure in 2011 are listed in *Table 3.20.a. 2*. Expenditure of these authorities covered 40% of the total. This was mainly on printed matter and related products (60%of the total for the key authorities), office and computing machinery, equipment and supplies (9%), radio, television and telecommunication equipment (7%), medical equipment (7%) and transport equipment (6%). Inclusion in the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.20.a. 2- Norway ICT 2011 - Key contracting authorities

Contracting authority / entità	Public sector area
Arbeid og velferdsdirektoratet, NAV (Labour and Welfare)	General public services
Oslo kommune (Oslo Municipality)	General public services
Trondheim Kommune (Trondheim Municipality)	General public services
Rogaland fylkeskommune (Rogaland County Council)	General public services
Departementenes Servicesenter (DSS)	General public services
Politiets data- og materielltjeneste (Police Computing and Material Service)	Public order and safety
Avinor AS	Transport
Statens Pensjonskasse (State Pension)	Economic and financial affairs
Oslo Lufthavn AS (Oslo Airport)	Transport
Norsk Tipping AS (Norwegian Tipping)	Other

3.20.b Public procurement of R&D

The total value of R&D public procurement contracts in Norway was about **EUR 27.7 million**[338] in 2011, with a 28% increase compared to 2008, **EUR 21 million**.

A breakdown of the overall R&D procurement contract value across different areas of public sector activity is given in *Table 3.20.b. 1* for 2008 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services. These can be active at national, regional and local level.

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[338]Of which 91.5% is above EU threshold while 7.35% is below. 1.15% is unknown.

Table 3.20.b. 1- Norway R&D - Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	47%	40%	7%
Environment	14%	0%	14%
General public services	2%	2%	-0%
Health	6%	7%	-1%
Other	26%	51%	-24%
Unknown	5%	0%	5%
Total	100%	100%	

The contracting authorities that contributed most to expenditure in 2011 are listed in Table 3.20.b. 2. Expenditure of these authorities covered 96% of the total and centred on laboratory, optical and precision equipment (EUR 8.5 million, e.g. hydrographic instruments and meteorological instruments for the University of Troms and the National Institute of Nutrition and Seafood Research), medical equipment, pharmaceuticals and personal care products (EUR 6.6 million, e.g. dental consumables and reagents for electrophoresis for the University of Oslo and the University of Troms) and chemical products. Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.20.b. 2- Norway R&D 2011 - Key contracting authorities

Contracting authority / entity	Public sector area
Norges Teknisk Naturvitenskapelige universitet (Norwegian University of Science and Technology)	Education
Bioforsk	Environment
Universitetet i Tromsø (University of Tromsø)	Education
Universitetet i Oslo (University of Oslo)	Environment
Nasjonalt institutt for ernærings- og sjømatforskning	Other

(National Institute of Nutrition and Seafood Research)

Universitetet i Bergen (University of Bergen)	Education
Universitetssykehuset Nord-Norge HF (University Hospital of North Norway)	Health
Havforskningsinstituttet (IMR)	Other
INSPIRIA science center (INSPIRIA science center)	Unknown
Statens lånekasse for utdanning (State Educational Loan Fund)	General public services

3.20.c Public procurement of R&D ICT

The total value of ICT-related R&D public procurement contracts in Norway was about **EUR 12 million**[339] in 2011, compared with **EUR 5.6 million** in 2008. A Breakdown of ICT-related R&D overall contract value across different areas of public sector activity for 2010 and 2011 is given in *Table 3.20.c 1*.

Table 3.20.c 1 - Norway ICT–related R&D - Contract values by public sector activity

Public Sector Area	2011	2008	Δ
Education	67%	81%	-14%
General public services	1%	9%	-9%
Health	1%	0%	1%
Other	21%	10%	11%
Unknown	11%	0%	11%
Total	100%	100%	

The contracting authorities which contributed to expenditure in 2011 are listed in *Table 3.20.c 2*. Expenditure of these authorities cover the 100% of the total spend and supplied, among others, laboratory, optical and precision equipment (especially for the Norwegian University of Science and Technology), medical

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[339] 82.3% is above EU threshold while 16.47% is below and 1.23% is unknown

equipment (e.g. University of Bergen) and radio, television, communication and telecommunication equipment. Inclusion in the list of the key contracting authorities does not mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.20.c 2 -Norway ICT –related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Norges Teknisk Naturvitenskapelige universitet (Norwegian University of Science and Technology)	Education
Universitetet i Oslo (University of Oslo)	Education
Universitetet i Tromsø (University of Tromsø)	Education
INSPIRIA science center (INSPIRIA science center)	Unknown
Nasjonalt institutt for ernærings- og sjømatforskning (National Institute of Nutrition and Seafood Research)	Other
Universitetet i Bergen (University of Bergen)	Education
Norges forskningsråd (Research Council of Norway)	General public services
Helse Stavanger HF (Stavanger Hospital)	Health

3.20.d Collection of procurement data by public authorities

Legal context

Public procurement in Norway is regulated by:

- The Public Procurement Act (LOV-1999-07-16-69);
- The Public Procurement Regulations (FOR-2006-04-07-402) and
- The Utilities Regulations (FOR-2006-04-07-403).

Both sets of regulations have their base in the Act. The aforementioned Norwegian legislation implements European public procurement directives 92/50/EEC, 92/13/EEC, 89/665/EEC, 2004/17/EC, 2004/18/EC.

The public entities covered by the Public Procurement Act correspond to the definition of contracting authorities listed in article 1 of Directive 2004/18/EC.

In principle, all types of public contracts which are not covered by article 123 of the EEA Agreement (corresponding to the EC treaty Article 296) are covered by the abovementioned Act and Regulations, with some exceptions, as specified in Public Procurement Regulations section 1-3 (2) and (3):

Section 1-3 (2):

a) Contract which can either be exempt within the meaning of Article 123, or declared to be secret, or possible only under special security measures in accordance with Act 20 March 1998 No. 10 (Safety Act) or protective instruction of 17 March 1972 No. 3352, or when required by the essential security interests;

b) Contracts for the acquisition or lease, without regard to financing, of land, existing buildings or other immovable property or concerning rights to such property. Contracts for financial services, without regard to form, signed simultaneously, before or after the contract of acquisition or rental, within the scope of this regulation,

c) Contracts for broadcasting companies' procurement, development, production or co-production of programs and contracts for broadcast times,

d) Contracts for arbitration and mediation services,

e) Contracts for financial services in connection with the offering, purchase, sale and transfer of securities or other financial instruments, in particular transactions conducted by public employers to provide money or capital, and central bank services,

f) Employment contracts,

g) Research and development services, when the client does not fully pay for the service or does not fully accrue the principal to use in his business,

h) Contracts for public procurement of services assigned to a body or association of organs that is itself a contracting authority as defined in § 1-2 (who are covered by the regulations) pursuant to an exclusive right which it enjoys pursuant to a published law, regulation or administrative decision, provided that the provisions are compatible with the EEA Agreement,

i) Contracts which mainly aim to put a contracting authority able to impose a public telecommunications network, is available, or operates such a network, or to provide one or more telecommunications services to the public, as defined in Directive 2004/18/EC Article 1, paragraph 15,

j) Service concession contracts,

k) Contracts that involve the exercise of official authority as may be exempted by EEA Agreement Article 39, cf Article 32

Section 1-3 (3) … Contracts that are regulated by other procurement rules and awarded:

a) In accordance with an international agreement relating to the stationing of troops,

b) According to an international organization specific method, or

c) In accordance with the international agreement concluded in conformity with the agreement between Norway and one or more states that are not party to the EEA Agreement, which includes deliveries intended for a project implemented or utilised by the parties. Any such agreement shall be communicated to the Ministry of Government Administration, Reform and Church Affairs if the value of the contracts exceeds the thresholds in § 2-2.

The standard **national threshold for the publication of public procurement** in Norway is approximately EUR 67 853 (NOK 500 000).

Public procurement data collection process

DOFFIN[340] is the main portal for public procurement notices and a knowledge portal for purchasers, managers and suppliers.[341] The database includes public procurement notices and awards.

DOFFIN is a service under the direction of The Ministry of Government Administration, reform and church affairs (FAD). The service is operated by a private company: Millstream Associates, which was selected in an international competition in 2005. The Agency for Public Management and eGovernment (DIFI) is the contract manager and is responsible for day-to-day management.

Coverage of the public procurement database

Procurement contracts with a value above the national threshold are published in the national procurement database DOFFIN according to the Public Procurement Regulations (section9-1). Publication of procurement (notices and awards) below the threshold value is voluntary.

The database contains information submitted by the contracting authorities, which are the State, county and municipal authorities and institutions established under public law. These may be municipal or State-run enterprises or other institutions, or businesses mainly financed by the authorities or serving the needs of the public. The quality of data may thus vary. Notices are submitted using web-based forms with on-line instructions and guidance.

It should be noted that contract awards may be published on DOFFIN, but are not often submitted. For example: there are about 11 000 announcements

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[340] http://www.english.doffin.no/
[341] Containing guidance on the rules and a chronological account of the activities, evaluations and decisions required in the different phases of procurement, see: http://www.anskaffelser.no.

yearly, 3-4000 of these are contracts above the EU threshold, and only 2000 of the latter contain award notices.

Defence procurement is subject to standard national public procurement rules, including publication. However, certain procurement is exempt, including those pursuant to article 123 of the EEA Agreement (corresponding to the EC treaty Article 296), if the contract is classified as secret or if the contract is required to be exempt from the rules due to a security interest.[342]

Defence procurement below the national threshold is normally published in DOFFIN, to reach as many suppliers as possible. Non-secret procurement not subject to the public procurement rules may nonetheless be published: if the value is above EUR 1 000 000, they will be published in the European Business Bulletin (EBB). If the value is below EUR 1 000 000, they will be announced on the Norwegian Defence website.[343]

3.20.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

There are no other public sources for public procurement data in Norway other than the national DOFFIN portal and the collection of expense data and establishment of total values by the SSB (Statistics Norway). Statistics for 2011 were published on December 7, 2012. SSB obtains most of its information through accounts. These statistics would give a picture of expenditure on public procurement in Norway, but not statistics on R&D and/or ICT procurement. Statistical reports are available on http://www.ssb.no/english/subjects/12/01/offinnkj_en/. Defence is included in the SSB statistics. SSB statistics are not very detailed, they separate between "efforts" and "investments". "Efforts" is quantification of efforts of internal resources; "investments" are external procurement.

There are some private procurement data providers, of which Mercell has emerged as the most suitable provider. However, none of the private providers seem able to provide any significant data other than what is in DOFFIN.

Information on procurement which is not included in the database, but which should have been included in accordance with the law, may show up in public authorities' reports. For example, the Norwegian Auditor General performs checks on how public bodies perform their tasks. If the audit reveals breaches, they may be described in the report. The same applies to the Norwegian Public Procurement Complaints Body ("KOFA"). They may receive complaints about

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[342]Public Procurement Act section 3 and Public Procurement Regulations section 1-3 (2)(a).
[343]See: http://forsvaret.no/om-forsvaret/utstyrsfakta/anskaffelser/Sider/default.aspx.

procurement which were, contrary to public procurement rules, not announced. Both the Auditor General and KOFA deal with specific cases on an ad-hoc basis, they do not collect any information systematically.[344]

Other information sources: public procurement in the defence sector

Defence expenditure statistics in Norway are generated on the basis of existing accounting information. The expenditure of all government defence institutions is taken into account. From the interview with the MoD in Norway it is clear that information about R&D expenditure on ICT would require additional analysis of accounting information.

Approximately NOK 1 billion (EUR 135,4 million) was spent on R&D in the defence sector in Norway in 2012, of this amount, approximately 100 million NOK (approximately EUR 13,5 million) was outsourced.

Of the 'outsourced' R&D defence expenditure approximately NOK 20 million (EUR 2,7 million) was spent on ICT.

The representative of the Norwegian MoD told the study team that there is no data available on how much of the total 'outsourced' defence expenditure is spent on ICT, nor could he inform us if space-related expenditure is included in the governmental statistics.

3.20.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Norwegian authorities would be willing to provide the European Commission with public procurement data in future, e.g. on an annual basis, if these are based on CPV codes. In addition, there will be a lack of award notices as these are missing for a large part of published procurement.

Information collected other than on the basis of CPV codes will incur additional cost. The Norwegian authorities are unsure how much any quality assurance of the data would cost.

Data provision by the MoD

The MoD in Norway very much welcomes cooperation with the study team and the Commission. However, providing data on R&D and ICT concerning the intelligence services and special operation forces may prove to be challenging.

The related challenges listed below may not be insurmountable for the MoD in Norway:

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[344]See the Auditor General's Document 3:6 (2010-2011), containing the reasons why public entities do not comply with the public procurement rules, or KOFA's database of processed claims at http://www.kofa.no/no/Avgjorte-saker/.

(a) organisational complexity;

(b) common semantics and the adoption of semantics by the relevant stakeholders;

(c) political barriers;

(d) availability of budgets for implementation.

However, data security restrictions would be a real concern.

Data provision by the National Statistical Institute (NSI)

The study team has contacted the NSI on numerous occasions with a request for an interview, however they have declined our request.

3.21 POLAND

This chapter presents estimates of the amount of ICT-related (3.21.a), R&D (0), and ICT-related R&D procurement (3.21.c) in Poland. The figures do not include the value of defence contracts, and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

Collection of data on procurement contracts by the national public authorities is illustrated in paragraph 3.21.d, while the availability of qualitative information that can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in paragraph 3.21.e.

Full country data set is provided in Excel format (see Annex 3).

3.21.a Public procurement of ICT

The total value of ICT public procurement contracts in Poland in 2011was about **EUR 2.6 billion**[345], with a decrease of 34% compared to 2010, **EUR 3.9 billion**.

A breakdown of the overall ICT contract value across different areas of public sector activity is given in Table 3.21.a.1[346] for 2010 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[345] Of which 70.39% is above EU threshold and 26.75% is below.
[346] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.21.a.1- Poland ICT – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	3%	1%	1,5%
Education	13%	7%	6,4%
Electricity	2%	3%	-1,6%
Environment	1%	1%	0,0%
Gas, oil and heat	3%	4%	-1,2%
General public services	22%	13%	9,1%
Health	11%	7%	3,8%
Other	21%	47%	-25,9%
Postal services	1%	0%	0,3%
Public order and safety	16%	5%	11,5%
Transport	4%	10%	-6,1%
Unknown	4%	2%	2,1%
Water	0%	0%	0,1%
Total	100%	100%	

The contracting authorities that contributed most to the expenditure in 2011 are listed in Table 3.21.a.2. Expenditure of the top ten authorities covered 29% of the total and centred on postal and telecommunication services (50% of the total for the key authorities), IT services (20%), and software package and information systems (8%). Inclusion in the list of the key authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.21.a.2 - Poland ICT 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Komenda Wojewódzka Policji (Regional Police Public order and safety)	Public order and safety
Polskie Górnictwo Naftowe i Gazownictwo (Polish Oil and Gas)	Gas, oil and heat
PKP Polskie Linie Kolejowe S.A. (Polish Railway Lines SA)	Transport
Uniwersytet Warszawski (Warsaw University)	Education
Ministerstwo Finansów (Ministry of Finance)	Economic and financial affairs
Instytut Meteorologii i Gospodarki Wodnej (Institute of Meteorology and Water Management)	Other
Zaklad Ubezpieczeń Społecznych (Dep. of Social Insurance)	Other
Główny Urząd Geodezji i Kartografii (Head Office of Geodesy and Cartography)	General public services
Uniwersytet Kazimierza Wielkiego (Kazimierz Wielki University)	Education
Komenda Główna Policji (Police Headquarters)	Public order and safety
Ministerstwo Sprawiedliwości (Ministry of Justice)	Other
Telewizja Polska SA (Polish Television)	Other
Narodowy Fundusz Zdrowia Centrala (National Health Fund)	Health
ZdiUM (Road Management and Maintenance, City of Wrocław)	Other
Agencja Restrukturyzacji i Modernizacji Rolnictwa (Agency for Restructuring and Modernisation of Agriculture)	Other
Uniwersytet Łódzki (University of Lodz)	Education
Instytut Chemii Bioorganicznej PAN	Other
Urząd Marszałkowski Województwa Lubuskiego (Marshal Office of Lubusz)	General public services
Gmina Puchaczów (Municipality Puchaczów)	General public

Contracting authority / entity	Public sector area
	services
Kasa Rolniczego Ubezpieczenia Społecznego (Agricultural Social Insurance Fund)	Other

3.21.b   Public procurement of R&D

The total value of R&D public procurement contracts in Poland was about **EUR 324.1 million**[347] in 2011, which means there was a 39% decrease compared to 2010, **EUR 539 million**.

A breakdown of the overall R&D contract value across different areas of public sector activity is given in *Table 3.21.b.1* for 2010 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

Table 3.21.b.1- Poland R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	0%	1%	-0,5%
Education	34%	34%	0,2%
Electricity	0%	0%	0,2%
Environment	2%	1%	0,8%
General public services	8%	4%	3,2%
Health	11%	18%	-7,7%
Other	43%	40%	3,1%
Unknown	2%	1%	0,5%
Total	100%	100%	

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[347] 70.67% is above EU threshold and 19.55% is below. The remaining 9.78 % is unknown.

The contracting authorities that contributed most to the expenditure in 2011 are listed Table 3.21.b.2. Expenditure of these authorities covered 42% of the total and centred on construction works (EUR 57.5 million or 35% of the total for the key authorities), such as those at the National Center for Electromagnetic Radiation of the Jagiellonian University, as well as contracts for medical equipment (EUR 56 million, e.g. the supply and installation of an X-ray tomography system for the Institute of Aviation) or for laboratory, optical and precision equipment (EUR 15 million). Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.21.b.2- Poland R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Instytut Lotnictwa (Institute of Aviation)	Other
Wrocławskie Centrum Badań EIT+ Sp. z o.o. (Wroclaw Research Centre EIT + Ltd.. Ltd.)	General public services
Instytut Fizyki Jądrowej im. Henryka Niewodniczańskiego Polskiej Akademi Nauk (Institute of Nuclear Physics. Henry Nuclear Physics Polish Academy of Sciences)	Other
Instytut Chemii Bioorganicznej Polskiej Akademii Nauk (Institute of Bioorganic Chemistry of the Polish Academy of Sciences)	Other
Akademia Górniczo, Hutnicza im. Stanisława Staszica (AGH, them. Staszic)	Education
Politechnika Rzeszowska (Rzeszow University of Technology)	Education
Uniwersytet Jagielloński (Jagiellonian University)	Education
Park Naukowo-Technologiczny Euro-Centrum Sp. z o.o. (Science and Technology Park Euro-Centrum Sp. Ltd.)	Other
Uniwersytet Kardynała Stefana Wyszyńskiego w Warszawie (Cardinal Stefan Wyszynski University in Warsaw)	Education

Contracting authority / entity	Public sector area
Katolicki Uniwersytet Lubelski Jana Pawła II (Catholic University of Lublin John Paul II)	Education

3.21.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Poland was about **EUR 58.6 million**[348] in 2011, compared to **EUR 70.8 million** in 2010. A breakdown of the overall ICT-related R&D contract value across different areas of public sector activity is given in *Table 3.21.c. 1* for 2010 and 2011.

Table 3.21.c. 1- Poland ICT – related R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	19%	19%	0,2%
Environment	5%	0%	4,8%
General public services	1%	0%	1,1%
Health	3%	11%	-8,0%
Other	66%	61%	5,6%
Public order and safety	0%	0%	0,3%
Transport	1%	2%	-0,2%
Unknown	4%	7%	-3,8%
Total	100%	100%	

The contracting authorities which contributed most to expenditure in 2011 are listed in *Table 3.21.c. 2*. Expenditure of these authorities covered 72% of the total and centred on medical equipment (EUR 18 million, e.g. Institute of Nuclear Physics), radio, television, (tele)communication equipment (EUR 8.3 million, e.g. a transmission system purchased by the Institute of Bioorganic Chemistry),

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[348] 89.37% of the amount is above EU threshold while 3.27% is below and 7.37% is unknown.

software package and information systems (EUR 4.2 million) and electrical machinery and apparatus.

Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.21.c. 2- Poland ICT – related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Instytut Chemii Bioorganicznej Polskiej Akademii Nauk (Institute of Bioorganic Chemistry of the Polish Academy of Sciences)	Other
Instytut Fizyki Jądrowej im. Henryka Niewodniczańskiego Polskiej Akademi Nauk (Institute of Nuclear Physics. Henry Nuclear Physics Polish Academy of Sciences)	Other
Politechnika Rzeszowska (Rzeszow University of Technology)	Education
Instytut Problemów Jądrowych im. Andrzeja Sołtana (Institute for Nuclear)	Education
Instytut Badawczy Leśnictwa (Forest Research Institute)	Environment
Instytut Biologii Doświadczalnej imienia Marcelego Nenckiego Polskiej Akademii Nauk (Institute of Experimental Biology)	Education
Instytut Meteorologii i Gospodarki Wodnej (Institute of Meteorology and Water Management)	Other
Akademia Wychowania Fizycznego J. Piłsudskiego w Warszawie (Academy of Physical Education J. Pilsudski Warzszawie)	Education
Instytut Wysokich Ciśnień Polskiej Akademii Nauk (Institute of High Pressure Physics of the Polish Academy of Sciences)	Other

3.21.d Collection of procurement data by public authorities

Legal context

Public procurement in Poland is regulated by a number of laws and decrees transposing the relevant European legislation[349]:

- **Standard procurement regime:**
  - Public procurement law act of 29 January 2004 (Journal of Laws 2010, s. 113. item 759 with further amendments).[350]

- **Procurement in the water, energy, transportation and postal sectors:**
  - Public procurement law act of 29 January 2004 (Journal of Laws 2010, s. 113. item 759 with further amendments).

- **Defence and security procurement**
  - Public procurement law act of 29 January 2004 (Journal of Laws 2010, s. 113. item 759 with further amendments)[351]

The standard **national threshold for the publication of public procurement** in Poland is EUR 14 000.

Public procurement data collection process

In Poland, the collection and storage of public data regarding public procurement is the responsibility of the Public Procurement Office President (*Prezes Urzędu Zamówień Publicznych*) (the PPO President).[352] The PPO President is a central government body acting on the basis of the public procurement law act of 29 January 2004 (Journal of Laws 2010, s. 113. item 759) ("PPL"). According to Article 154 pt. 3 he issues, by electronic means, the Public Procurement Bulletin

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[349]For more details on the legal framework in Poland see:
http://www.uzp.gov.pl/cmsws/page/?F;370.

[350]The Law was largely amended on 25th May 2006 in order to implement the provisions of the EU Directives 2004/17 and 2004/18.Before the enactment of Law of 29th January 2004, public procurement in Poland was regulated by the act on public procurement of 10th June 1994 with several amendments.

[351]Lastly amended on 20 February 2013, Dz. U. [Journal of Laws] of 2012, Item 1271. (Journal of Laws of. 2012 pos. 1271), implementing the provisions of Defence Directive 2009/81/EC.

[352]http://www.uzp.gov.pl/cmsws/page/GetFile1.aspx?attid=3938

(*Biuletyn Zamówień Publicznych*), hereinafter called the PPB, where all the announcements provided for in the PPL are placed.

The PPB is as an electronic database in Polish (http://bzp1.portal.uzp.gov.pl/index.php?ogloszenie=browser). It includes a search engine that allows users to search for announcements through different methods/criteria. The database is freely accessible.

The announcements are published by the awarding entities using an online announcement template.[353] The awarding entities are required to provide specific information to ensure that the announcement meets minimum quality standards.[354] There is however no mechanism providing for the verification of data provided or the correctness of the information provided in the tender announcement.

Coverage of the public procurement database

As mentioned above, the database consists of announcements that are published through electronic means by the awarding entities conducting the procurement procedures and awarding public contracts.

The obligation to place public contract announcements or awards pertains to contracts, the value of which, excluding VAT, does not exceed EUR 14 000. Such contracts may also be announced in the PPB, but these situations happen rarely. The awarding entities placing the announcements are obliged to provide information required by PPL provisions depending on the type of procedure (i.e. open tender, restricted tender, negotiations with publication, competitive dialogue, negotiations without publication). Among other things, the awarding entities are obliged to provide information about the type of contract (services, supplies, construction works) and the CPV code(s). The obligation to publish announcements is not dependent on the type of awarding entity or where such an entity is based. There are no other means of publishing tender announcements, so the PPB contains all the announcements published below the value of EU thresholds (excluding contracts under the national threshold).

The PPO President's database covers all entities obliged to apply PPL regulations, both national entities and regional public entities.

The PPB does not contain announcements regarding the commencement of public procurement procedures or the award of public contracts, the value of which is equal to or above EU public procurement thresholds ((1) awarded by a public finance sector entity, within the meaning of legal provisions on public finances, excluding state universities and colleges, state cultural institutions, state film industry institutions, self-government units and their associations, public finance sector units, where the founding or supervisory body are self-government units

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[353]See Article 12 pt. 1 of the PPL.
[354]Regulation of the Prime Minister of 28 January 2010 on the standard forms of notices published in the Public Procurement Bulletin (Journal of Laws, No. 12, item 69).

as well as awarded by other state organizational units without legal personality, is equal to or exceeds PLN equivalent of EUR 130 000, for supplies or services, EUR 5 000 000, for works; (2) awarded by entities other than those listed in point (1), except for contracts, referred to in point (3), is equal to or exceeds PLN equivalent of EUR 200 000, for supplies or services, EUR 5 000 000, for works; (3) in case of utility contracts, is equal to or exceeds PLN equivalent ofEUR 400 000 for supplies or services, EUR 5 000 000, for works.)

According to article 4 pt. 5, the PPL does not apply to contracts containing classified information, if required by significant public interest, or important state interest.

The PPO President's database does not yet include many defence procurement contracts, as Directive 2009/81/EC has only just been implemented into the Polish legal system. As of 20 February 2013, the PPL provides (article 4 pt. 5 under b) that the Act shall not apply to: contracts for the production of or trade in arms, munitions and war material, referred to in article 346 of the Treaty on the Functioning of the European Union, if required by the essential interest of national security, and the award of the contract without the application of the PPL will not adversely affect the conditions of competition in the internal market regarding products which are not intended for specifically military purposes.

Additionally, there are exclusions which reflect the implementation of the other relevant EU Directives into the PPL.

With regard to R&D procurement, it is worth noting that, pursuant to article 4 pt. 3 under e PPL, the PPL does not apply to contracts where the object of the contract constitutes research and development services and provision of research services, which are not wholly remunerated by the contracting authority or whose results are not exclusively owned by the contracting authority.

3.21.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

On the basis of Article 154 pt. 15 and 15 of the PPL the PPO President is obliged to prepare annual reports on the functioning of the system of public contracts in Poland[355]. The report contains, *inter alia,* statistical information on public procurement procedures conducted and awarded by entities obliged to apply PPL. It is not limited to EU thresholds but includes public contracts under and above the EU thresholds. The information provided pertains mainly to the division of contracts awarded above and below EU thresholds, and types of contracts

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[355] http://www.uzp.gov.pl/cmsws/page/GetFile1.aspx?attid=3938

(services, supplies, construction works). Consequently the PPO President gathers procurement data regarding procurement both above and below EU thresholds conducted by entities obliged to apply the PPL. However, such data is not publicly available other than through the annual reports on the functioning of the system of public contracts in Poland.

Additionally, the awarding entities are obliged to publish tender announcements on their own websites, which resemble those published in the PPB. Consequently many government agencies and other awarding entities provide freely accessible tender search engines on their own websites. The website of the City of Warsaw may serve as an example[356]. The search engine provided includes announcements placed by around 500 entities based in Warsaw. Similar databases are run by entities such as the General Directorate of National Roads and Highways (GDDKiA), as well as the Polish Railway Lines (Polskie Linie Kolejowe S.A.) but all of these are not national level databases.

In addition, the Public Procurement Office prepares a weekly report on the Polish and European public procurement market based on notices placed in the Public Procurement Bulletin and published in TED. It concentrates very much on the number of contract notices and types of procedures applied. The information is to be found at:

http://www.uzp.gov.pl/cmsws/page/?F;289;informacja_o_polskim_i_europejski m_rynku_zamowien_publicznych_w_2012_r._.html

Furthermore, the Public Procurement Office issues a monthly Information Bulletin containing some statistical data, including the number of notices, the percentage of applied procurement types and the number of contracts of each type. The monthly information constitutes a more thorough analysis of the market and is based on more criteria[357].

The Polish public procurement procedures are under the supervision of the Regional Observatory Chambers (*Regionalne Izby Obrachunkowe*)(ROC), institutionalised by the Regional Observatory Chambers act of 7th November 1992. The ROC are government institutions responsible for the supervision of public expenditure and they supervise the proper application of PPL regulations in public procurement procedures conducted by local government entities. Consequently, ROC does not supervise public procurement procedures conducted by entities which are not public bodies, but which are obliged to apply PPL regulations. The ROC conduct supervisory procedures reviewing individual public procurement procedures and give their recommendations in PPL regulations infringement procedures. The analysis did not identify any public procurement data that would be gathered by ROC.

The Central Statistical Office (*Główny Urząd Statystyczny*) does not provide for statistics on public procurement tenders and/or contracts in Poland. R&D and ICT

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[356] http://ogloszeniabzp.um.warszawa.pl/wyszukiwarka.php
[357] All the bulletins are available at:
http://www.uzp.gov.pl/cmsws/page/?F;574;biuletyn_informacyjny_uzp_2012.html

procurement are not distinguished in statistical data as separate procurement sectors. In particular the analysis did not identify any studies conducted by CSO (GUS) in the field of public procurement expenditure in R&D and ICT.

Many contracting authorities provide freely accessible tender search engines on their own websites. The website of the City of Warsaw may serve as an example[358]. The search engine provided includes notices of the City of Warsaw and its subordinate units. Such databases are also run by entities such as the General Directorate of National Roads and Highways (GDDKiA) and the Polish Railway Lines (Polskie Linie Kolejowe S.A.) but all of these are sub-national level databases.

Other information sources: public procurement in the defence sector

According to the data provided by the EDA, the "R&D (including R&T) Expenditure" of Poland was EUR 88,93 million in 2009 and EUR 121,22 million in 2010. Poland does not publish data on "Outsourced Defence Expenditure". R&D statistics are based on funds designated in the budgets of both the MoD and the National Center for Research and Development (NCBR)[359].

Our contact persons at the MoD estimate that 44% of Polish defence expenditure in R&D can be considered as 'outsourced' in 2012[360]; expenditure in 2012 on R&D were approximately PLN 706 million –EUR 170,16 million – including:

- PLN 407 million –EUR 98,10 million, from the MoD;
- PLN 13 million, EUR 3,3 million, within EDA and;
- PLN 299 million, EUR 72,07 million, from the NCBR.

It is estimated that 60% of 'outsourced'R&D defence expenditure is spent on ICT. This figure pertains only to projects conducted within the scope of the EDA. In case of the NCBR, such statistics could probably be gathered on the basis on concluded contracts.

Space-related expenditure is included in the data provided to the EDA.

Our contact persons at the MoD were unable to tell us how much of the total 'outsourced' defence expenditure is spent on ICT; they referred us to their colleagues at the Department of Information and Telecommunication. The study team has filed an official request, in accordance with the instructions provided by the MoD, but has not received any answers.[361]

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[358] http://ogloszeniabzp.um.warszawa.pl/wyszukiwarka.php
[359]Department for security and defence.
[360]Assuming that projects conducted within the scope of EDAand NCBR are considered as „outsourced".
[361] The letter was sent in January 2013 to: Sztab Generalny Wojska Polskiego, Zarząd Planowania Rzeczowego P-8 SG WP, Ul. Rakowiecka 4a, 00-904 Warszawa/Warsaw, Polska/Poland.

3.21.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Polish public authorities have not expressed their thoughts on the question raised by the study team as to whether they would have any difficulties in providing the same ICT / R&D / R&D ICT procurement data requested by the European Commission on a regular basis, e.g. annually.

The PPO President's database currently does not use a quality assurance system for data inserted in the database by the contracting authorities, nor does it verify the quality of data provided by contracting authorities for governmental annual reports. The Public Procurement Office is unable to provide an estimate of costs involved.

Data provision by the Ministry of Defence

The MoD would not have problems providing the same ICT / R&D / R&D ICT procurement data on an annual basis, provided that such data was to be prepared for 'supervisory purposes'. But currently it seems to be an 'ad hoc' activity, which demands dedicated work. Possible barriers would be of a political/organizational nature and the cost would mainly be related to human resources.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D OR ICT / R&D of ICT procurement, BERD

The Polish Central Statistical Office("SCO") collects economic statistical data from businesses and institutions that are listed in the REGON (National Official Business Register).Reporting requirements are determined by the type of business activity, as defined in the Polish Classification of Activities 2007 and the number of employees.

The SCOdo not consider it feasible to adapt methods and tools used for performer expenditure-based R&D indicators, in particular BERD, to extract ICT-related R&D procurement statistics, since using this methodology would be regarded as too time consuming.

(B) Funder-based measurement of R&D OR ICT / R&D of ICT procurement, GBAORD

The SCO would prefer to adapt methods and tools used for funder-based R&D indicators, in particular GBAORD, to extract ICT-related R&D procurement statistics, because of the substantially small number of entities conducting public procurement of this kind.

(C) National accounts data for the measurement of R&D OR ICT / R&D of ICT procurement

The SCO considers using national account aggregates to extract ICT-related R&D procurement statistics too complicated; it would not be possible to implement this method in reality.

(D) Alternative approaches to the measurement of R&D OR ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

It would be possible to cooperate with the Polish Public Procurement Office in order to collect the relevant data and adopt a suitable methodology. This would require additional funds, as it would result in an increase of the scope of research of the current Polish Statistical Research programme on Public Statistics.[362]

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[362]The scope of the information obtained for the purpose of public statistics is defined in the Annex to the Regulation of the Prime Minister concerning sample reporting forms, instructions on how to complete them, and sample statistical questionnaires and surveys used in statistical research and established in the statistical research programme on public statistics.

3.22 PORTUGAL

This chapter presents estimates of the amount of ICT-related (3.22.a), R&D (3.22.b), and ICT-related R&D procurement (3.22.c) in Portugal. The figures do not include the value of defence contracts, and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

The collection of data on procurement contracts by the national public authorities is illustrated in paragraph 0, while the availability of qualitative information that can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in paragraph 0.

Full country data set is provided in Excel format (see Annex 3).

3.22.a Public procurement of ICT

The total value of ICT public procurement contracts in Portugal in 2011 was about **EUR 424.5 million**[363], a decrease of 36% compared to 2010, **EUR 669 million**.

A breakdown of the overall ICT contract value across different areas of public sector activity is given in *Table 3.22.a. 1*[364]for 2010 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[363] Of which 35.95% of the total amount is above EU threshold while 46.5% is below. The remaining 17.54% is unknown.
[364] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contractingauthorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.22.a. 1- Portugal ICT – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	8%	6%	1,7%
Education	13%	15%	-1,6%
Electricity	1%	2%	-0,5%
Environment	2%	2%	0,0%
Gas, oil and heat	0%	0%	-0,1%
General public services	20%	41%	-21,2%
Health	8%	5%	3,2%
Other	19%	18%	0,8%
Postal services	6%	0%	6,3%
Public order and safety	1%	1%	0,2%
Transport	12%	2%	9,8%
Unknown	6%	7%	-0,7%
Water	3%	1%	2,0%
Total	100%	100%	

The contracting authorities that contributed most to the above expenditure levels for 2011 are listed in Table 3.22.a.2. Expenditure of the authorities covered 30% of the total and centred on IT services (32% of the total for the key authorities, e.g. databases and software development), repair and maintenance services (28%), office and computing machinery, equipment and supplies (12%) and radio, television, communication, telecommunication and related equipment (11%). Inclusion in the list does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.22.a.2 – Portugal ICT – Key contracting authorities

Contracting authority / entity	Public sector area
CTT, Correios de Portugal SA (Postal of Portugal)	Postal Services
Rede Ferroviária Nacional, REFER, EPE (National Rail Network)	Transport
Secretaria-Geral do Ministério da Educação (Ministry of Education)	Education
Turismo de Portugal, IP	Other
Parque Escolar EPE	Education
Rádio e Televisão de Portugal, SA (Radio and Television of Portugal)	Other
Direcção-Geral de Informática e Apoio aos Serviços Tributários e Aduaneiros (Directorate-General for Informatics and Support Services Tax and Customs)	Economic and financial affairs
Banco de Portugal (Bank of Portugal)	Economic and financial affairs
Metropolitano de Lisboa, EPE (Lisbon Underground)	Transport
Refer Telecom Serviços de Telecomunicações, S.A. (Refer Telecom Telecommunications Services)	Other

3.22.b Public procurement of R&D

The total value of R&D public procurement contracts in Portugal was about **EUR 6.5 million**[365] in 2011, compared to **EUR 15 million** in 2010. Breakdown of R&D contract value across different areas of public sector activity for2010 and 2011 is given in _Table 3.22.b. 1_.

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[365] 25.23% is above EU threshold and the 43.48% is below. 31.28% is unknown.

Table 3.22.b. 1 – Portugal R&D -Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	1%	0%	1,1%
Education	51%	83%	-31,5%
Environment	1%	0%	1,1%
Health	28%	3%	25,4%
Other	11%	10%	1,1%
Unknown	7%	4%	2,9%
Total	100%	100%	

The contracting authorities that contributed most to the expenditure in 2011 are listed in *Table 3.22.b. 2*. Expenditure of the authorities covered 88% of the total and centred on medical equipment, pharmaceuticals and personal care products (EUR 2 million or 36% of the total for the key authorities, e.g. blood-testing reagents and imaging equipment for the use of the University Hospital of Coimbra).Additionally, the contracts supply laboratory, optical and precision equipment (EUR 2 million, e.g. spectrometers and microscopes for the University of Beira Interior) and construction work (about EUR 0.5 million). Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.22.b. 2 – Portugal R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Universidade da Beira Interior (University of Beira Interior)	Education
Hospitais da Universidade de Coimbra, EPE (University Hospitals of Coimbra, EPE)	Health
Universidade de Coimbra (University of Coimbra)	Education

Laboratório Nacional de Engenharia Civil, I.P. (National Laboratory for Civil Engineering, IP)	Other
Instituto Português do Sangue, I.P. (Portuguese Blood Institute, IP)	Health
Universidade de Évora (University of Évora)	Education
Universidade da Beira Interior (University of Beira Interior)	Education
Instituto Nacional de Saúde Dr. Ricardo Jorge, I.P. (National Institute of Health Dr. Ricardo Jorge, IP)	Health
Instituto de Biologia Molecular e Celular, IBMC (Institute of Molecular and Cell Biology, IBMC)	Unknown
Universidade do Algarve (University of Algarve)	Education

3.22.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Portugal was about **EUR 3.8 million**[366] in 2011, compared to **EUR 7.5 million** in 2010. A breakdown of the overall ICT-related R&D contract value across different areas of public sector activity is given in *Table 3.22.c. 1* for 2010 and 2011.

Table 3.22.c. 1- Portugal ICT – related R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	0%	0%	0,3%
Education	56%	82%	-25,1%
Environment	2%	0%	1,8%
Health	30%	4%	25,7%

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[366] 42.69% is above EU threshold while 32.94% is below and 24.37% is unknown.

Other	1%	9%	-8,1%
Unknown	11%	5%	5,4%
Total	100%	100%	

The contracting authorities which contributed to expenditure in 2011 are listed in *Table 3.22.c. 2*. Expenditure of these authorities cover the 93% of the total spend and centered on laboratory, optical and precision equipment (EUR 1.9 million, e.g. spectometres for the University of Beira Interior), medical equipment (EUR 1.1 million) and software package and information system. Inclusion in the list of key contracting authorities does not mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.22.c. 2 -Portugal ICT – related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Universidade da Beira Interior (University of Beira Interior)	Education
Hospitais da Universidade de Coimbra, EPE (University Hospitals of Coimbra, EPE)	Health
Universidade de Coimbra (University of Coimbra)	Education
Instituto de Biologia Molecular e Celular, IBMC (Institute of Molecular and Cell Biology, IBMC)	Unknown
Instituto Nacional de Saúde Dr. Ricardo Jorge, I.P. (National Institute of Health Dr. Ricardo Jorge, IP)	Health
Universidade do Algarve (University of Algarve)	Education
Universidade da Beira Interior (University of Beira Interior)	Education
Universidade de Évora (University of Évora)	Education

Administração da Região Hidrográfica do Alentejo, I.P. (Hydrographic Region of Alentejo)	Environment
Estrutura de Missão para os Assuntos do Mar (Task Group for Maritime Affairs)	Unknown

3.22.d Collection of procurement data by public authorities

Legal context

Public procurement in Portugal is regulated by a number of laws and decrees which inter alia transpose the relevant European legislation:

- **Standard procurement regime:**
  - The Portuguese Código Dos Contratos Públicos (Procurement Contracts Code, "the PCC"), implemented by Decreto-Lei (Decree-Law) No. 18/2008[367]. The PCC also applies to public procurement not covered by EU Directives, including concessions contracts.
- **Procurement in the water, energy, transportation and postal sectors:**
  - The PCC (see above).
- **Defence and security procurement:**
  - Decreto-Lei No. 104/2011 establishes the legal regime of public procurement in the fields of defence and security, transposing Directive 2009/81/EC of 13 July on the coordination procedures for the award of certain contracts, supply contracts and service contracts by contracting authorities or entities in the areas of defence and security.
  - Decreto-Lei No. 33/99regulates military equipment procurement contracts.

The **threshold for the direct award of public procurement contracts** in Portugal is EUR 150 000 for public works contracts, and EUR 75 000 for supply or services contracts.

Public procurement data collection process

In Portugal there are two main procurement authorities which collect data, the first of these is the National Agency for Public Procurement ("the ANCP"), at the Ministry of Finance, set up in 2007 to oversee the National Public Procurement System (SNCP). The second is the Instituto da Construção e do Imobiliário (INCI,

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[367] All legislative information was taken from www.base.gov.pt, the government portal for public contracts in Portugal, unless otherwise indicated. Accessed between Nov 2013, Jan 2014

the Ministry of Public Works), which runs the Base Information System Portal. The procurement framework is completed by "Ministerial Purchasing Units" and mandatory and voluntary contracting authorities or entities.

The ANCP is subject to the Public Enterprises, Decree-Law No 558/99 of December 17and Decree-Law No. 300/2007 of 23 August. Its creation is part of the Restructuring Program of the Central State Administration ("PRACE"), as defined by Resolution of the Council of Ministers No. 39/2006 of 21 April, and it has been awarded some of the responsibilities of the now defunct General Heritage Directorate ("DGP"). The ANCP Public Procurement Portal was released in April 2005 (originally under old management), initially for information and the English version became available in September 2006.

The ANCP principally deals with contracts in supplies and services for the state sector, while the INCI focuses on construction. The BASE Portal das Compras Públicas lists certified e-tendering platforms. Tender notices are required to be published in the publicly available Diário da República, but may be subsequently re-published on other (certified) platforms (in accordance with Article 130. of the Portuguese Public Contracts Code). The Portal provides a centralised space for public procurement information, advertises calls for tenders and other procurement procedures, publishes technical content and relevant legislation, and makes the procurement system accessible and transparent to citisens and businesses.The BASE system furthermore includes information required for the preparation of statistical reports to be sent by the INCI to the European Commission, relating to purchasing contracts, hire purchase of goods and services and to contracts for public works awarded by Contracting Authorities in the previous year.

The organisational structure and functioning of purchasing groups is governed by Decree-Law no. 200/2008 and the SNCP, which, as stated, includes the ANCP and the Ministerial Purchasing Units, and is regulated by Decree-Law No. 37/2007.

Public procurement data coverage

The Base Public Contracts Portal compiles information on both the negotiation and execution of a public contract. The information sent to the portal comes from diverse entities and is communicated in "data blocks", at various stages in the public procurement process. Models for "data blocks" are annexed to Ministerial Orders nos. 701-A/2008, 701-E/2008 and701-G/2008, all of 29 July. The set of "data blocks" referred to here contains information on the progress of the whole procurement procedure, as well as execution of the resulting contract, and must be entered into the Public Contracts Portal system within the deadlines

established in Article 3 of the aforementioned Ministerial Order no. 701-E/2008 and, in the specific case of communication of contractual amendments, in Article 315 of the PCC.

Portugal has chosen not to provide a single platform for purchasing, there are currently 7 operators that provide different Electronic Platforms to provide this service to the contracting authorities of the State; they are all certified by the Centro de Gestão da Rede Informática do Governo (CEGER: the body that supervises the electronic platforms and certifies and monitors those entities that may provide electronic public contracting platform services). Each contracting authority interacts directly with the Public Contracts Portal, particularly after finalisation of a contract. In this phase, the "data blocks" that are forwarded to the portal differ depending on the type of contract and type of procurement procedure. They provide information on the essential elements of the contracts and the way in which they are executed:

a. Technical data block: for works contracts or public works concession contracts with a base value or contract value of more than EUR 200 000, this is communicated in the notice of the launch of the procurement procedure and can be updated in the Procurement Report and the Final Works Report;

b. Procurement Report (for public works and public works concession contracts) and Contracting Report (for all other contracts): communicated after finalisation of the contract;

c. Annual Summary Report: for public works and public works concession contracts with a contract value of more than EUR 500 000 and for which execution lasts more than one year;

d. Communication of Contractual Amendments that represent an accumulated value of more than 15% of the contract value, applicable to all public contracts;

e. Final Works Report (for public works and public works concession contracts) and Contract Execution Report (for all other contracts): communicated after completion of the contract.

In simplified direct negotiation contracts or in cases of procurement procedures excluded from the scope of the legislation (to which Part II of the PCC does not apply) the obligation to communicate information applies solely to the contract execution phase, i.e. to the data blocks referred to in sub-paragraphs c), d) and e).

Subnational databases are automatically linked to the Portal Base as follows:

- Contract notices are published in Diário da República (national electronic legal gazette). The data of the ads published in Diário da República are sent by webservice by INCM (Imprensa Nacional-Casa da Moeda, The Portuguese Official Publication Office);

- Contract awards addressed in electronic platforms, certified by CEGER.

Quality requirements are described in Portaria (Ministerial Order) no.701-F/2008.In addition, there is a PCC monitoring committee that collects evidence relating to the application of the Public Contract Code (Article 2(1) of the Portaria No.701-B/2008).

All purchases under the PCC have to be recorded in the database regardless of their value.[368]

Defence procurement (publicity) rules might differ between procurement of arms, munitions and war material; and general contracts in the defence sector.

Both the ANCP and BASE Portal databases use CPV but the data does not differentiate between R&D, ICT and ICT R&D procurement. While both databases can be accessed online, the ANCP site requires a personal login (username, password and digital certificate obtained through registration). Tender notices are then available in PDF format. The public information system includes notices published by different levels of government, including ministries, agencies, municipalities, educational and scientific institutions, universities, public institutions and administrative and financial entities.

The BASE Portal database includes contracts for public authorities, which belong in the defence sector.

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[368]For more information on national threshold, please see the PCC website and http://europa.eu/youreurope/business/profiting-from-eu-market/benefiting-from-public-contracts/portugal/index_en.htm.

3.22.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

Apart from the two main procurement authorities described above there are no other relevant general public information sources in Portugal.

Other information sources: public procurement in the defence sector

According to data provided by the EDA, the R&D (including R&T) expenditure of Portugal was EUR 9,03 million in 2009 and EUR 6,98 million in 2010.Defence expenditure data is collected annually by the Directorate General for Policy and National Defence.

The Directorate-General of Armament and Defence Infrastructure (hereinafter DGAIED) states that the 2010 budget for R&D funded by the Law of Military Planning was EUR 2,02 million. This comprised contracts to national entities for both national and international projects, which are principally outsourced (with the involvement of DGAIED). Other defence projects are run by different departments at the Ministry of National Defence, however in general around half of these include outsourced services, the remainder usually involves private enterprises on a partnership basis.

ICT data within R&D expenditure is not available. Projects may have an ICT element, though without being specifically located in this field, such as training, research or consultancy. The proportion of outsourced defence expenditure spent on ICT is not available from the Services Directorate of Projects, Industry and Logistics (DSPIL) however it may be provided by the State General Staff of the Armed Forces. The Law of Military Planning may allow the provision of more data on defence R&D projects, however this would require an authorisation request, as the Portugal Procurement Code exempts public publishing of these contracts on the Portal Base. Space-related data is provided to the EDA. While Portugal has not participated in any space-related R&D so far, data on satellite communications and images is collected by the State General Staff of the Armed Forces. European Space Agency projects are managed by the Foundation on Science and Technology, and the MOD does not contribute to this.

3.22.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Portuguese public authorities are willing to cooperate on a regular basis/ However there is currently no specific classification for R&D, ICT and ICT R&D procurement. According to the Management Coordinator of the BASE Portal, this may be introduced in the future. The costs of providing such classification would depend on the exact requirements.

Currently data quality is maintained by the Tribunal de Contas (Court of Auditors), who oversee compliance with the PCC. The quality of data would depend on the use of correct semantics by contracting authorities, which could be a hurdle when providing this data to the Commission. Measures required (and costs incurred) could include: familiarisation with common semantics, designing information material, holding meetings, training employees and members, checking quality of data provided.

Data provision by the MoD

The MoD would be willing to cooperate with the Commission in the future, providing data on a regular basis. The following issues were raised in terms of providing ICT-related defence R&D procurement data on an annual basis: the centralisation of data collection, assignment of responsibility and definition of specific data required. Relevant costs and burdens include cost for: familiarisation with the information requirements, retrieving relevant information from existing data and adjusting existing data and producing new data.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D OR ICT / R&D of ICT procurement, BERD

The Ministry of Education and Science (MES) report that the **BERD** survey currently used (the IPCTN, a national survey of scientific and technological potential, under the responsibility of the DGEEC) identifies government R&D funding but does not differentiate between public contracts and concessions. Neither is ICT-related and non ICT-related expenditure is distinguished in the present survey. Entities responsible for carrying out public contracts could identify public procurement R&D expenditure.

(B) Funder-based measurement of R&D OR ICT / R&D of ICT procurement, GBAORD

Public funding of R&D based on **GBAORD**, the indicator used by the OECD-NESTI Working Party, information is not available in Portugal (including the proportion of public procurement contracts to business enterprises and of ICT-related expenditure in this area).

(C) National accounts data for the measurement of R&D OR ICT / R&D of ICT procurement

The MES was also unable to provide information on issues using the **COFOG** classification.

(D) Alternative approaches to the measurement of R&D OR ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

The MES is of the opinion that entities responsible for carrying out public contracts should be able to provide information on an appropriate alternative method to collect ICT-related public procurement statistics.

3.23 ROMANIA

This chapter presents estimates of the amount of ICT-related (3.23.a), R&D (3.23.b), and ICT-related R&D procurement (3.23.c) in Romania. The figures do not include the value of defence contracts, and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, as gathered by the private tender alert provider Tender Service.

The collection of data on procurement contracts by the national public authorities is illustrated in paragraph 3.23.d, while the availability of qualitative information that can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in paragraph 3.23.e.

Full country data set is provided in Excel format (see Annex 3).

3.23.a Public procurement of ICT

The total value of ICT public procurement contracts in Romania in 2011 was about **EUR 831.6 million**[369], which is 32% more than in 2009, **EUR 629 million**.

A breakdown of the overall ICT contract value across different areas of public sector activity is given in *Table 3.23.a. 1*[370] for 2009 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[369] 87.99% is above the threshold while 9.08% is below.
[370] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.23.a. 1- Romania ICT – Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Economic and financial affairs	2%	6%	-3,9%
Education	5%	3%	2,8%
Electricity	21%	18%	3,5%
Environment	3%	1%	2,3%
Gas, oil and heat	4%	10%	-5,8%
General public services	16%	25%	-9,0%
Health	8%	4%	3,5%
Other	29%	19%	10,0%
Postal services	0%	4%	-4,3%
Public order and safety	2%	3%	-0,4%
Transport	6%	5%	0,5%
Unknown	2%	1%	0,5%
Water	1%	0%	0,4%
Total	100%	100%	

The contracting authorities that contributed most to the expenditure in 2011 are listed in _Table 3.23.a. 2_. Expenditure of these authorities covered 50% of the total and centred on office and computing machinery (37% of the total for the key authorities), electrical machinery and apparatus (13%), radio, television and telecommunication equipment (7%, incl. transmission services for television and radio programs acquired by the Romanian Radio Broadcasting). Additionally, the authorities acquired other equipment, such as medical equipment and laboratory, optical and precision equipment. Inclusion in the list of the key authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities and entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.23.a. 2- Romania ICT 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Societatea Romana de Radiodifuziune (Romanian Radio Society)	Other
Electrica SA	Electricity
Societatea Comerciala CEZ Distributie S.A. (CEZ Distribution SA)	Electricity
Municipiul Bucureşti (Municipality of Bucharest)	General public services
Compania Nationala Imprimeria Nationala SA (National Printing Company SA)	Other
Agentia Nationala de Administrare Fiscala (National Agency for Tax Administration)	General public services
CN Aeroporturi Bucuresti SA (CN Airports Bucuresti SA)	Transport
OMV Petrom SA	Gas, oil and heat
Societatea Nationala Radiocomunicatii (National Radiocommunications Company)	Other
Compania nationala loteria româna SA (Romanian National Lottery Company)	Economic and financial affairs

3.23.b Public procurement of R&D

The total value of R&D public procurement contracts in Romania was about **EUR 70.7 million**[371] in 2011, which is more than twice the value in 2009, **EUR 31.7 million**.

Breakdown of R&D procurement contract valuea cross different areas of public sector activity is given in *Table 3.23.b. 1* for 2008 and 2011.

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[371] 69.1% is above EU threshold while 25.01% is below. 5.98% is unknown.

Table 3.23.b. 1- Romania R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	8%	27%	-19,3%
Electricity	0%	1%	-0,3%
Environment	0%	1%	-0,6%
General public services	0%	0%	-0,2%
Health	12%	15%	-2,8%
Other	74%	54%	20,5%
Unknown	5%	2%	2,6%
Total	100%	100%	

The contracting authorities that contributed most to the expenditure in 2011 are listed in the table below. Expenditure of these authorities covered 58% of the total and centred on, among others, industrial machinery (EUR 15 million, e.g. refrigerating equipment and instrumentation purchased by the National R&D Institute for Cryogenics and Isotopic Technologies), laboratory, optical and precision equipment (EUR 10.3 million, e.g. airborne laboratory for atmospheric research acquired by the National Institute of Aerospace R&D, Institutul National de Cercetare-Dezvoltare Aerospatiala "Elie Carafoli"), construction works (EUR 8 million), and electrical machinery, apparatus, equipment and consumables (EUR 5.8 million). Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.23.b. 2- Romania R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Institutul national de cercetare-dezvoltare pentru tehnologii criogenice si izotopice (National Institute of Research-Development for Cryogenic and Isotopic Technologies)	Other
Spitalul Clinic Colentina (Clinical Hospital)	Health

Microelectronica S.A. (Microelectronics SA)	Other
Institutul National de Cercetare-Dezvoltare Aerospatiala Elie Carafoli (National Institute of Aerospace Research and Development Elie Carafoli)	Other
Institutul National de Cercetare-Dezvoltare pentru Fizica Laserilor, Plasmei si Radiatiei (National Research and Development Institute for Laser, Plasma and Radiation)	Other
Institutul National de Cercetare Dezvoltare pentru Fizica si Inginerie Nucleara Horia Hulubei (National Institute of Physics and Nuclear Engineering Horia Hulubei)	Other
Universitatea de Stiinte Agricole si Medicina Veterinara a Banatului Timisoara (University of Agricultural Sciences and Veterinary Medicine of Banat Timisoara)	Education
Institutul national de cercetare-dezvoltare pentru microbiologie si imunologie Cantacuzino (National Institute of Research-Development for Microbiology and Immunology Cantacuzino)	Health
Institutul de Biologie si Patologie Celulara Nicolae Simionescu (Institute of Cellular Biology and Pathology Nicolae Simionescu)	Other
Institutul National de Cercetare-Dezvoltare Pentru Tehnologii Criogenice si Izotopice, ICSI Rm. Valcea (National Research and Development Institute for Cryogenics and Isotopic Technologies, ICSI Rm)	Other

3.23.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Romania was about **EUR 36 million**[372] in 2011, compared to **EUR 13.2 million** in 2009. A breakdown of the overall ICT-related R&D procurement contract value across different areas of public sector activity is given in *Table 3.23.c. 1*for 2009 and 2011.

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[372] 74.22% of the amount is above EU threshold while 16.22% is below and 9.56% is unknown.

Table 3.23.c. 1- Romania ICT −related R&D − Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Education	14%	41%	-26,8%
Gas, oil and heat	0%	0%	0,1%
Health	1%	3%	-2,4%
Other	76%	52%	24,1%
Unknown	9%	5%	4,9%
Total	100%	100%	

The contracting authorities which contributed most to expenditure in 2011 are listed in *Table 3.23.c. 2*. Expenditure of these authorities covered 62% of the total and centred on laboratory, optical and precision equipment (EUR 9 million, e.g. high power laser system purchased by the National Research and Development Institute for Laser, Plasma and Radiation), industrial machinery, apparatus, equipment (EUR 4.3 million, e.g. machine tools and turbine equipment for the National Research Institute for Metals Ferrous And Rare), electrical machinery apparatus (EUR 4.2 million, e.g. Microelectronics SA) and transport equipment (EUR 4.2 million).

Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is in general a major contributor to the total value of ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.23.c. 2- Romania ICT −related R&D 2011 − Key contracting authorities

Contracting authority / entity	Public sector area
Microelectronica S.A. (Microelectronics SA)	Other
Institutul National de Cercetare-Dezvoltare Aerospatiala Elie Carafoli (National Institute of Aerospace Research and Development Elie Carafoli)	Other
Institutul National de Cercetare-Dezvoltare pentru Fizica Laserilor, Plasmei si Radiatiei (National Research and Development Institute for Laser, Plasma and	Other

Radiation)

Institutul de Biologie si Patologie Celulara Nicolae Simionescu (Institute of Cellular Biology and Pathology Nicolae Simionescu)	Other
Institutul National de Cercetare Dezvoltare pentru Fizica si Inginerie Nucleara Horia Hulubei (National Institute of Physics and Nuclear Engineering Horia Hulubei)	Other
UNIVERSITATEA TRANSILVANIA BRASOV (Transylvania University, Brasov)	Education
Institutul National de Cercetare Dezvoltare pentru Metale Neferoase Si Rare-IMNR (National Research Institute for Metals Ferrous And Rare-IMNR)	Unknown
Institutul National de Cercetare Dezvoltare pentru Tehnologii Izotopice si Moleculare (National Institute for Research and Development of Isotopic and Molecular Technologies)	Other
Universitatea de Medicina si Farmacie Iuliu Hatieganu (University of Medicine and Pharmacy Iuliu Hatieganu)	Education
Institutul National de Cercetare Dezvoltare in Informatica, ICI (National Institute for Research and Development in Informatics, ICI)	Other

3.23.d Collection of procurement data by public authorities

Legal context

Public procurement in Romania is regulated by several laws and decrees, which inter alia implement the European public procurement Directives[373]:

- **Standard procurement regime:**
  - o Legislative Decree No. 34/2006 (entered into force 23rd July 2006, with the latest amendments introduced in December 2011) ("the Procurement Decree") centralises and regulates the administration of public procurement in Romania.

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[373]For more details on the legal framework in Romania see the list of legislative acts regulating public procurement (in Romanian) available at ANRMAP website http://www.anrmap.ro/legislatie?tip_legislatie=1.

- o Government Decision No. 925/2006 (with the latest amendments introduced in October 2011) (the Procurement Decision) further substantiates the application of the Procurement Decree.
- o Government Decision no. 1660/2006 for approving the application norms of the provisions referring to the award of procurement contracts by electronic means from the Government's Emergency Ordinance no. 34/2006.
- o Government Decision no. 71/2007 for approving the application norms of the provisions referring to the award of the public works concession contracts and of services concession contracts from the Government's Emergency Ordinance no. 34/2006.

- **Procurement in the water, energy, transportation and postal sectors:**
  - o The Procurement Decree (see above).

- **Defence and security procurement**
  - o Legislative Decree No. 114/2011 ("the Defence Decree"), entered into force on 01.10.2012.

The standard **national threshold for the publication of public procurement** in Romania is EUR 15 000.

Public procurement data collection process

In Romania, according to Article 48 of the Procurement Decree, all contracting authorities are obliged to publish any public procurement in the SEAP database (*sistemul electronic de achiziţii publice*) (electronic system for public procurement: www.e-licitatie.ro), which is operated by the National Centre for Information Society Management (*Centrul Național pentru Managementul Societății Informaționale*) (CNMSI). CNMSI is responsible for the technical maintenance and operation of the SEAP. The SEAP system contains 12,951 contracting authorities, 38,365 participants and around 3 million public procurement announcements, with the total value of the awarded contracts reaching RON 45,2 billion (EUR 10 million).

Prior to their publication in SEAP, all public procurement announcements must receive approval from the National Authority for Regulation and Monitoring of Public Procurement (*Autoritatea Naţională pentru Reglementarea şi Monitorizarea Achiziţiilor Publice*) (ANRMAP). ANRMAP has the main responsibility for collecting the information and verifies that all the announcements contain the requisite information. If the value of the public procurement reaches the EU threshold, the CNMSI has an obligation, following an approval by ANRMAP, to forward the announcement for publication in the OJ. Following publication in SEAP the

contracting authority can also choose to publish in the Official Gazette of Romania (*Monitorul Oficial*). Once the public procurement procedure is complete, the contracting authority has to announce the results in SEAP, and, where applicable, in the OJ and the Official Gazette.

In order to ensure the quality of the data gathered, ANRMAP verifies the information inserted by each contracting authority in the SEAP. If the information satisfies all requisite formal criteria ANRMAP approves its publication in the SEAP. If there are formal defects, or missing or incorrect data, ANRMAP will request the contracting authority to make the necessary amendments and re-submit the data to the system.

The rules on transparency regarding public procurement have been in force since 1 January 2007, the year Romania became a Member State of the European Union. From 1 January 2008 the publication of public procurement announcements in the Official Gazette became optional.

The SEAP system is freely searchable. Search results are instantly displayed on the web page rather than being exported into documents of various formats. It should be noted that for each public procurement procedure the SEAP system provides access to the tender documentation, such as the technical assignment, the selection criteria and clarifications issued by the contracting authority.

Coverage of the public procurement database

The public procurement data available in the SEAP system covers public procurement at all levels, including national, regional and local levels.

The data published in the SEAP system covers all public procurement above the EU thresholds from 2007 onwards. Where national thresholds are met but the public procurement is below the EU threshold, publication is mandatory. If the national threshold is not met, data may still be published in the SEAP on request from the contracting authority.

Certain contracts are excluded under the EU Directives, following implementation under national law. The individual contracting authorities, however, may publish such public procurement notices in the SEAP.

3.23.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

Another source of information for public expenditure on R&D and ICT is the National Institute of Statistics (*Institutul National de Statistica*, "INS"), which publishes statistical data concerning expenditure (both public and private) in various areas. For example, among the statistical tables published by the INS are: (13.10) current expenditure from research-development activity, by sector of performance and type of research, (13.12) total expenditure from research-development activity, by sector of performance and financing source, (13.26) technological innovation expenditure. Although these statistics cover a longer time frame than the SEAP system (1995-2010), it does not provide clear links to ICT R&D public procurement and does not provide detailed differentiation of the industrial sectors concerning public procurement.

The study team has approached several private data providers (tender alert services) in Romania with a detailed inquiry concerning the availability of public procurement data and the possibility of acquiring these for the purposes of the present study and price. The study team reached an agreement with private provider Tender Service, which provided the study team with the required data.

Other information sources: public procurement in the defence sector

According to data provided by the EDA, the "R&D (including R&T) Expenditure" of Romania was EUR 2,35 million in 2009 and EUR 2,12 million in 2010. Romania has not reported any cost of "Outsourced Defence Expenditure" in 2009 and 2010. Our contact person at the MoD confirmed that the Romanian MoD did not have 'outsourced' defence expenditure during that period.

Romanian defence expenditure is calculated and classified on the basis of existing accounting information in accordance with methodology provided by EDA. The MoD's response to the EDA Defence Data Gathering Questionnaire takes into account only the MoD's expenditure.

There is no space-related expenditure in Romania.

3.23.f Future data provision to the European Commission

Data provision by the public procurement authorities

Our contact person at AMRAP has advised us that, if asked to provide the data and ensure its quality, then the costs would depend on the level of quality control required. There is a quality control mechanism already in place at the ANRMAP, which provides for preliminary screening of information inserted into the SEAP by the contracting authorities. Should this be sufficient then there would be little extra cost involved. If the supply of data to the European Commission required any additional quality checks to then the ANRMAP will be able to provide cost estimates.

Data provision by the MoD

Our contact person at the MoD has advised the study team that the main requirement to collect and provide the relevant information in the future, on a regular / annual basis would be the adoption of common semantics by the relevant stakeholders. They were unable to estimate the possible cost of such future data provision.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D OR ICT / R&D of ICT procurement, BERD

The representatives of the National Institute of Statistics in Romania("INS") were unable to propose a concrete performer-based methodology. They have outlined certain limitations of the performer-based assessment, which are described under question 3 concerning national accounts.

(B) Funder-based measurement of R&D OR ICT / R&D of ICT procurement, GBAORD

In collecting the data, INS is using the funder-based approach for calculating Government Budget Appropriations or Outlays for R&D (GBAORD), which are generally derived from national budgets, in particular by identifying all budget items involving R&D and measuring or estimating their R&D content in terms of funding. However, for the GBAORD indicator, INS does not have a methodology in place to identify ICT-related R&D public procurement.

(C) National accounts data for the measurement of R&D OR ICT / R&D of ICT procurement

With regard to the National Accounts, INS has identified the following limitations:

(1) ESA95 (which is in force until 2014) does not consider R&D as investment, but intermediate consumption. As a consequence, in the Romanian national accounts, detailed R&D expenditure are not explicitly separated from other intermediate consumption items, so no data have been published for ICT-related R&D to date.

(2) The National Accounts Division started to test the compilation of "satellite accounts for R&D" according to recommendations of the Eurostat Task Force on R&D, but there is insufficient information available at national level to obtain reliable estimates.

(a) Statistical information comes only from the performer side of R&D, not from the funder side.

(b) Data from COFOG at level 2 (classification required based on national accounts) for general government is not available from the Ministry of Finances.

(D) Alternative approaches to the measurement of R&D OR ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

The INS submitted that they have very limited experience of establishing methodologies to quantify public procurement of ICT R&D. In their view it is a difficult and challenging issue.

In the past the INS has undertaken several initiatives of its own to differentiate ICT and R&D related public procurement. One of these initiatives involved a questionnaire regarding the acquisition of ICT for R&D in a combined R&D and Innovation survey carried out in 2012. Another initiative in 2010 consisted of the identification of R&D public procurement, distributing a questionnaire dedicated to innovation in the public sector. The INS asked the respondents to answer a question regarding the use of procurement practices to promote innovation in their organizations. The study team has inquired whether INS could provide the results of the above mentioned studies which can be used for further assessment or verification of the data collected from other sources but the INS has not forwarded this data.

The representatives of the NSI concluded that due to their limited experience in quantifying the ICT and R&D public procurement they prefer not to participate in the study at this point.

3.24 SLOVAKIA

This chapter presents estimates of the amount of ICT-related (3.24.a), R&D (3.24.b), and ICT-related R&D procurement (3.24.c) in the Slovak Republic. The figures do not include the value of defence contracts, and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, as gathered by the private tender alert provider Tender Service.

The collection of data on procurement contracts by the national public authorities is illustrated in paragraph 3.24.d, while the availability of qualitative information that can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in paragraph 3.24.e.

Full country data set is provided in Excel format (see Annex 3).

3.24.a Public procurement of ICT

The total value of ICT public procurement contracts in the Slovak Republic in 2011 was about **EUR 331 million**[374], compared to **EUR 2 billion** in 2009.

A breakdown of the overall ICT contract value across different areas of public sector activity is given in *Table 3.24.a.1*[375]for 2009 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[374] 94.49% of the total amount is above EU threshold while 3.51% is below.
[375] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contractingauthorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.24.a.1- Slovak Republic ICT – Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Economic and financial affairs	1%	0%	0,5%
Education	24%	5%	19,2%
Electricity	0%	1%	-0,7%
Environment	1%	0%	0,8%
Gas, oil and heat	4%	0%	4,0%
General public services	10%	7%	3,5%
Health	14%	2%	12,4%
Other	12%	46%	-34,0%
Postal services	1%	0%	0,9%
Public order and safety	25%	2%	22,8%
Transport	3%	36%	-32,8%
Unknown	3%	0%	3,4%
Total	100%	100%	

The contracting authorities that contributed most to expenditure in 2011 are listed in *Table 3.24.a.2*. Expenditure of these authorities covered 56% of the total and centred on information and technology services (43% of the total for the key authorities, e.g. Slovenský plynárenský priemysel), construction work (13%), medical equipment (6%, e.g. University Hospital F.D. Roosevelt). Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.24.a.2- Slovak Republic ICT 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Ministerstvo vnútra Slovenskej republiky (Ministry of Interior)	Public order and safety
Fakultná nemocnica s poliklinikou F. D. Roosevelta Banská Bystrica (University Hospital F. D. Roosevelt Banska Bystrica)	Health
Výpočtové stredisko SAV (Computing Centre of SAS)	Education
Slovenský plynárenský priemysel, a.s. (Slovak Gas Industry)	Gas, oil and heat
Žilinská univerzita v Žiline (University of Žilina)	Education
Východoslovenský ústav srdcových a cievnych chorôb, a.s. (East Slovak Institute of Cardiovascular Disease)	Health
Univerzita Komenského v Bratislave (Comenius University in Bratislava)	Education
Slovenská technická univerzita v Bratislave (Slovak University of Technology)	Education
Colné riaditeľstvo SR (Customs Directorate)	General public services
Metodicko-pedagogické centrum (Methodological and Pedagogical Centre)	Education

3.24.b Public procurement of R&D

The total value of R&D public procurement contracts in the Slovak Republic was about **EUR 31.3 million**[376] in 2011, compared to **EUR 19.6 million** in 2009.

Breakdown of R&D contract value across different areas of public sector activity is given in *Table 3.24.b. 1* for 2009 and 2011.

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[376] 65.94% is above EU threshold while 17.87% is below and 16.19% is unknown.

Table 3.24.b. 1- Slovak Republic R&D – , Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Economic and financial affairs	4%	0%	4,4%
Education	32%	87%	-55,9%
Health	13%	2%	10,6%
Other	50%	10%	40,1%
Unknown	1%	1%	0,9%
Total	100%	100%	

The contracting authorities that contributed most to expenditure in 2011 are listed in *Table 3.24.b. 2*. Expenditure of these authorities covered 67% of the total and centred on laboratory, optical and precision equipment (EUR 9.4 million, e.g. Institute of Neurobiology,), research and development services (EUR 5.4 million, such as the development of a camera vision system with high resolution for Simap, s.r.o. or the development of a computer-assisted mechanical ventilation for Chirana Medical, a.s.), and office and computing machinery, equipment and supplies (EUR 2.3 million). Contracts also provided for software services and information system. Inclusion in the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.24.b. 2- Slovak Republic R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Neurobiologický ústav SAV (Institute of Neurobiology)	Other
Univerzita Komenského v Bratislave (Comenius University in Bratislava)	Education
Výskumný ústav potravinársky (Food Research Institute)	Health
Slovenská technická univerzita v Bratislave, Rektorát (Slovak Technical University in Bratislava, Faculty)	Education
Simap, s.r.o. (SIMAP Ltd.)	Other

Chirana Medical, a.s. (Chirana Medical, Inc.)	Health
Ekonomická univerzita v Bratislave (University of Economics in Bratislava)	Education
Pyrobatys SK, s.r.o. (Pyrobatys SK, sro)	Economic and financial affairs
Centrum výskumu živočíšnej výroby Nitra (Animal Production Research Centre Nitra)	Other
Žilinská univerzita v Žiline (University of Žilina)	Education

3.24.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in the Slovak Republic was about **EUR 21.6 million**[377] in 2011, compared to **EUR 18 million** in 2009[378]. A breakdown of the overall ICT-related R&D contract valueacross different areas of public sector activity is given in *Table 3.24.c. 1* for 2009 and 2011.

Table 3.24.c. 1- Slovak Republic ICT - related R&D – Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Education	34%	92%	-58,6%
Health	19%	3%	16,2%
Other	46%	4%	41,7%
Unknown	1%	1%	0,6%
Total	100%	100%	

The contracting authorities that contributed most to expenditure in 2011 are listed in *Table 3.24.c. 2*. Expenditure of these authorities covered 71% of the total and centred on laboratory, optical and precision equipment (EUR 7.5 million,

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[377] 61.62% of the amount is above EU threshold while 19.65% is below and 18.73% is unknown.
[378] The amount of ICT related R&D procurement is almost the 70% of the total amount of R&D procurement. This is due to the fact that, according to the classifications of Frascati Manual, in Slovakia, there was a large portion of R&D records belonging to the category ICT and ICT+.

e.g. equipment for the molecular biology research purchased by the Comenius University), research and development services (EUR 4 million, e.g. Simap, s.r.o.) and office and computing equipment (EUR 2.4 million, e.g. University of Economics in Bratislava). Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is in general a major contributor to the total value of ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.24.c. 2- Slovak Republic ICT - related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Univerzita Komenského v Bratislave (Comenius University in Bratislava)	Education
Výskumný ústav potravinársky (Food Research Institute)	Health
Simap, s.r.o. (SIMAP Ltd.)	Other
Chirana Medical, a.s. (Chirana Medical, Inc.)	Health
Ekonomická univerzita v Bratislave (University of Economics in Bratislava)	Education
Centrum výskumu živočíšnej výroby Nitra (Animal Production Research Centre Nitra)	Other
Univerzita Pavla Jozefa Šafárika v Košiciach Pavol Jozef Safarik University in Kosice)	Education
Ekonomická univerzita v Bratislave (University of Economics in Bratislava)	Education
Centrum výskumu živočíšnej výroby Nitra (Animal Production Research Centre Nitra)	Other
Ústav experimentálnej fyziky SAV (Institute of Experimental Physics)	Other

3.24.d Collection of procurement data by public authorities

Legal context

Public procurement in Slovakia is regulated by a number of laws and decrees, part of which transpose the relevant European legislation[379]:

- **Standard procurement regime:**
  - Act No. 25/2006 Coll. of Laws on Public procurement and on the Amendment of Certain Acts.[380]

- **Procurement in the water, energy, transportation and postal sectors:**
  - Act No. 25/2006 Coll. of Laws on Public procurement and on the Amendment of Certain Acts.

- **Defence and security procurement**
  - Act No. 25/2006 Coll. of Laws on Public procurement and on the Amendment of Certain Acts (hereinafter referred to as "the Act").

The standard **national threshold for the publication of public procurement** in Slovakia is:

- EUR 20 000 for building / works contracts;
- EUR 10 000 for supply /service contracts.

Public procurement data collection process

The Office for Public Procurement is responsible for collecting information regarding public procurement. Since April 1st 2011, amendment No. 58/2011 to the Act has meant that all public procurement notices are sent to the Office for Public Procurement to be published[381]. Public procurement notices are also displayed on the web page. Contracting authorities may also publish calls for the submission of tenders on their web sites.

According to Article 9(7) of the Act, introduced by amendment No. 58/2011, contracting authorities are obliged to send copies of tender documentation (copies of all tenders and minutes of the tender evaluation, the jury session, the opening of tenders and a copy of the contract etc.) without delay as soon as a

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[379]For more details on the legal framework in Slovakia see: https://www.uvo.gov.sk/legislativa
[380]For the English version, see: https://www.uvo.gov.sk/en/web/opp/act-on-public-procurement (please note that the latest amendment was introduced in February 2012 but is not included in the English wording).
[381] The data is available at http://www.e-vestnik.sk/EVestnik/Aktualne.

public contract has been concluded. These are then sent to the internal Information System of the Office of Public Procurement, which ensures their publication and allows for further statistical evaluation. Since January 1st 2011, amendment 546/2010 to the Civil Code, the Commercial Code and the Act on access to information has meant all public contracts from that date enter into force only after their official publication on the web page of the contracting authority itself or the Official Gazette.

When sending a notice voluntarily (if the contracting authority wants the notice to be published by the Office) this data is also entered into the database. This data is not covered in the statistical evaluation.

This data is accessible to the public on the Central register of public procurement documents website[382]. The database, at www.e-vestnik.sk, is freely searchable and updated daily.

In terms of quality control, there is no special procedure. The revision of some data entries is automatic. In other words, the users are continually notified of errors while the Information System is processing the data. After data is imported into the Information System of the Office of Public Procurement, the employees only check entries as needed for statistical analysis.

Coverage of the public procurement database

The e-vestnik.sk database covers national, regional and local contracting authorities.

Article 1 of the Act specifies relevant exclusions from public procurement rules in Slovakia[383]. According to Article 1 (2) c) and d) the Act does not apply to contracts awarded in the defence sector where the object relates to the production of guns, ammunition and combat material or to trade in them. It also does not apply to contracts governed by rules based on an international agreement relating to the deployment of troops, which concerns activities in the territory of a Member State of the European Union or a third country (Article 1(2) e of the Act).

As noted above, the Office for Public Procurement does not administer awards of contracts of a small value (EUR 20 000 for building works contracts and EUR 10 000 for supply or service contracts). These procurement procedures do not have to be published. The contracting authority may voluntarily send a notice of such contracts to the Office for Public Procurement and these will then be published on the Information System, but will not be used for statistical analysis.

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[382] http://crdvo.uvo.gov.sk/
[383] https://www.uvo.gov.sk/en/web/opp/act-on-public-procurement

3.24.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

There are no other public sources for public procurement data in Slovakia other than the national central register.

The study team has concluded a cooperation agreement with the *Tender Service Group*, a pan-European private tender alert provider, which inter alia holds public procurement data for Slovakia. Tender Service has provided the study team with relevant public procurement data for Slovakia in the course of the first quarter of 2013. The data has been analysed as described in the methodological section using both CPV-based and keyword-based searches.

Other information sources: public procurement in the defence sector

The MoD of the Slovak Republic provides data on defence expenditure to the EDA, in the form of a questionnaire, on a regular basis. The data are, in turn, assimilated on the basis of regular entries by several units within the MoD and the General Staff of the Armed Forces of the Slovak Republic[384], responsible for parts of the relevant defence information, as set out in the questionnaire.

According to data provided by the EDA, the R&D (including R&T) Expenditure of Slovakia was EUR 5,25 million in 2009 and EUR 100 000 in 2010. The cost of Outsourced Defence Expenditure was EUR 119 million in 2009 and EUR 0 in 2010.

Our contact at the Slovak MoD has confirmed that, since 2006, an estimated 8,3 % of the approved budget was set aside for R&D in the defence sector. For outsourced R&D defence expenditure in ICT, our contact mentioned that EUR 47 955 was spent on defence R&D with a focus on ICT.[385] In 2012 this amount was estimated at EUR 52 150.

The MoD estimates that total outsourced defence expenditure on ICT was 20-33 % (depending on the time period) of the total defence sector expenditure.

The data provided to EDA doesn't include space-related expenditure.

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[384] In Slovak: Generálny štáb Ozbrojených síl Slovenskej republiky. This is an administrative entity of the Slovak MOD, responsible for the Armed forces of the Slovak Republic. The chief of Staff is appointed by the President of the Slovak Republic and inferior in authority to the MOD.
[385] This was a project contracted to the Academy of Armed Forces in Liptovský Mikuláš.

3.24.f Future data provision to the European Commission

Data provision by the public procurement authorities

The Office for Public Procurement believes that there may be some difficulties in providing the required procurement data to the European Commission on an annual basis. In particular, they would not be able to fund the necessary increase in staff.

Data provision by the MoD

Future data provision as described may involve complications for the MoD. For example, there may be inconsistencies in the data provided by various units, due to the fact that each unit is using its own mechanism to collect and summarise the data. For instance, when collecting data from the SAP system, it is necessary to supplement the R&D defence expenditure data for institutional support with budget adjustment dsts, as funds were transferred to the budget measure.

However providing defence data for the EDA doesn't cause substantial complications as, together with the questionnaire, Member States have also received guidelines, including common definitions of key terms, for data processing. It is difficult for the MoD to foresee what the additional costs would be.

Data provision by the national statistical institute

(A) Performer-based measurement of R&D OR ICT / R&D of ICT procurement, BERD

Data gathering concerning R&D by the Statistical office is based on the so-called VV 6-01 module. This module is based on performer based R&D indicators. Since 2006 data gathering involves R&D expenditure indicators in selected sectors of R&D and also involves ICT. The VV 6-01 module can be found on the website of the Statistical Office of the Slovak Republic[386] and below:

33.	**R&D on expenditure R&D in selected areas**	I. r.	total	from state budget
Module	(EURO)			
		a	1	2
ICT		1		

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[386] http://portal.statistics.sk/files/Sekcie/sek_200/Vzory_formularov/rok_2011/f_vvp601_2011.pdf

only software	2		
Biotechnology	3		
New materials	4		
Nanotechnology and nanomaterials	5		
Checksum (r. 1 to 5)	99		

Data gathering in Slovakia has been based on this model since 2006. As Eurostat is considering evaluation of the best methods of gathering ICT-related R&D data, the Statistical Office presented this method last year (2012) at a meeting with Eurostat[387], together with the Statistical Office of the Czech Republic, which is using a similar module for data gathering.

(B) Funder-based measurement of R&D OR ICT / R&D of ICT procurement, GBAORD

The GBAORD statistics compiled by the Ministry of Education, Science, Research and Sport of the Slovak Republic is based on funder-based R&D indicators. One problem with gathering ICT-related R&D from the GBAORD statistics is the GBAORD data structure used by socio-economic objectives at NABS chapters, from which it is not possible to identify ICT-related R&D expenditure. Extension of the GBAORD structure would mean an additional burden for the Ministry of Education and other funding bodies (central authorities).

(C) National accounts data for the measurement of R&D OR ICT / R&D of ICT procurement

The Statistical office of the Slovak Republic doesn´t provide Eurostat with information regarding public procurement data, so they cannot advice on the feasibility of using national account aggregates to extract ICT-related R&D procurement statistics.

(D) Alternative approaches to the measurement of R&D OR ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

The data gathering methodology described in **(A)** concerning in ICT related R&D expenditure has proven to work well in Slovakia. Consequently, the Statistical Office considers this method to be the most suitable. There is no need for further institutional action to employ this method. However if there is interest in such indicators as procurement, these must be specified;BERD and GBAORD contain just R&D indicators.

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[387]The study team has requested the materials regarding this presentation, but has not (yet) received them.

3.25 SLOVENIA

The section presents estimates of the amount of ICT-related (sub-section 3.25.a), R&D (sub-section 3.25.b), and ICT-related R&D procurement (sub-section 3.25.c) in Slovenia. The figures do not include the value of defence contracts, and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

The collection of data on procurement contracts by the national public authorities is illustrated in sub-section 3.25.d, while the availability of qualitative information, which can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in sub-section 3.25.e.

Full country data set is provided in Excel format (see Annex 3).

3.25.a Public procurement of ICT

The total value of ICT public procurement contracts in Slovenia in 2011was about **EUR 335.6 million**[388], an8% increase compared to 2010's **EUR 309.1 million**.

A breakdown of the overall ICT contract value across different areas of public sector activity is given in Table 3.25.a.1[389] for 2010 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[388] 76.07% is above the threshold and 15.33% is below.
[389] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contractingauthorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.25.a.1- Slovenia ICT – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Economic and financial affairs	2%	5%	-2,8%
Education	11%	5%	5,7%
Electricity	7%	3%	4,1%
Environment	0%	0%	0,3%
Gas, oil and heat	0%	1%	-1,0%
General public services	48%	49%	-1,2%
Health	16%	12%	4,4%
Other	10%	10%	-0,4%
Postal services	1%	2%	-0,3%
Public order and safety	0%	1%	-0,9%
Transport	5%	3%	1,6%
Unknown	1%	10%	-9,4%
Water	0%	0%	0,0%
Total	100%	100%	

The contracting authorities that contributed most to expenditure in 2011 are listed in *Table 3.25.a. 2*. Expenditure of these authorities covered 51% of the total and centred on radio, television, telecommunication, equipment (36% of the total for the key authorities) and postal and telecommunications services (21%,e.g. telecommunication and computer network services for the AJN). The authorities acquired a number of other services, such as IT services (14%)and repair and maintenance services. Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.25.a. 2- Slovenia ICT 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
AJN	General public services
Občina Kočevje (The municipality Kočevje)	General public services
Zavod za zdravstveno zavarovanje Slovenije (Health Insurance Institute of Slovenia)	Health
Občina Moravske Toplice (Municipality Moravske Toplice)	General public services
Elektro Slovenija d.o.o. (Electric Slovenia)	Electricity
ARNES	Education
Občina Brežice (Municipality Breľice)	General public services
DARS d.d.	Transport
Občina Kamnik (Municipality of Kamnik)	General public services
Zavod za zaposlovanje (The Employment)	General public services

3.25.b Public procurement of R&D

The total value of R&D public procurement contracts in Slovenia was about **EUR 8 million**[390] in 2011, compared to **EUR 2.9 million** in 2010.

Breakdown of R&D contract value across different areas of public sector activity is given in *Table 3.25.b. 1* for 2010 and 2011.

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[390] 66.57% is above Eu threshold while 29.51% is below and 3.93% is unknown.

Table 3.25.b. 1- Slovenia R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	2%	10%	-7,3%
Environment	0%	4%	-3,7%
Health	1%	0%	0,8%
Other	97%	85%	11,5%
Transport	0%	1%	-1,3%
Total	100%	100%	

The contracting authorities that contributed to expenditure in 2011 are listed in *Table 3.25.b. 2.* Expenditure of the authorities covered 88% of the total and centered on laboratory, optical and precision equipment (EUR 4.8 million, e.g. a microscope purchased by the Nanocenter of Ljubljana and a high brightness ion source by the J. S. Institute), construction works (EUR 1.9 million, e.g. works at the Preglov Research Centre of the Institute of Chemistry), radio, television, telecommunication equipment (EUR 0.4 million, such as an antenna system for the satellite earth stations of SPACE-SI, Vesolje-SI). Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.25.b. 2- Slovenia R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Center odličnosti nanoznanosti in nanotehnologije, Nanocenter, Ljubljana (Center of excellence in nanosciences and nanotechnologies, Nanocenter, Ljubljana)	Other
Kemijski Institut (Institute of Chemistry)	Other
Centre of Excellence for Integrated Approaches in Chemistry and Biology of Proteins	Other
Jožef Stefan Institute (IJ. S. Institute))	Other

Vesolje-SI (Space_SI)	Other
Univerza v Mariboru (University of Maribor)	Education
Luka Koper d.d. (Port of Koper)	Other
Nacionalni inštitut za javno zdravja NIJZ (National Institute of Public Health)	Health
ARRS (Slovenian Research Agency)	Other

3.25.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Slovenia was about **EUR 5.2 million**[391] in 2011[392], compared to **EUR 2.8 million** in 2010.

Breakdown of contract value of ICT-related R&D procurement contracts across different areas of public sector activity is given in *Table 3.25.c. 1* for 2010 and 2011.

Table 3.25.c. 1- Slovenia ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2010	Δ
Education	4%	10%	-6,3%
Environment	0%	3%	-2,6%
Health	1%	0%	0,7%
Other	96%	87%	8,2%
Total	100%	100%	

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[391] The amount of ICT related R&D procurement is 65% of the total amount of R&D procurement. This is due to the fact that, according to the classifications of Frascati Manual, in Slovenia, there was a large portion of R&D records belonging to the category ICT and ICT+.
[392] Of which 86.43% is above EU threshold while 7.53% is below and 6.03% is unknown.

The contracting authorities that contributed to expenditure in 2011 are listed in *Table 3.25.c. 2*. Expenditure of these authorities cover the 95% of the total spend and centered on laboratory, optical and precision equipment (EUR 4 million, e.g. Pulsed Laser Deposition equipment purchased by the Centre of Excellence for Nanoscience and Nanotechnology). Contracts provided for various other equipment, such as radio television and telecommunication equipment (EUR 0.3 million) and IT services. Inclusion in the list does not necessarily mean the institution or organisation is in general a major contributor to the total value of ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.25.c. 2- Slovenia ICT –related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Centre of Excellence for Integrated Approaches in Chemistry and Biology of Proteins	Other
Center odličnosti nanoznanosti in nanotehnologije, Nanocenter, Ljubljana (Center of excellence in nanosciences and nanotechnologies, Nanocenter, Ljubljana)	Other
Vesolje-SI (Space_SI)	Other
Jožef Stefan Institute (JSI)	Other
Univerza v Mariboru (University of Maribor)	Education
Luka Koper d.d. (Port of Koper)	Other
IVZ	Health

3.25.d Collection of procurement data by public authorities

Legal context

Public procurement in Slovenia is regulated by a number of laws and decrees that transpose the relevant European legislation[393]:

o **Standard procurement regime:**

  o Public Procurement Act (Official Gazette no. 128/06, 16/08, 19/10, 18/11);

  o Decree on lists of contracting authorities, works, services, lists of products, information to be included in notices, definition of technical specifications and requirements relating to devices for the electronic receipt of tenders (Official Gazette no. 18/07);

  o Legal Protection in Public Procurement Procedures Act (Official Gazette no. 43/11 and 60/11-ZTP-D)[394].

o **Procurement in the water, energy, transportation and postal sectors:**

  o Public Procurement in the Water, Energy, Transport and Postal Services Act (Official Gazette no. 128/06, 16/08, 19/10, 43/11);

  o Decree on lists of contracting authorities, community legislation, works and services, information to be included in notices, definition of technical specifications and requirements relating to devices for the electronic receipt of tenders (Official Gazette no. 18/07);

  o Legal Protection in Public Procurement Procedures Act (Official Gazette no. 43/11 and 60/11-ZTP-D)[395].

o **Defence and security procurement**

  o Decree on Defence and Confidential Procurement (Official Gazette n. 80/07);

  o Directive 2009/81/EC will be transposed into Slovenian law by the Public Procurement for Defence and Security Act (EVA 2010-16110-0024) and partially by the Legal Protection in Public Procurement Procedures Act (Official Gazette no. 43/11 and 60/11-ZTP-D), the Act

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[393] For more details and guidance on the legal framework for public procurement in Slovenia see: http://www.djn.mf.gov.si/sistem-javnega-narocanja

[394] This act abolishes and replaces the *Auditing of Public Procurement Procedures Act (Official Gazette no. 78/99, 90/99, 110/02, 2/04-ZPNNVSM, 42/04, 61/05, 78/06, 53/07)*.

[395] This act abolishes and replaces the *Auditing of Public Procurement Procedures Act (Official Gazette no. 78/99, 90/99, 110/02, 2/04-ZPNNVSM, 42/04, 61/05, 78/06, 53/07)*.

Amending the Public Procurement Act (EVA 2012-1611-0005) and the Act Amending the Public Procurement in Water Management, Energy, Transport and Postal Services Area Act (EVA 2012-1611-0006). The Public Procurement for Defence and Security Act (EVA 2010-16110-0024), the Act Amending the Public Procurement Act (EVA 2012-1611-0005) and the Act Amending the Public Procurement in Water Management, Energy, Transport and Postal Services Area Act (EVA 2012-1611-0006) were adopted by Slovenian Government on September 13, 2012 by the Parliament in November 2012. When the Public Procurement for Defence and Security Act enters into force, the Decree on Defence and Confidential Procurement (Official Gazette n. 80/07) will be abolished.

The **national thresholds for the publication of public procurement** in Slovenia are defined as follows[396]:

- Procurement of goods and services under the standard regime: EUR 20 000;

- Procurement of works under the standard regime: EUR 40 000;

- Procurement of goods and services under the utilities regime: EUR 40 000;

- Procurement of works under the utilities regime: EUR 80 000.

The reduction of national thresholds for the publication of public procurement (to comparatively low levels) in 2010 was accompanied by the introduction of a "procedure to award small value procurement". This simplified the procurement procedure may be used by contracting authorities for:

- Goods and services with a value of EUR 20 000 - 40 000;

- Works, utility goods and utility services with a value of EUR 40 000– 80 000;

- Utility works with a value of EUR 80 000 - 160 000.

For procurement below the national thresholds, voluntary publication is possible.

Public procurement data collection process

In Slovenia, there is a single one-stop public information system in which data on public procurement is digitally collected, stored and published: **e-naročanje.si[397]**.

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[396] See http://www.enarocanje.si/?podrocje=portal

This platform is operated by the Official Gazette of the Republic of Slovenia ("*Uradni list Republike Slovenije d.o.o.*"), a public undertaking under the responsibility of the Ministry of Finance, Department for Public Private Partnership and Public Procurement System.

Contracting authorities are obliged by law to publish contract award notices for above national and EU threshold procurement. The relevant information is directly entered by contracting authorities into the e-naročanje.si portal based on online-forms which have been based on the European TED templates. After verification, the data is published online on the e-naročanje.si portal and, where relevant, also submitted to TED for Europe-wide publication. The systematic data verification process of the Official Gazette of the Republic of Slovenia is both automated through the IT system and manual. The verification focuses on formal aspects and completeness of the data. The correctness of the content of published procurement notices remains the full responsibility of the relevant contracting authorities.

Data quality on the portal is monitored by the Ministry of Finance, Directorate for Public Procurement.[398] This directorate was established in April 2012 following the abolition of the Slovenian Public Procurement Agency according to the *Act on the Termination of the Public Procurement Agency (Official Gazette no. 48/12)*. The directorate carries out regular systematic cross-checks of award notices that appear to be incorrect or not in line with procurement rules (e.g. wrong contract values, use of wrong procurement procedure). Where potential errors are identified, the directorate contacts the responsible contracting authorities to verify the correctness of the data and, where necessary, adapt the data entries.

The Slovenian National Review Commission[399], established by the Auditing of Public Procurement Procedures Act Official Gazette no. 78/99, 90/99, 110/02, 42/04, 61/05, 78/06, 53/07), is a separate, independent and autonomous state body to review the lawfulness of public procurement procedures. It does not systematically check the data available on the e-naročanje.si portal, but will intervene in cases of suspicion of fraud.

In Slovenia, statistical data on public procurement is collected by the Ministry of Finance directly from contract award notices published on the national public procurement platform (e-naročanje.si portal).[400] Since 2009 the templates for

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[397] www.enarocanje.si
[398] For an organisational chart, please refer to
http://www.mf.gov.si/en/about_the_ministry/organization/#c58
[399] www.dkom.si
[400] Collection of statistical data on public procurement is regulated by the *Public Procurement Act and the way of their collecting (Official Gazette no. 8/09)* and the *Public Procurement in the Water, Energy, Transport and Postal Services Act and the way of their collecting (Official Gazette no. 8/09)*.

contract award notices contain several additional mandatory fields for the collection of statistical data on public procurement. While this information is not published on the e-naročanje.si portal, the Ministry of Finance issues aggregated figures on a regular basis.[401]Collection of statistical data via the electronic tender notification system has reduced the reporting burden for contracting authorities which previously had to report separately for statistical purposes.

Coverage of the public procurement database

Public procurement procedures are executed by approximately 3.000 Slovenian contracting authorities. As public procurement in Slovenia is fragmented, most of the contracting authorities are fairly small and do not have specialised procurement officers.[402]

In Slovenia there is no special central purchasing organization. Yet, the Ministry of Finance carries out procedures of joint public procurement for the central government.[403]

Potentially all types of public procurement can be entered into the e-naročanje.si database; no types of procurement are excluded from the publication. However, in practice many public authorities do not publish their procurement if they are not legally obliged to do so. This concerns both the specific exemptions under the procurement directives and below national threshold procurement. Public procurement of R&D OR ICT / R&D of ICT is not published in a specific category on the e-naročanje.si portal.

While it is technically possible to enter contract award notices of any amount on the e-naročanje.si portal, voluntary publication of procurement below national thresholds remains relatively limited and concerns mostly procurement above EUR 15 000. In this context, one should however note that the Slovenian national thresholds for mandatory publication of public procurement are currently amongst the lowest in Europe.

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[401] For more information, see: http://www.djn.mf.gov.si/sistem-javnega-narocanja/letna-porocila
[402] PPN (2010): The comparative survey on public procurement systems across the PPN, pp. 183ff, http://www.publicprocurementnetwork.org/docs/ItalianPresidency/Comparative%20survey%20on%20PP%20systems%20across%20PPN.pdf
[403]Before the establishment of the Public Procurement Agency in 2011 (by the Act Establishing the Public Procurement Agency (Official Gazette no. 59/10)) joint public procurement for the central government contracting authorities was carried out by the Ministry of Public Administration. In 2011 and until its abolition in 2012 (Act on the Termination of the Public Procurement Agency (Official Gazette no. 48/12)) joint public procurement was carried out by the Public Procurement Agency. Since April 2012, the organisation competent for joint public procurement for the central government contracting authorities is the Ministry of Finance.

As a result of the delayed transposition of the Defence Procurement Directive 2009/81/EC[404], public procurement in the area of defence is currently excluded from publication obligations. With the enactment of the transposing legislation in the fourth quarter of 2012, the publication requirements of Directive 2009/18/EC was implemented in Slovenia the 1st January 2013. Hitherto, defence procurement is carried out according to national rules which do not foresee a publication of contract award notices. A defence procurement commission assesses all planned procurement of the Slovenian MoD and Armed Forces and decides whether these should be undertaken according to the national defence procurement rules or whether a standard procurement procedure (including standard publication obligations) may be more appropriate, for instance in cases of non-sensitive defence procurement.

The Ministry of Finance monitors the completeness and coverage of published public procurement data based on statistical data collected from the e-naročanje.si portal and benchmarking metrics such as GDP and total government expenditure.

3.25.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

The only sources of public procurement data in Slovenia are the national e-naročanje.si portal[405] and the statistical reporting provided by the Ministry of Finance[406].

The private tender alert provider *Razpisi d.o.o.*[407], a member of Tender Service Group, compiles its database from data collected from the e-naročanje.si portal. It does not cover additional procurement and does not hold better information.

Other information sources: public procurement in the defence sector

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[404]See further explanations in the section on the "legal context" above.
See also: http://europa.eu/rapid/press-release_IP-12-664_en.htm
[405] See http://www.enarocanje.si/?podrocje=portal
[406] See http://www.djn.mf.gov.si/sistem-javnega-narocanja/letna-porocila
[407] See http://www.javnirazpisi.com.

As mentioned above, public procurement in the area of defence is currently excluded from publication obligations as a result of the delayed transposition of the Defence Procurement Directive 2009/81/EC[408].

According to data provided by the EDA, the "R&D (including R&T) Expenditure" of Slovenia was EUR 11,17 million in 2009 and EUR 7,76 million in 2010. Slovenia does not publish any data on "Outsourced Defence Expenditure".

According to the Slovenian MoD, Directorate for Logistics, Procurement Office[409], the data communicated to the EDA is collected on the basis of existing accounting information, i.e. the expenditure from the contract values.

The Slovenian MoD indicates that in 2010, one contract of EUR 938776 was concluded in the field of R&D with a service provider outside of the MoDor Armed Forces. In 2009, two contracts of a total amount of EUR 3 475 080 were concluded with service providers outside of the MoD and Armed Forces.

Furthermore, the Slovenian MoD declares that in the scope of R&D, EUR 3,4 million were granted in two years for ICT; contracts were concluded with service providers outside the MoD and Armed Forces. The total expenditure of the MoD for the ICT requirements amounted to EUR 9 562 045 in 2009 and EUR 7 439 810 in 2010.

There are no additional data available on Slovenian defence ICT / defence R&D / defence R&D of ICT procurement. Space-related expenditure is not included in the data provided to the EDA.

3.25.f Future data provision to the European Commission

Data provision by public procurement authorities

The Slovenian public procurement authorities are willing to provide the European Commission with public procurement data free of charge in future, e.g. on an annual basis. However, any data published by the European Commission should be presented in an aggregated way only.

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[408] See further explanations in the section on the "legal context" above.
See also: http://europa.eu/rapid/press-release_IP-12-664_en.htm
[409] http://www.mo.gov.si/si/o_ministrstvu/organizacija/direktorat_za_logistiko/

Quality assurance for Slovenian public procurement data would not generate any particular additional cost because this is already carried out routinely.

Data provision by the MoD

For potential future provision of defence procurement data to the European Commission, the Slovenian MoD declared: *"We believe that the MoD of the Republic of Slovenia will not be facing any difficulties concerning the provision of the basic financial data related to the contract value of the orders linked to the defence ICT, value of orders or other data connected with the R&D or the values of the R&D contracts connected with the ICT. Financial values of the mentioned contracts are usually not the subject of security regulations and are available to the public. If such data would have to be collected for a specific purpose, the Republic of Slovenia could have concerns and such a request from the EDA would have to be considered separately. We do not foresee any special costs regarding the preparation of reports. Cost may, however, arise in case of more complex requests for special purposes, which would require help from an external institution on the basis of outsourcing."*

Data provision by the national statistical office

(A) Performer-based measurement of R&D OR ICT / R&D of ICT procurement, BERD

For the measurement of business R&D (BERD), the Slovenian national statistical office explained that "in Slovenia most funds from the government to the performerR&D providers are in the form of grants or other financial incentives. Some government funds are for the procurement of R&D. Data collection on [whether] government-funded R&D was performed under public procurement contracts or grants [would] be feasible, but reporting units would have a lot of work to identify and properly classify the funds. At the national level [the Slovenian national statistical office] [does] not yet have a plan to include this question in the questionnaire. Plans will depend on the availability of resources, which are currently very limited."

Furthermore, the Slovenian national statistical office stated that "it would be feasible to further distinguish ICT-related from non-ICT-related R&D performed under public procurement contracts on the basis of the NACE Rev. 2. However, this would increase the burden on respondents. Reporting units would have a lot of work to identify and properly classify the funds."

(B) Funder-based measurement of R&D OR ICT / R&D of ICT procurement, GBAORD

The Slovenian national statistical office explained that *"for now [no] data [is collected] on which main government departments or agencies paid for the R&D performed under public procurement contracts."* However, *"it would be feasible to collect data on which government institutions (not departments) paid for the R&D performed under public procurement contracts, but it would increase the burden on respondents. Reporting units would have a lot of work to identify and properly classify the funds."*

On the other hand, the Slovenian national statistical office outlined that a *"further [differentiation of] how much of these contracts is ICT-related [would] not [be] possible."* Currently, the Slovenian national statistical office has *"included in the questionnaire FOS and NABS classifications pursuant to which ICT cannot be exactly distinguished."*

Within GBAORD, *"it would be possible to separately identify public procurement contracts to business enterprises in this breakdown, but to further distinguish how much of these contracts is ICT-related is not possible."*

(C) National accounts data for the measurement of R&D OR ICT / R&D of ICT procurement

The Slovenian national statistical office explained that *"for budgetary units COFOG (groups) is assigned on transaction level (national classification of transactions by unit, by type and by function/programme). For indirect budgetary units COFOG is usually assigned at unit level, but for R&D [the Slovenian national statistical office] considers results from the national R&D survey for units from general government sector with activities research and development and tertiary education: from the survey the Slovenian national statistical office considers data on scope and goals, and for all reported research the R&D groups are assigned and applied to relevant part of expenditure of relevant units."*

With regard to *"ICT-related expenditure in general (not only R&D-related or within COFOG), the best available data within the system of national accounts would be the Supply and Use Tables; the uses of appropriate product groups [would be] broken down according to the CPA classification, e.g. CPA group 61 (telecommunication services), 62-63 (computer programming and consultancy etc.), 26 (computers, electronic and optical products). [The] CPA aggregation [is] not detailed enough; CPA groups and ICT definition do not match perfectly."*

(D) Alternative approaches to the measurement of R&D OR ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

The Slovenian national statistical office argued that "*because current surveys used for the measurement of business R&D (BERD) or for the measurement of GBAORD do not include a question to identify how much of government-funded R&D was performed under public procurement contracts or grants, the inclusion of new questions in the questionnaire would present an additional burden for providers of research and for reporting units as well as increased costs. Possible implementation would require modification of the questionnaires and methodological guidelines, the reporting units would have to adjust their records, etc.*"

The Slovenian national statistical office concluded that "*future implementation will depend on the availability of human and financial resources, which are currently very limited.*"

3.26 SPAIN

The section presents estimates of the amount of ICT-related (sub-section 3.26.a), R&D (sub-section 3.26.b), and ICT-related R&D procurement (sub-section 3.26.c) in Spain. The figures do not include the value of defence contracts, and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, as gathered by the private tender alert provider Tender Service. The latter data is available only for the year 2011[410].

The collection of data on public contracts by the national public authorities is illustrated in sub-section 3.26.d, while the availability of qualitative information, which can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in sub-section 3.26.e.

Full country data set is provided in Excel format (see Annex 3).

3.26.a Public procurement of ICT

The total value of ICT public procurement contracts in Spain in 2011 was about **EUR 3.23 billion**[411].

A breakdown of the overall ICT contract value across different areas of public sector activity is given in Table *3.26.a.1*[412] over the year 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[410] Data is based on information available on the 'Plataforma de Contratación del Estado' maintained by the Dirección General del Patrimonio del Estado, Junta Consultiva de Contratación Administrativa (see contrataciondelestado.es/). The platform includes all contracts for the general administration of State, its autonomous bodies, administrative entities and common services of social security and other state public institutions. Publication of contracts is not mandatory on the platform for regional and local administrations.
[411] Of which 97.9% is above the threshold.
[412] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contractingauthorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.26.a.1- Spain ICT – Contract values by public sector activity

Public Sector Area	2011
Economic and financial affairs	14%
Education	6%
Electricity	4%
Environment	1%
Gas, oil and heat	0%
General public services	24%
Health	9%
Other	21%
Postal services	3%
Public order and safety	1%
Transport	10%
Unknown	4%
Water	1%
Total	100%

The contracting authorities that contributed most to expenditure in 2011 are listed in Table 3.26.a.2. Expenditure of these authorities covered 41% of the total and centred on IT services (39% of the total for the key authorities, e.g. development of applications, consultancy, maintenance and management of ICT facilities acquired by the Generalidad de Cataluña), postal and telecommunications services (18%), business services (16%). The authorities purchased a number of other goods e.g. digital whiteboards and projectors (Red.es). Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.26.a.2- Spain ICT 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Generalidad de Cataluña (Government of Catalonia)	Economic and financial affairs
Junta de Andalucía (Government of Andalucia)	General public services
Metro de Madrid, Sociedad Anónima (Underground of Madrid)	Transport
Centre de Telecomunicacions i Tecnologies de la Informació de la Generalitat de Catalunya (Centre for Telecommunications and the Information Technologies of the Generalitat de Catalunya)	Other
S.E Correos y Telégrafos, SA (S.E Post Office SA)	Postal Services
Entidad Pública Empresarial, Red.es (Public Enterprise Red.es)	Other
Junta de Castilla y León (Government of Castile and León)	General public services
Tesorería General de la Seguridad Social (General Treasury of the Social Security)	General public services
Servicio Andaluz de Salud (Andalusian Health Service)	Health
Televisión Autonómica de Aragón, S.A. (Regional Television Aragón, SA)	Other

3.26.b Public procurement of R&D

The total value of R&D public procurement contracts in Spain was about **EUR 170.5 million**[413] in 2011. A breakdown of the overall R&D contract value across different areas of public sector activity is given in Table 3.26.b.1. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[413] 89.82% is above EU threshold while 6.17% is below and 4.02% is unknown.

Table 3.26.b.1- Spain R&D – Contract values by public sector activity

Public Sector Area	2011
Economic and financial affairs	1%
Education	20%
Environment	4%
General public services	22%
Health	6%
Other	41%
Transport	2%
Unknown	5%
Total	100%

The contracting authorities that contributed most to the expenditure in 2011 are listed in Table 3.26.b.2. Expenditure of the authorities covered 59% of the total and centred on, among others, construction works (EUR 38.8 million, e.g. works for the research facilities of the Fundación Imdea Materiales), transport equipment (EUR 27.5 million, e.g. ships for oceanographic and fisheries research acquired by the Spanish Institute of Oceanography), laboratory, optical and precision equipment (EUR 8.4 million) and furniture (EUR 7.7 million, e.g. periodicals in electronic format for the General Secretariat of the State Agency Council for Scientific Research). Inclusion in the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.26.b.2- Spain R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Instituto Español de Oceanografía (Spanish Institut of Oceanography)	General public services
Secretaría General de la Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC) (General Secretariat of the State Agency Council for Scientific Research)	General public services

Contracting authority / entity	Public sector area
Fundación Imdea Materiales	Other
Universidad de Córdoba (University of Cordoba)	Education
Fundación Ciudad de la Energía (Energy City Foundation)	Other
Rectorado de la Universidad de Valladolid (Rector of the University of Valladolid)	General public services
Fundació Parc Científic de Barcelona (PCB Foundation)	Other
Universidad de Huelva (University of Huelva)	Education
Consorcio para el Diseño, Construcción, Equipamiento y Explotación del Sistema de Observación Costero de las Illes Balears (Consortium for the Design, Construction, Equipment and Exploitation of Coastal Observation System of Illes Balears)	Other
Gerencia Regional de Salud de Castilla y León (Regional Health Management of Castilla y León)	Health

3.26.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Spain was about **EUR 41.8 million**[414] in 2011. A breakdown of the overall ICT-related R&D contract value across different areas of public sector activity is given *Table 3.26.c. 1* over the year 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[414] 88.43% of the amount is above Eu threshold while 9.66 is below. 1.91% is unknown.

Table 3.26.c. 1- Spain ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011
Economic and financial affairs	3%
Education	16%
General public services	18%
Health	18%
Other	42%
Unknown	3%
Total	100%

The contracting authorities which contributed most to expenditure in 2011 are listed in *Table 3.26.c. 2*. Expenditure of these authorities covered 73% of the total and centred on laboratory, optical and precision equipment (EUR 9 million, e.g. University of Jaén), medical equipment (EUR 6.6 million, e.g. X-ray therapy devices requested by the Regional Health Management of Castilla y León), printed matter and related products (EUR 6,5 million,e.g. General Secretariat of the State Agency Council for Scientific Research)and electrical apparatus and equipment (EUR 4.7 million, e.g. Center for Energy, Technology and Environmental Research).

Inclusion in the list of key contracting authorities does not mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.26.c. 2- Spain ICT –related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Secretaría General de la Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC) (General Secretariat of the State Agency Council for Scientific Research)	General public services

Gerencia Regional de Salud de Castilla y León (Regional Health Management of Castilla y León)	Health
Fundación Ciudad de la Energía (Energy City Foundation)	Other
CIEMAT (Center for Energy, Technology and Environmental Research)	Other
Universidad de Jaén(University of Jaén)	Education
Ajuntament de Girona (Girona City Council)	General public services
Universidad de Granada (University of Granada)	Education
Centro Nacional de Información Geográfica (National Centre for Geographic Information)	Economic and financial affairs
Rectorado de la Universidad de Cádiz (Rector of the University of Cadiz)	Education
Cedex (Center for study and experimentation in public works)	Other

3.26.d Collection of procurement data by public authorities

Legal context

Public procurement in Spain is regulated by a number of laws and decrees which transpose the relevant European legislation[415]:

o **General public procurement regime:**

- o *Real Decreto Legislativo 3/2011, de 14 de noviembre, por el que se aprueba el texto refundido de la Ley de Contratos del Sector Público* (Official State Gazette No.276, 16/11/2011)

- o *Real Decreto 817/2009, de 8 de mayo, por el que se desarrolla parcialmente la Ley 30/2007, de 30 de octubre, de Contratos del Sector Público* (Official State Gazette No.118, 15/5/2009)

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[415] For more details and guidance on the legal framework for public procurement in Spain see: http://contrataciondelestado.es/

- o **Procurement in the water, energy, transportation and postal sectors:**
  - o The general public procurement Act (Real Decreto Legislativo 3/2011) applies also to procurement in the water, energy, transportation and postal sectors. Certain specificities are regulated by another act:
  - o *Ley 31/2007, de 30 de octubre, sobre procedimientos de contratación en los sectores del agua, la energía, los transportes y los servicios postales* (Official State Gazette No.261, 31/10/2007)
    - ▪ Modified by *Ley 34/2010, de 5 de agosto, de modificación de las Leyes 30/2007, de 30 de octubre, de Contratos del Sector Público, 31/2007, de 30 de octubre, sobre procedimientos de contratación en los sectores del agua, la energía, los transportes y los servicios postales, y 29/1998, de 13 de julio, reguladora de la Jurisdicción Contencioso-Administrativa para adaptación a la normativa comunitaria de las dos primeras* (Official Gazzette No.192, 9/8/2010)

- o **Defence and security procurement**
  - o *Ley 24/2011, de 1 de agosto, de contratos del sector público en los ámbitos de la defensa y de la seguridad,* (Official Gazette no. 184, 2/8/2011). This Act transposes Directive 2009/81 into Spanish Law.

As a **general rule**, **all** public **procurement** must be **published** in Spain.

An exception is granted for the "minor contracts" (*contratos menores*), creating thus a *de facto* **threshold**:

- Procurement of works: EUR 18 000
- Other procurement: EUR 50 000

In certain circumstances, procurement might take place through a "negotiated procedure without publicity", in which case it is not published. A significant amount of public procurement, covering the more frequent and recurrent purchases of goods and services by the administration starts through published procurement (framework agreements or dynamic provisions systems are concluded after the award of the published procurement, foregoing the need for further publicity).

No particular differences exist in terms of the publication of public procurement data of R&D in relation with the framework established by the EU directives.

As a general rule, all public procurement must be published in the Official State Gazette (Article142 Act 3/2011). However, for contracting authorities at regional or local levels (or any dependant bodies), such publication might be replaced by publication in the regional or local official gazette.

All procurement subject to "harmonised regulation" (Article13 et ss. Act 3/2011) must be published in the OJOJ, i.e. on the TED platform. The threshold for procurement (including in the water, energy, transportation and postal sectors) subject to harmonised regulation are:

a) Procurement of works: EUR 5 000 000

b) Procurement of supplies:

    a. Central government contracting authorities: EUR 130 000

    b. Other contracting authorities: EUR 200 000

c) Procurement of services:

    a. Central government contracting authorities: EUR 130 000

    b. Other contracting authorities: EUR 200 000

d) Certain "subsidised contracts",*contratos subvencionados-* (specific procurement of works over EUR 5 000 000 or services over EUR 200 000 where an awarding authority subsidises directly over 50% of the contract value).

These thresholds are in line with EU Directives.

Publication in the OJ does not replace the publication in the State, regional or local gazette, which remains compulsory.

Any procurement not subject to harmonised regulation might also, if the contracting authority deems it convenient, be published in the OJ.

Public procurement data collection process

The State's Public Procurement Platform *(Plataforma de Contratación del Estado)* [416] digitally centralises public procurement data in Spain, constituting the State's single information point.

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[416] http://contrataciondelestado.es

The platform is managed by the State Consultative Board of Administrative Procurement (*Junta Consultiva de Contratación Administrativa del Estado*), which is part of the Treasury and Public Administrations Ministry (*Ministerio de Hacienda y Administraciones Públicas*).

Act 3/2011 enshrines the obligation (Article 53) for all contracting authorities to create a "contractor profile" accessible via Internet. Any relevant data and information related to their procurement activities may be included in the profile, which shall always publish the award of contracts. The contractor profile of all "central" contracting authorities (belonging to the State-level Administration) shall be integrated in the platform, which is also open (albeit not mandatorily) for any other public contracting authorities (such as regional and local).

For the collection of public procurement data, the contracting authority is responsible for gathering the information. They submit the data to the platform, which takes care of publishing it, complying with the legal requirements (in the appropriate official journals and in the adequate format). Whenever regional or local registers exist, the regional or local authorities can submit the data to such a register (it is not required to send them to the central platform), which will then liaise properly with the central public procurement register (*Registro Público de Contratos).* This central register is managed by the same body in charge of the platform, i.e., the State Consultative Board of Administrative Procurement. The information in the platform and the register is integrated.

Therefore, the information is collected by the contracting authorities but entered in the common system by a dedicated body.

Templates are used to ensure the quality of data. For more general supervision and control of public procurement, both internal and external bodies perform control tasks. The internal control within the Administration is carried out by civil servants (at national level, the body in charge is the General Intervention of the Central Administration –*Internvención General de la Administración del Estado*-). The external control is undertaken by a constitutional body, the Accounts Court (*Tribunal de Cuentas*). Some regions have created their own Accounts Courts. Furthermore, via the Act 34/2010, the Central Administrative Court of Contractual Appeals (*Tribunal Administrativo Central de Recursos Contractuales*)[417] was created specifically to deal with issues related to public procurement. The Court is entrusted with guaranteeing the correct application of

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[417]http://www.minhap.gob.es/es-ES/Servicios/Contratacion/TACRC/Paginas/Tribunal%20Administrativo%20Central%20de%20Recursos%20Contractuales.aspx

the rules governing the preparation and awarding of public procurement contracts.

Coverage of the public procurement database

Potentially all types of public procurement can be entered into the national public procurement portal.

However, only the State contracting authorities are obliged to include their "contractor profile" in the State's Public Procurement Platform. In such profiles all the contract details are made available. Regional and local contracting authorities (either the Administrations or dependant public bodies) can do it on a voluntary basis. While a significant amount of public procurement carried out by regional and national administrations can be found in the platform, the coverage is not complete (numerous regional and local authorities, but not all, have concluded collaboration agreements with the central platform to publish their procurement data).

Public procurement of R&D OR ICT / R&D of ICT is not published in a specific category on the national public procurement portal.

In 2012, a specific tab for innovative public procurement was included in the online procurement platform, as can be seen below (left side, last search criterion).

Within the search criterion "innovative public procurement" can be easily searched and it is possible to distinguish contracts of pre-commercial procurement and of public procurement of innovative technologies. Public procurement that conforms to the definition of innovative public procurement must be flagged as such, so it can be searched for with the specific tab (all innovative public procurement since the introduction of the tab can be found). The definition of public procurement of innovative solutions is in line with the

OECD definition. Its scope (and hence the contracts included) is therefore wider than the public procurement of R&D of ICT solutions.

From October 2012 (the first contract was published on 1/10/2012) until the end of April 2013, a total of 13 innovative public procurement contracts were awarded, with a combined total value of about EUR 18 million (there were contracts of approximately EUR 8 million, EUR 5 million and EUR 4 million a piece, while all the remaining contracts were below EUR 300 000, including seven below EUR 100 000).

This comes in the context of a series of policy measures supporting innovative public procurement in Spain. The formal origin of the stimulus can be traced back to an agreement of the Council of Ministers from 2/7/2010, where the State's Innovation Strategy was adopted. The Science, Technology and Innovation Act (*Ley 14/2011, de 1 de junio, de la Ciencia, la Tecnología y la Innovación*) explicitly mentions innovative public procurement, while an agreement of the Council of Ministers from 8/7/2011 sets out the procedure for the implementation of innovative public procurement in all ministerial departments and public bodies. These must now report on the amounts expected to be allocated to innovative public procurement (both as pre-commercial procurement and public procurement of innovative technologies) in their budgets and multiannual action plans. In addition, the Ministry of Economy and Competitiveness (which assumed the relevant responsibilities of the former Ministry of Science and Innovation) published an *innovative public procurement user guide*, aimed at the public authorities and other public bodies acting as contracting authorities.

3.26.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

While not all the contracting authorities are obliged to publish information in the national public procurement portal, they are all obliged to submit detailed information (essential details of all contract awards, as well as any modification, extension, deadline or price variations, final value and extinction) to the central public procurement register (*Registro Público de Contratos*)[418]. This register is

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[418] http://www.minhap.gob.es/es-ES/Servicios/Contratacion/Junta%20Consultiva%20de%20Contratacion%20Administrativa/Paginas/Registro%20publico%20de%20contratos.aspx

designated by Act 3/2011 (Article333) as the official central information system for public procurement in Spain, and hence as the support for knowledge, analysis and research of public procurement, as well, inter alia, of statistics on public contracts.

The public procurement register is the central point for information on public procurement in Spain. It gathers and provides information on the number and value of contracts according to their type, the contracting authority, the type of awarding procedure and value brackets. However, the figures are aggregate (the latest are from 2011). No information on individual contracts is offered.

For qualitative information, the Public Procurement Observatory *(Observatorio Contratación Pública)* was created in 2011 as a result of a research project co-financed by the Ministry of Science and Innovation for 2009-2011. The observatory aims to keep citizens and professionals abreast of all regulatory changes in the field of public procurement and their implications, as well as to provide insightful analysis.[419]

The study team concluded a cooperation agreement with the *Tender Service Group*, a pan-European private tender alert provider, which holds public procurement data for Spain. Tender Service provided the study team with relevant public procurement data for Spain in the course of the first quarter of 2013, once a complex and time-intensive data enrichment process by Tender Service had been completed.

The table below provides an indicative view on the characteristics of the dataset for Spain. It indicates the total number of records for 2011 (contract notices and contract awards) as well as the number of ICT-related records identified in 2011 and 2010 in a CPV-based search.

Table 3.26.e. 1- Characteristics of the Tender Service dataset for Spain

Indicative information on Tender Service public procurement data for Spain	
Total number of records in 2011 *(contract notices and contract awards)*	100,520
<u>*As a comparison:*</u> ***Total number of TED records in***	18,859

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[419]http://www.obcp.es/index.php/mod.pags/mem.quienesSomos/chk.d9acdcf78342eb85b18c5114d73c2c31

2011	
(contract notices and contract awards)	

Number of ICT records (CPV-based search)		
Year	*Contract notices*	*Contract awards*
2010	1,942	2,552
2011	1,959	3,321

Tender Service provided public procurement data for 2011. The data has been analysed as described in the methodological section using both CPV-based and keyword-based searches.

Other information sources: public procurement in the defence sector

According to data provided by the EDA, the "R&D (including R&T) Expenditure" of Spain was EUR 228,84 million in 2009 and EUR 162,06 million in 2010. Further, the "Outsourced Defence Expenditure" of Spain is reported to be EUR 241 million in 2009 and EUR 233 million in 2010.

No additional information regarding defence procurement in Spain could be obtained from the Spanish MoD.

3.26.f Future data provision to the European Commission

Data provision by the public procurement authorities

Any future data provision on public procurement in Spain to the European Commission would have to be negotiated with the Spanish Ministry for Public Administration.

Data provision by the MoD

Any future data provision on public procurement in the defence sector in Spain to the European Commission would have to be agreed with the Spanish MoD[420]. In the framework of this study, the Spanish MoD has not been willing to provide any data.

Data provision by the national statistical office

The Spanish National Statistical Office[421] and the Spanish Ministry of Economy and Competitiveness[422] (which is in charge of data collection for the GBAORD statistics) regularly publish data on R&D expenditure in Spain.[423] These statistics do not differentiate between R&D grants and procurement, even though a relevant question regularly featured in the Spanish R&D and innovation surveys.

The Spanish authorities estimate that approximately 22% of direct public funds for business R&D are made available under procurement contracts (as opposed to grants), corresponding to approximately 3% of total business R&D in Spain.[424]

No additional information could be obtained from the Spanish National Statistical Office or the Spanish Ministry of Economy and Competitiveness.

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[420] http://www.defensa.gob.es/
[421] http://www.ine.es/
[422] Ministerio de Economía y Competitividad > Secretaría de Estado de Investigación, Desarrollo e Innovación > Subdirección General de Planificación y Seguimiento, http://www.idi.mineco.gob.es/ Contact: sgpes@mineco.es, +34 916 037 978
[423]http://www.idi.mineco.gob.es/portal/site/MICINN/menuitem.7eeac5cd345b4f34f09dfd1001432e a0/?vgnextoid=fa48c18d48530210VgnVCM1000001034e20aRCRD and http://www.ine.es/en/inebmenu/mnu_imasd_en.htm
[424] OECD workshop on measuring the link between public procurement, R&D and innovation, Paris, 5-6 December 2013.

3.27 SWEDEN

This section presents estimates of the amount of ICT-related (sub-section 3.27.a), R&D (sub-section 3.27.b), and ICT-related R&D procurement (sub-section 0) in Sweden. The figures do not include the value of defence contracts, and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, as gathered by the private tender alert provider Mercell.

The collection of data on procurement contracts by the national public authorities is illustrated in sub-section 3.27.d, while the availability of qualitative information, which can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in sub-section 3.27.e.

Full country data set is provided in Excel format (see Annex 3).

3.27.a Public procurement of ICT

The total value of ICT public procurement contracts in the Sweden in 2011 was about **EUR 1.13 billion**[425], compared to **EUR 1.19 billion** in 2009.

A breakdown of the overall ICT contract value across different areas of public sector activity is given in *Table 3.27.a. 1*[426]for 2009 and 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[425] 87.82% is above the threshold while 4.84% is below.
[426] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.27.a. 1 -Sweden ICT – Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Economic and financial affairs	5%	1%	4,4%
Education	6%	1%	4,4%
Electricity	0%	0%	-0,1%
Environment	1%	1%	0,2%
Gas, oil and heat	0%	0%	0,0%
General public services	68%	14%	54,0%
Health	6%	1%	5,5%
Other	7%	5%	2,1%
Postal services	0%	0%	0,2%
Public order and safety	1%	0%	0,5%
Transport	2%	1%	1,0%
Unknown	4%	77%	-72,2%
Water	0%	0%	0,0%
Total	100%	100%	

The contracting authorities that contributed most to expenditure in 2011 are listed in *Table 3.27.a. 2*. Expenditure of these authorities covered 50% of the total and centred on software package and information systems (79% of the total for the key authorities), printed matter and related products (7%). The authorities acquired a number of other services, such as IT services (7%), and medical equipment, pharmaceuticals and personal care products. Inclusion in the list of the key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.27.a. 2 – Sweden ICT – Key contracting authorities

Contracting authority / entity	Public sector area
Kammarkollegiet	General public services
Ekonomistyrningsverket (The Swedish National Financial Management Authority)	Economic and financial affairs
Trafikverket (Transport Administration)	Transport
Region Skåne	General public services
Landstinget Gävleborg (Gävleborg County Council)	General public services
Upphandlingscenter (Procurement Centre)	General public services
Talboks- och punktskriftsbiblioteket, TPB (Talking Books and Braille, TPB)	General public services
Uddevalla kommun (Uddevalla Municipality)	General public services
Linköpings universitet (Linköpings University)	Education
Kalmar kommun (Kalmar Municipality)	General public services

3.27.b Public procurement of R&D

The total value of R&D public procurement contracts in Sweden was about **EUR 51.6 million**[427] in 2011, compared to **EUR 19.4 million** in 2009.

Breakdown of R&D contract value across different areas of public sector activity is given in *Table 3.27.b. 1* for 2009 and 2011.

Table 3.27.b. 1 – Sweden R&D -Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Education	95%	99%	-3,3%
Environment	0%	0%	-0,2%
General public services	1%	0%	0,7%

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[427] 43.32% is above EU threshold while 11.44% is below. 45.23% is unknown.

Health	1%	1%	0,6%
Other	0%	0%	-0,2%
Transport	2%	0%	2,0%
Unknown	0%	0%	0,4%
Total	100%	100%	

The contracting authorities that contributed most to the expenditure in 2011 are listed in *Table 3.27.b. 2*. Expenditure of these authorities covered 85% of the total and centred on laboratory, optical and precision equipment (EUR 37.1 million, e.g. geological and geophysical instruments for the University of Uppsala), medical equipment, pharmaceuticals and personal care products (EUR 3.1 million, e.g. X-ray devices and tomography devices acquired by the University of Linköpings) and transport equipment (EUR 1.8 million, e.g. simulators necessary to create a prototype for traffic management acquired by the Transport Administration).

Inclusion in the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.27.b. 2 – Sweden R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Umeå Universitet (University of Umeå)	Education
Linköpings universitet (University of Linköpings)	Education
Göteborgs universitet (University of Göteborgs)	Education
Uppsala universitet (University of Uppsala)	Education
Lunds universitet (University of Lunds)	Education
Karolinska Institutet (Karolinska Institute)	Education
Sveriges lantbruksuniversitet, SLU (Swedish University of Agricultural Sciences)	Education
Stockholms universitet (Stockholm University)	Education

Luleå tekniska universitet (Luleå University of Technology)   Education

Trafikverket (Transport Administration)   Transport

3.27.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Sweden was about **EUR 33 million**[428] in 2011[429], compared to **EUR 11.2 million** in 2009[430].

Breakdown of contract value of ICT-related R&D procurement contracts across different areas of public sector activity is given in *Table 3.27.c. 1* for 2009 and 2011.

Table 3.27.c. 1 - Sweden ICT –related R&D – Contract values by public sector activity

Public Sector Area	2011	2009	Δ
Education	95%	98%	-2,6%
General public services	0%	1%	-0,6%
Health	2%	1%	0,5%
Other	0%	0%	-0,4%
Transport	3%	0%	3,1%
Total	100%	100%	

The contracting authorities which contributed most to expenditure in 2011 are listed in *Table 3.27.c. 2*. Expenditure of these authorities covered 87% of the total and centred on laboratory, optical and precision equipment (EUR 23.2 million, e.g. chromatographs and analysis apparatus for the University of Umeå and Göteborgs), medical equipment (EUR 2.7 million, e.g.University of Lunds) and transport equipment (EUR 1 million).

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[428] The amount of ICT related R&D procurement is 64% of the total amount of R&D procurement. This is due to the fact that, according to the classifications of Frascati Manual, in Sweden, there was a large portion of R&D records belonging to the category ICT and ICT+.
[429]Of which 29.75% and 13.77% are, respectively, above and below EU threshold. 56.49% is unknown.

Inclusion in the list of the key contracting authorities does not mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.27.c. 2 -Sweden ICT –related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Umeå Universitet (University of Umeå)	Education
Göteborgs universitet (University of Göteborgs)	Education
Linköpings universitet (University of Linköpings)	Education
Lunds universitet (University of Lunds)	Education
Karolinska Institutet (Karolinska Institute)	Education
Sveriges lantbruksuniversitet, SLU (Swedish University of Agricultural Sciences)	Education
Luleå tekniska universitet (Luleå University of Technology)	Education
Trafikverket (Transport Administration)	Transport
Chalmers University of Technology	Education
Karlstads universitet, Karlstad (University of Karlstad)	Education

3.27.d Collection of procurement data by public authorities

Legal context

There are seven main laws and acts on public procurement in Sweden:

- **Swedish Public Procurement Act**[431], *Lagen om offentlig upphandling*, LOU (SFS 2007:1091, LOU); and

- **Utilities Procurement Act**[432], *Lagen om upphandling inom områdena vatten, energi, transporter och posttjänster*, LUF (SFS 2007:1092, LUF);

- **Law on procurement of defence and security**[433], *Lagen om upphandling på försvars- och säkerhetsområdet*, LUFS (SFS 2011:1029, LUFS);

- **Law on environmental requirements in procurement of cars and some public transport services**[434], *Lagen om miljökrav vid upphandling av bilar och vissa kollektivtrafiktjänster* (SFS 2011:846);

- **Act on System of Choice**[435], *Lagen om valfrihetssystem*, LOV (SFS 2008:962 LOV);

- **Law on freedom of the Employment Service**[436], *Lagen om valfrihet hos Arbetsförmedlingen* (SFS 2010:536);

- **Law on introduction activities for certain newly arrived immigrants**, *Lagen om etableringsinsatser för vissa nyanlända invandrare* (SFS 2010:197).

LOU is the main act governing public procurement in Sweden. It regulates public procurement of works, supply and service contracts. Public procurement above the national threshold of SEK 284631 but below the EU relevant thresholds are subject to the national publication rules for public procurement within the LOU (Chapter 15 of the LOU). Procurement that is above EU thresholds are subject to the specific publication provisions of the LOU that transpose EU public procurement directive 2004/18/EC.

The LUF regulates public procurement in the water, energy, transport and postal services sectors and transposes the EU utilities procurement directive 2004/17/EC. Utilities' procurement above the national threshold of SEK 569262

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[431] http://www.notisum.se/rnp/sls/lag/20071091.HTM
[432] http://www.notisum.se/rnp/sls/lag/20071092.HTM
[433] http://www.notisum.se/rnp/sls/lag/20111029.htm
[434] http://www.notisum.se/Pub/Doc.aspx?url=/rnp/sls/lag/20110846.htm
[435] http://www.notisum.se/rnp/sls/lag/20080962.htm
[436] http://www.notisum.se/rnp/sls/lag/20100536.htm

but below the EU threshold is subject to the national publication rules for public procurement within the LUF (Chapter 15 of the LUF). Procurement that is above the EU threshold (and relates to the aforementioned areas, i.e. water, energy, transport and postal services) are also subject to the specific publication provisions of the LUF that transpose the European legislation.

The LUFS is the law on procurement in defence and security and transposes the EU defence procurement directive 2009/81/EC. Contracts relating to production of or trade in arms, munitions and military equipment covered by Article 346.1 b TFEU can be exempted from this law on an individual basis.

In order to ensure that people receiving health and social care can choose the most suitable provider, providing the best care quality, the Act on Freedom of Choice System (LOV) applicable as of 1 January 2009, offers alternative procurement procedures to the LOU in the areas of health and social care.

Public procurement data collection process

The Swedish Competition Authority is responsible for public procurement statistics, but the collection and processing of statistics is conducted by Statistics Sweden.

Data is collected under the public procurement directives and the WTO-GPA. The obligation to provide statistics on procurement below the national thresholds covers only government agency tendering and procurement in the utilities sectors. The collection of this data is made by two surveys conducted by Statistics Sweden. The Swedish Competition Authority, however, determines the survey design.[437]

Sweden's public procurement data is not collected and stored in a central system, but in a number of different federal, regional, and local portals. There are also portals of private service providers that collect and publish public procurement notices:

- **Allego–Visma**[438]
- **E-AVROP**[439]
- **Proff Offert**[440]
- **Licitio**[441]

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[437] http://www.kkv.se/t/Page____2099.aspx
[438] http://www.allego.se/hem.aspx
[439] https://www.e-avrop.com/
[440] http://www.proffoffert.se/

- **Mercell**[442]

- **Visma-Opic**[443]

- **Offentliga Upphandlingar**[444]

The private data provider Mercell has provided below-EU-threshold public procurement data for Sweden in the framework of the present study.

Statistics Sweden, the national statistics office of Sweden, has confirmed that there is **no systematic data collection with regards to public procurement**.

Whilst the statistics office has produced a report on public procurement[445], the report is not detailed enough to be able to extract the data needed for this study. Furthermore, it was confirmed in an interview that the data used for the report was based on data provided by a private service provider (Visma Opic AB) and that it was limited to above EU threshold procurement. However, the report does provide numbers that underline the issue of data collection in Sweden given that there is no central data collection. Over 1,300 public authorities made public procurement announcements in 2011 and in that same year, there were about 3,700 public authorities that were subject to the laws on public procurement in Sweden. Ensuring a (complete) data set for public procurement is practically impossible. However, the report did state that in general public procurement there was a 3% increase in the number of published calls from 2010 to 2011. Furthermore, the report provided a number of recommendations, the most significant of which was the recommendation to collect all data in one database. This recommendation has been considered by public authorities and there are plans to setup a national database, which may serve as a data collection point for public procurement data in the future. However, no progress on the set-up of such a portal can be found.

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[441] http://www.licitio.se/
[442] http://se.mercell.com/
[443] http://www.opic.com/
[444] http://www.offentligaupphandlingar.se/
[445]*Siffror och fakta om offentlig upphandling, Statistik om upphandlingar som genomförts under 2011* [Facts and Figures on Government Procurement, Statistics on contracts awarded in 2011], http://www.kkv.se/upload/Filer/Trycksaker/Rapporter/rapport_2012-6.pdf
See also:
Bättre statistik om offentliga upphandlingar [Better statistics for public procurement], http://www.kkv.se/upload/Filer/Trycksaker/Rapporter/rapport_2011-5.pdf

3.27.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

Relevant sources of information include:

- Konkurrensverket (The Swedish Competition Authority)[446]
- Avropa.se (The National Procurement Services)[447]
- Kommerskollegium (National Board of Trade)[448]
- Sveriges Kommuner och Landsting (SKL) (Swedish Association of Local Authorities and Regions (SALAR))[449]
- Upphandlingsutredningen (The Public Procurement Committee)[450]

Other information sources: public procurement in the defence sector:

According to data provided by the EDA, the "R&D (including R&T) Expenditure" of Sweden was EUR 151,08 million in 2009 and EUR 106,75 million in 2010. Further, the "Outsourced Defence Expenditure" of Sweden is reported to be EUR 0 in 2009 and EUR 90 million in 2010.

Other relevant sources of information include:

- Försvarets materielverk (Swedish Defence Materiel Administration)[451]
- The law on procurement of defence and security[452]

No additional information regarding defence procurement in Sweden could be obtained from the SwedishMoD.

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[446] http://www.kkv.se
[447] http://www.avropa.se
[448] http://www.kommers.se
[449] http://www.skl.se
[450] http://upphandlingsutredningen.se/
[451] http://www.fmv.se/en/Procurement/
[452] http://www.notisum.se/rnp/sls/lag/20111029.htm

3.27.f Future data provision to the European Commission

Data provision by the public procurement authorities

There is currently no view on future data provision by Swedish public authorities to the European Commission. This will mainly depend on whether Sweden will establish a central public procurement platform in the future.

The private tender alert data provider Mercell, which has provided below-EU-threshold data for Sweden in the framework of the present study, has declared that it is willing to provide similar data sets to the European Commission for a fee.

Data provision by the MoD

Any future data provision on public procurement in the defence sector in Sweden to the European Commission would have to be agreed with the SwedishMoD. In the framework of this study, the SwedishMoD has not been willing to provide any data.

Data provision by the national statistical office

Statistics Sweden regularly publishes data on R&D expenditure in Sweden.[453] The published statistics do not differentiate between R&D grants and procurement.

No additional information could be obtained from Statistics Sweden.

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[453]http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/Education-and-research/
under "research"

3.28 SWITZERLAND

This section presents estimates of the amount of ICT-related (sub-section 3.28.a), R&D (sub-section 3.28.b), and ICT-related R&D procurement (sub-section 3.28.c) in Switzerland. The figures are based on information included in the national public procurement database, which is only available for 2011. Estimates do not include the value of defence contracts.

The collection of data on procurement contracts by the national public authorities is illustrated in sub-section 3.28.d, while the availability of qualitative information, which can complement the estimates presented in the report, including the value of defence contracts, when available, is discussed in sub-section3.28.e.

Full country data set is provided in Excel format (see Annex 3).

3.28.a Public procurement of ICT

The total value of ICT public procurement contracts in Switzerland in 2011 was about **EUR 671.1 million**[454].

A breakdown of the overall ICT contract value across different areas of public sector activity is given in Table 3.28.a.1 over the year 2011[455]. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

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[454] Of which 2.97% is below the EU threshold and none above. 97% could not be classified according to the EU threshold.

[455] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Table 3.28.a.1- Switzerland ICT – Contract values by public sector activity

Public Sector Area	2011
Economic and financial affairs	3%
Education	2%
Electricity	2%
Environment	4%
Gas, oil and heat	0%
General public services	14%
Health	6%
Other	23%
Postal services	1%
Public order and safety	3%
Transport	42%
Unknown	1%
Water	0%
Total	100%

The contracting authorities that contributed most to expenditure in 2011 are listed in Table 3.28.a.2. Expenditure of these authorities covered 48% of the total and centred on IT services (77% of the total for the key authorities, e.g.ethernet services acquired by the Federal Office of Information and Communication Technology or the rail control system purchased by the Swiss Federal Railways, SBB), computing machinery and equipment (8%), and architectural and engineering services (5%, e.g. Zurich City). Inclusion in the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.28.a.2- Switzerland ICT 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Schweizerische Bundesbahnen SBB (Swiss Federal Railways)	Transport
Office fédéral de l'informatique et de la télécommunication (Federal Office of Information and Communication Technology)	Other
Confédération, Office fédéral des constructions et de la logistique (OFCL) (Federal Office of Constructions and Logistic)	General public services
Stadt Zürich (Zurich City)	General public services
Bundesamt für Strassen ASTRA, Bundesamt für Strassen ASTRA (Federal Office for Roads Authority, Federal Roads Authority)	Transport
EJPD	Public order and safety
Office fédéral des constructions et de la logistique (OFCL)	General public services
Nagra	Environment
BLS	Transport
Die Schweizerische Post	Postal services

3.28.b Public procurement of R&D

The total value of R&D public procurement contracts in Switzerland was about **EUR 60.8 million**[456] in 2011. Breakdown of ICT-related R&D overall contract value across different areas of public sector activity for 2011 is given in *Table 3.28.b. 1*.

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[456] 100% of the amount could not be classified according to the EU threshold.

Table 3.28.b. 1- Switzerland R&D – Contract values by public sector activity

Public Sector Area	2011
Education	46%
Environment	4%
General public services	1%
Other	47%
Unknown	2%
Total	100%

The contracting authorities that contributed to expenditure in 2011 are listed in *Table 3.28.b. 2*. Expenditure of these authorities covered 80% of the total and centred on construction work (EUR 11,5 million, e.g. development and construction at the SwissFEL by the Paul Scherrer Institute), laboratory, optical and precision equipment (EUR 10,9 million, e.g. second ion mass spectometre for the University of Lausanne) and radio, television, communication, telecommunication and related equipment (EUR 6.4. million, e.g. purchase of an X-ray table for the Paul Scherrer Institut). Inclusion in the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.28.b. 2- Switzerland R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Paul Scherrer Institut, Paul Scherrer Institut	Other
Eidgenössische Technische Hochschule Zürich (Federal Institute of Technology Zurich)	Education
Universität Zürich(University of Zurich)	Education
Université de Lausanne, Université de Lausanne (University of Lausanne)	Education
Nationale Genossenschaft für die Lagerung radioaktiver Abfälle (Nagra) (National Cooperative for the Disposal of Radioactive Waste	Environment

(Nagra))

Swiss Agency for Development and Cooperation (SDC), Global Programme Food Security	Other
Ecole Polytechnique Fédérale de Lausanne, Faculté des Sciences de Base (Federal Polytechnic institute of Lausanne)	Education
Eidg. Materialprüfungs- und Forschungsanstalt Empa (Swiss Federal Laboratories for Materials Testing and Research, Empa)	Other
ETH Zürich, Eidgenössische Technische Hochschule Zürich, Laboratorium für Organische Chemie (Swiss Federal Institute of Technology Zurich, Laboratory of Organic Chemistry)	Education
Eidgenössische Forschungsanstalt WSL (Swiss Federal Research Institute WSL)	Other

3.28.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in Switzerland was about **EUR 37.5 million**[457] in 2011[458]. A breakdown of the overall ICT-related R&D contract value across different areas of public sector activity is given in *Table 3.28.c. 1* over the year 2011.

Table 3.28.c. 1- Switzerland ICT – related R&D – Contract values by public sector activity

Public Sector Area	2011
Education	62%
Environment	6%
Other	28%
Unknown	4%
Total	100%

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[457] The amount of ICT related R&D procurement is 62% of the total amount of R&D procurement. This is due to the fact that, according to the classifications of Frascati Manual, in Switzerland, there was a large portion of R&D records belonging to the category ICT and ICT+.
[458] 100% of the total amount could not be classified according to the EU threshold.

The contracting authorities which contributed to expenditure in 2011 are listed in *Table 3.28.c. 2*. Expenditure of these authorities cover the 95% of the total spend and centered laboratory, optical and precision equipment (EUR 15,3 million, e.g. a mass spectrometer purchased by the University of Lausanne) and medical equipment (EUR 7,5 million, e.g. Paul Scherrer Institut). The contracts also provided for industrial machinery, telecommunication equipment and medical equipment. Inclusion in the list of key contracting authorities does not necessarily mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.28.c. 2- Switzerland ICT – related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
Paul Scherrer Institut, Paul Scherrer Institut	Other
Universität Zürich(University of Zurich)	Education
ETH Zürich, Eidgenössische Technische Hochschule Zürich (Swiss Federal Institute of Technology Zurich)	Education
Université de Lausanne, Université de Lausanne (University of Lausanne)	Education
Nationale Genossenschaft für die Lagerung radioaktiver Abfälle (Nagra) (National Cooperative for the Disposal of Radioactive Waste (Nagra))	Environment
Ecole Polytechnique Fédérale de Lausanne (Federal Polytechnic institute of Lausanne)	Education
Eidg. Materialprüfungs- und Forschungsanstalt Empa (Swiss Federal Laboratories for Materials Testing and Research, Empa)	Other
Universität Bern, Departement Klinische Forschung (University of Bern, Department of Clinical Research)	Education

3.28.d Collection of procurement data by public authorities

Legal context

In Switzerland, public procurement is regulated by all levels of government: by the confederation, the cantons and potentially also by the municipalities.[459] Yet, international agreements have defined the guiding principles of public procurement legislation in Switzerland. Their consistent implementation at all levels of government is ensured via cooperation forums and inter-cantonal agreements.

As Switzerland is neither a member of the European Union (EU) nor the European Economic Area (EEA), the Government Procurement Agreement (GPA) ("*Übereinkommen über das öffentliche Beschaffungswesen*"[460]) of the World Trade Organisation (WTO) represents the cornerstone of the Swiss public procurement legislation. It has led to a federal law on procurement ("*BöB, Bundesgesetz über das öffentliche Beschaffungswesen*"[461]) and to an ordinance on public procurement from the Federal Council ("*VöB, Verordnung über das öffentliche Beschaffungswesen*"[462]). At the cantonal level, the implementation of international procurement law has been achieved with an inter-cantonal agreement (*IVöB, Interkantonale Vereinbarung über das öffentliche Beschaffungswesen*[463]) binding all 26 cantons and their 3 000 municipalities.

One of the seven bilateral agreements signed between the European Community and the Swiss Confederation in 1999 ("*Bilaterals I*") focused on public procurement setting down the criteria according to which certain procurement must be put out to international public tender. The agreement extends the area of application of the WTO-GPA regulations. It also covers procurement by regions and municipalities, procurement by public and private companies in the sectors of rail transport, gas, and heating supply, as well as procurement by private companies which, on the basis of special or exclusive rights transferred to them by a public authority, are active in the sectors of drinking water, electricity supply, urban transport, airports, as well as river and sea transport.[464]

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[459] An overview of Swiss legislation on public procurement, notably with regard to the publication obligations, is provided under:
https://www.simap.ch/DOWNLOADPART/portalFileInformation/DE/LAW_ENTRY_0_ASSOCIATION_4_UPLOAD_1280129639677.pdf

[460] WTO-GPA: http://www.admin.ch/ch/d/sr/i6/0.632.231.422.de.pdf

[461] BöB: http://www.admin.ch/ch/d/sr/1/172.056.1.de.pdf

[462] VöB: http://www.admin.ch/ch/d/sr/1/172.056.11.de.pdf

[463] IVöB:
http://www.bpuk.ch/Libraries/K_IV%c3%b6B_d/INTERKANTONALE_VEREINBARUNG_%c3%9cBER_DAS_%c3%96FFENTLICHE_BESCHAFFUNGSWESEN_IV%c3%b6B.sflb.ashx

[464] EU-Switzerland bilateral agreement on public procurement: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:22002A0430(06):EN:HTML

The confederation government and the cantons cooperate to implement procurement law homogeneously and in a coherent manner, notably in the framework of the BPUK ("*Bau-, Planungs- und Umweltdirektoren-Konferenz*"[465]). For instance, joint efforts were undertaken to develop a common electronic platform, simap.ch, for government procurement notices including those of the large Swiss cities.[466]

The **thresholds for the publication of public procurement** in Switzerland for 2012 and 2013 were defined as follows[467]:

Contracting authorities	Thresholds		
	Works	*Supplies*	*Services*
Municipalities	CHF 8700 000 (EUR 6 000 000)	CHF 350 000 (EUR 240 000)	CHF 350 000 (EUR 240 000)
Cantons	CHF 8700 000 (EUR 6 000 000)	CHF 350 000 (EUR 240 000)	CHF 350 000 (EUR 240 000)
Federal authorities	CHF 8700 000 (EUR 6 000 000)	CHF 230 000 (EUR 160 000)	CHF 230 000 (EUR 160 000)
Utilities in the postal sector	CHF 8700 000 (EUR 6 000 000)	CHF 700 000 (EUR 480 000)	CHF 700 000 (EUR 480 000)
Utilities in the water, energy and transportation sectors	CHF 8700 000 (EUR 6 000 000)	CHF 700 000 (EUR 480 000)	CHF 700 000 (EUR 480 000)

[465] BPUK: http://www.bpuk.ch
[466] PPN (2010): *The comparative survey on public procurement systems across the PPN*, pp. 211ff, http://www.publicprocurementnetwork.org/docs/ItalianPresidency/Comparative%20survey%20on%20PP%20systems%20across%20PPN.pdf
[467] Thresholds for 2012/2013: http://www.bpuk.ch/Libraries/F%c3%b6B_Schwellenwerte_d/Mitteilung_Schwellenwerte_IV%c3%b6B_f%c3%bcr_die_Jahre_2012_2013.sflb.ashx as well as https://www.simap.ch/DOWNLOADPART/portalFileInformation/DE/LAW_ENTRY_0_ASSOCIATION_4_UPLOAD_1276760173406.pdf

Utilities in the rail, gas and heat sectors	CHF 8 000 000 (EUR 6 000 000)	CHF 640 000 (EUR 400 000)	CHF 640 000 (EUR 400 000)
Utilities in the telecommunication sector	CHF 8 000 000 (EUR 6 000 000)	CHF 960 000 (EUR 600 000)	CHF 960 000 (EUR 600 000)

Public procurement data collection process

In Switzerland, public procurement data is collected and stored digitally on a common portal that covers the different levels of government[468]

The platform is operated by simap.ch ("*Verein simap.ch*"[469]) which was jointly founded by the Confederation and the cantons. The Financial Directorate of the Canton of Zürich ("*Kantonale Drucksachen- & Materialzentrale Zürich, kdmz*"[470]) and the Federal State Secretariat for Economic Affairs (SECO)[471] are responsible for operating the portal.

The contracting authorities enter data directly in the simpap.ch database. Predefined templates, automatic data checks, user manuals and a helpdesk ensure the quality of the data. Yet there are no systematic or manual checks of data quality by the platform operator.

Public procurement is verified by the court of auditors (*Finanzkontrolle*)[472] at the relevant level of government in specific cases of suspicion of fraud as well as in random inspections.

Data that is entered in the simap.ch database is transmitted once a day to the European Publication Office for inclusion in the TED database. Yet, due to the third-country-status of Switzerland, two particularities have to be noted: (1) The thresholds for publication of Swiss public procurement on TED are not those of the EU Public Procurement Directives, but those of the WTO-GPA, the EU-Switzerland bilateral agreement as well as Swiss implementation legislation; (2)

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[468] http://www.simap.ch
[469] https://www.simap.ch/shabforms/COMMON/application/applicationGrid.jsp?template=1&view=15&page=/MULTILANGUAGE/simap/content/aboutus.jsp
[470] http://www.kdmz.zh.ch/internet/finanzdirektion/kdmz/de/home.html
[471] http://www.seco.admin.ch
[472] The relevant body at confederation level is the Swiss Federal Audit Office (*Eidgenössische Finanzkontrolle*), http://www.efk.admin.ch/

Even though German is an official language of both Switzerland and the EU and a large share of Swiss public procurement takes place in German, Swiss public procurement notices on TED can only be published in French or English, the two official languages of the WTO.

It is estimated by SECO that close to 100% of all Swiss public procurement at confederation level (above national thresholds) are published on TED, while only about 50% the public procurement at canton level (above national thresholds) are transmitted to TED. This is mainly due to the additional effort that would be required to translate tender notices of German-speaking cantons to either French or English. This effort is often not undertaken because the WTO-GPA publication obligations are already fulfilled by a publication (in German) on the simap.ch database and because Swiss contracting authorities have no legal publication obligations vis-à-vis the European Publication Office (TED).

Contracting authorities can attach additional procurement documents to their tender notices on the simap.ch platform. Furthermore, contracting authorities can answer tenderers' questions online in protected forums. An e-procurement feature is not yet available on simap.ch.

Coverage of the public procurement database

In Switzerland, about 20% of government procurement takes place at the confederation level, 38% at the cantonal and 42% at the cities level for a total of about CHF 36 billion.[473] At the level of the confederation, three central procurement agencies exist: (1) *armasuisse* for procurement in the area of defence, (2) the Federal Office for Works and Logistics (*Bundesamt für Bauten und Logistik*), and the Federal Travel Office (*Bundesreisezentrale*). The roles and responsibilities of these agencies are regulated by federal ordinance on the organisation of public procurement by the confederation (*Verordnung über die Organisation des öffentlichen Beschaffungswesens des Bundes*).[474]

Swiss authorities at all levels of government, i.e. confederation, cantons and municipalities, are covered by the SIMAP database. Potentially all types of public procurement can be entered into the simap.ch database; no types of procurement are excluded from the publication. However, in practice most public authorities do not publish their procurement if they are not legally obliged to do so. This issue concerns both below national (i.e. WTO-GPA) threshold procurement as well as specific exemptions under the WTO-GPA.

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[473] PPN (2010): The comparative survey on public procurement systems across the PPN, pp. 211ff, http://www.publicprocurementnetwork.org/docs/ItalianPresidency/Comparative%20survey%20on %20PP%20systems%20across%20PPN.pdf
[474] Org-VöB: http://www.admin.ch/ch/d/sr/1/172.056.15.de.pdf

Inter alia, the following areas of public procurement are covered by specific exemptions under the WTO-GPA[475]:

- procurement of arms, ammunition or war materials, or procurement indispensable for national security or for national defence purposes;

- procurement in the rail transport, gas, and heating supply, drinking water, electricity supply, urban transport, airports, as well as river and sea transport sectors[476];

- procurement in the field of telecommunications;

- procurement of prototypes or a first product or service which are developed at its request in the course of, and for, a particular contract for research, experiment, study or original development.

SECO explains that voluntary publications of public procurement notices in these areas take place only very rare cases.

Public procurement of R&D OR ICT / R&D of ICT is not published in a specific category on the simap.ch portal. As Switzerland is neither member of the EU nor of the EEA, the simap.ch portal does not differentiate between EU-wide and non-EU-wide procurement. However, it is possible to search separately for WTO-wide and non-WTO-wide procurement.

According to Swiss public procurement authorities, the quality and completeness of the data on the simap.ch portal varies depending on the commitment of the different contracting authorities: While data quality is very high for public procurement at confederation level, it is lower for some of the 26 cantons. As a principle, the contracting authorities are responsible for the quality and completeness of their publications on the simap.ch portal (self-declaratory principle); no systematic checks are carried out.

In this regard it is also important to note that an important share of Swiss contracting authorities only publish tender notifications (mandatory above national thresholds), but do not issue contract award notices (on a voluntary basis). As a result, the available data on contract values is somewhat fragmentary. Furthermore, many contracting authorities at canton and

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[475] Cf. articles I, XV and XXIII (http://www.wto.org/english/docs_e/legal_e/gpr-94_01_e.htm) as well as the detailed listing in appendix I for Switzerland of the WTO-GPA (http://www.wto.org/english/tratop_e/gproc_e/appendices_e.htm#swi).
[476] These are, however, included by the EU-Switzerland bilateral agreement.

municipality level do not publish the effective contract values, but only vague price indications such as price ranges or fees per hour.[477]

3.28.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

There are no other sources with regard to public procurement data in Switzerland than the national simap.ch portal.

The private tender alert provider *Infodienst Ausschreibungen*[478], a member of Tender Service Group, compiles its database from data collected from the simap.ch portal. It does not cover additional procurement and does not hold superior information.

Other information sources: public procurement in the defence sector

As mentioned above, procurement of arms, ammunition or war materials, or procurement indispensable for national security or for national defence purposes does not fall under the publication obligations of the WTO-GPA. The federal procurement law BöB (Article 3) also explicitly excludes its application to these areas.

In 2010, the Federal Council has defined a procurement strategy for the Swiss MoD (*Beschaffungsstrategie des Bundesrates für das VBS*)[479]. The procurement strategy breaks down goods and services first according to the WTO-GPA / BöB rules (military and dual-use vs. civilian) and then according to the procurement goals.

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[477] Contracting authorities are required to communicate the effective contract values on the simap.ch portal. Yet, this information is not published/disclosed on the platform. It only serves for internal statistical purposes.
[478] See http://www.infodienst-ausschreibungen.ch
[479] http://www.ar.admin.ch/internet/armasuisse/en/home/themen/beschaffung/rustungspolitik.parsys.2905.downloadList.99396.DownloadFile.tmp/beschaffungsstrategieen.pdf
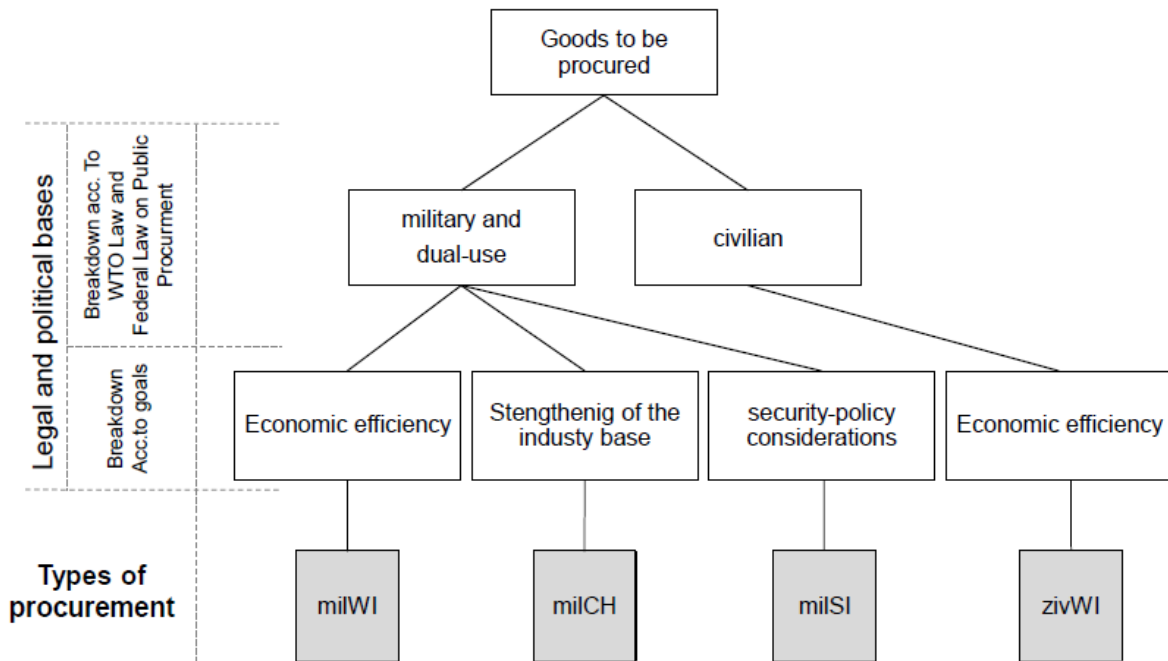
The Swiss Defence Procurement Agency *armasuisse* is in charge of procuring both military,dual-use and civilian goods and services for the Swiss MoD and Armed Forces. All civilian procurement (type "*zivWI*") above the national thresholds are published on the simap.ch platform in order to comply with the WTO-GPA[480]; these typically include non-sensitive ICT procurement, but no R&D and R&D of ICT procurement. All other procurement operated by *armasuisse* for the MoD and the Armed Forces are excluded from publication. *armasuisse* was unwilling to provide any data on military procurement (types "*milWI*", "*milCH*" and "*milSI*").

Switzerland is not a member of the European Defence Agency (EDA) and therefore does not submit any statistical data to this entity.

The Swiss GBAORD statistics provide a relatively detailed overview of how much money *armasuisse* spent on R&D and also differentiate between modes of R&D expenditure.

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[480] Thisprocurement can be identified on simap.ch by searching for "armasuisse" or alternatively for "CC WTO" and "CC OMC".

R&D expenditure by *armasuisse* in 2010 by spending mode, in thousand CHF[481]			
Intramural R&D	*R&D contracts*	*R&D grants*	*Total*
4245	12776	-	17021

The statistical data show that *armasuisse* spent CHF 12776 000 on R&D procurement contracts in 2010. *armasuisse* did not make use of grants to fund R&D.

There are no other data sources that could provide a precise view of military procurement of R&D OR ICT / R&D of ICT in Switzerland. Information on defence procurement published by the Swiss MoD is limited to large scale off-the-shelf procurement which requires democratic approval.[482]

3.28.f Future data provision to the European Commission

Data provision by public procurement authorities

In general, the Swiss public procurement authorities are willing to provide the European Commission with public procurement data in future, e.g. on an annual basis. The conditions of such a data provision would have to be negotiated by the European Commission with simap.ch.

Data provision by the MoD

The Swiss Defence Procurement Agency *armasuisse* is available to respond to questionnaires from the European Commission for potential future data gathering exercises.

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[481] Source:
http://www.bfs.admin.ch/bfs/portal/fr/index/themen/15/09/key/ind2.indicator.20204.202.html
See also the section "statistical data" below.
[482]http://www.vbs.admin.ch/internet/vbs/de/home/themen/rust/2012/dokumente.html

Data provision by the national statistical office

(A) Performer-based measurement of R&D OR ICT / R&D of ICT procurement, BERD

The quadrennial Swiss BERD statistics[483] differentiate between different modes of public funding of business R&D. The survey includes the question "*How much of the intramural R&D is funded by public contracts of R&D?*" which serves as a basis for performer-based measurement of R&D procurement.

The data below shows that **Swiss businesses** reported to have concluded **public procurement contracts for R&D** purposes worth CHF 198 million in 2008, including CHF 1 million in the ICT manufacturing sector and CHF 32 million in the ICT services sector.

R&D grants play a minor role for business R&D in Switzerland and are therefore included in the categories "other sources in Switzerland" and "funding from abroad".

Intermural business expenditure on R&D by economic sector and source of financing, 2008, in million CHF

	Companies' own resources	Other private companies in Switzerland	Public sector in Switzerland (contracts only)	Higher education institution in Switzerland	Other sources in Switzerland (includes grants)	Funding from abroad (includes grants)	Total
Food	548	..	..	..	0	0	548
Chemicals	576	50	1	0	1	15	643
Pharmaceuticals	4 607	5	0	..	..	16	4 628
Metallurgy	185	14	1	0	1	32	232
Machinery	1 273	23	32	1	3	46	1 378
High-technology instruments	623	12	0	0	2	65	701
ICT manufacturing	912	131	1	..	2	57	1 102
ICT services	312	35	32	3	3	65	450
Research and	407	58	103	3	65	493	1 129

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[483] Data available under:
http://www.bfs.admin.ch/bfs/portal/fr/index/themen/15/09/key/ind2.indicator.20205.202.html

development							
Other	*984*	*91*	*29*	*2*	*7*	*55*	*1 167*
Total	**10 426**	**417**	**198**	**9**	**84**	**844**	**11 979**

The latest available figures are from 2008.

It is not mandatory for companies to answer the survey. In the last business survey (2012) the response rate was 64%. The response rate on R&D procurement was somewhat lower; yet the Swiss Federal Statistical Office (FSO) uses estimations for cases of non-response and estimates that the statistics linked to this question are reliable and of good quality.

Specific questions related to ICT / R&D of ICT procurement are currently not included in the Swiss BERD survey. While the FSO sees no technical difficulty to including an ICT-related question in the business questionnaire, it expects that there would be no political support for such an additional question. The questionnaire is limited to a maximum of 4 pages and every additional question needs to be duly justified and to obtain political support in order to be included in the survey.

(B) Funder-based measurement of R&D OR ICT / R&D of ICT procurement, GBAORD

The Swiss FSO has led Europe in implementing OECD recommendations for GBAORD statistics, including a clear differentiation between modes of R&D funding.

The Swiss GBAORD data[484] is structured as follows:

- **Public funding of domestic R&D performing institutions:**
    - Indirect federal and cantonal public funding (GFU)
    - Government intramural R&D expenditure
    - R&D grants in Switzerland, without grants to the SNSF and to the CTI

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[484] Swiss Federal Statistical Office (2012): *Public Funding of Research in Switzerland, 2000-2010*, http://www.bfs.admin.ch/bfs/portal/en/index/themen/04/22/publ.html?publicationID=4917
The corresponding dataset is available under:
http://www.bfs.admin.ch/bfs/portal/fr/index/themen/15/09/key/ind2.indicator.20204.202.html

- **Public funding of domestic R&D programmes/projects (without cross-border flows of funds):**
    - <u>Government R&D contracts in Switzerland</u>
    - Grants to the SNSF
    - Grants to the CTI
    - <u>Cantonal R&D contracts to higher education institutions in Switzerland</u>
- **Public funding of R&D performing institutions abroad (incl. intergovernmental R&D organisations):**
    - R&D grants abroad (without FP and without ESA)
- **Public funding of international R&D programmes/projects abroad (with cross-border flows of funds):**
    - Grants to the FP
    - Grants to ESA
    - <u>Federal R&D contracts to higher education institutions abroad</u>
    - <u>Federal R&D contracts to business enterprises abroad</u>
    - International R&D programmes abroad
    - <u>Federal R&D contracts to NGO</u>
    - <u>Other federal R&D contracts abroad</u>

The sum of <u>underlined items</u> equals the **total amount public procurement of R&D** by Swiss public authorities and agencies. Data for 2000-2010 is provided below.

Swiss GBAORD by funding mode, 2000-2010, in thousands CHF (current prices)

	2000	2002	2004	2006	2008	2010
Indirect federal and cantonal public funding (GFU)	1 694 208	1 825 328	1 964 904	2 127 690	2 579 113	2 783 443
Government intramural R&D expenditure	141 292	139 162	139 886	120 800	122 539	124 201
R&D grants in Switzerland, without grants to the SNSF and to the CTI	188 472	285 138	192 020	161 855	135 036	151 546
Public funding of domestic R&D performing institutions	**2 023 972**	**2 249 628**	**2 296 810**	**2 410 345**	**2 836 688**	**3 059 190**
* Governement R&D contracts in Switzerland	86 794	76 482	74 541	74 397	78 692	82 857
Grants to the SNSF	316 360	307 603	426 286	439 884	612 156	772 780
Grants to the CTI	87 521	85 950	108 625	108 457	103 735	118 216

* Cantonal R&D contracts to higher education institutions in Switzerland	27 457	34 437	25 864	26 339	59 866	43 185
Public funding of domestic R&D programmes/projects (without cross-border flows of funds)	**518 132**	**504 472**	**635 316**	**649 077**	**854 449**	**1 017 038**
R&D grants abroad (without FP and without ESA)	106 778	129 567	118 576	81 627	67 277	97 222
Public funding of R&D performing institutions abroad (incl. intergovernmental R&D organisations)	**106 778**	**129 567**	**118 576**	**81 627**	**67 277**	**97 222**
Grants to the FP	..	..	198 866	218 593	240 146	310 284
Grants to ESA	118 000	123 027	126 417	140 722	155 990	145 355
* Federal R&D contracts to higher education institutions abroad	957	1 425	699	1 401	1 392	1 164
Federal R&D contracts to business enterprises abroad	221	583	1 501	2 008	2 429	2 329
International R&D programmes abroad	859	2 227	352	1 325	4 358	2 741
* Federal R&D contracts to NGO	..	1 415	1 068	217	1 101	1 423
* Other federal R&D contracts abroad	696	2 405	1 979	989	1 713	2 480
Public funding of international R&D programmes/projects abroad (with cross-border flows of funds)	**120 733**	**131 082**	**330 882**	**365 255**	**407 129**	**465 776**
Total GBAORD	**2 769 616**	**3 014 749**	**3 381 584**	**3 506 304**	**4 165 542**	**4 639 226**
*** Total R&D procurement**	**115 904**	**116 164**	**104 151**	**103 343**	**142 764**	**131 109**

Higher education institutions, public research institutes and public R&D funding agencies are considered as *beneficiaries* of governmental R&D funding in the Swiss GBAORD statistics (i.e. beneficiaries of indirect funding, contracts and grants). Any R&D procurement by these actors is not taken into account in the Swiss GBAORD statistics as this would lead to double-counting of R&D expenditure.

ICT / R&D of ICT procurement are currently not measure in the Swiss GBAORD statistics. While it would be technically feasible to introduce additional questions in the GBAORD survey for public administrations with regard to ICT, political support would be required for this to be implemented in practice.

For public extramural R&D expenditure, the Swiss GBAORD survey distinguishes between different types of beneficiaries as well as between grants and contracts. The questionnaire design is as follows:

1. Domestic beneficiaries

2. Beneficiaries abroad

1. Domestic beneficiaries	Contracts in 1000 Fr.	Grants in 1000 Fr.
1.1. Higher Education Sector		
1.2. Business Enterprise Sector		
1.3. Non Profit Institutions		
1.4. Regions (Cantons, Municipalities)		
1.5. Funding R&D Agencies		
1.6. Other Domestic Beneficiairies		
Total Domestic Beneficiaries		
1.7. Other Government Departments		
Total Domestic Beneficiaries with Government Departments		

2. Beneficiaries abroad	Contracts in 1000 Fr.	Grants in 1000 Fr.
2.1. Higher Education Sector		
2.2. Business Enterprise Sector		
2.3. Non Governmental Organisations		
2.4. R&D Programmes abroad		
2.5. Other beneficiairies abroad		
Total Beneficiaries Abroad		

With regard to the different **modes of public R&D funding in Switzerland**, one can observe a growing relative importance for grants; while the share of intramural R&D expenditure and contracts is decreasing (cf. figure and tables below).

Government R&D Expenditure by Type of Expenditure, 1986-2010
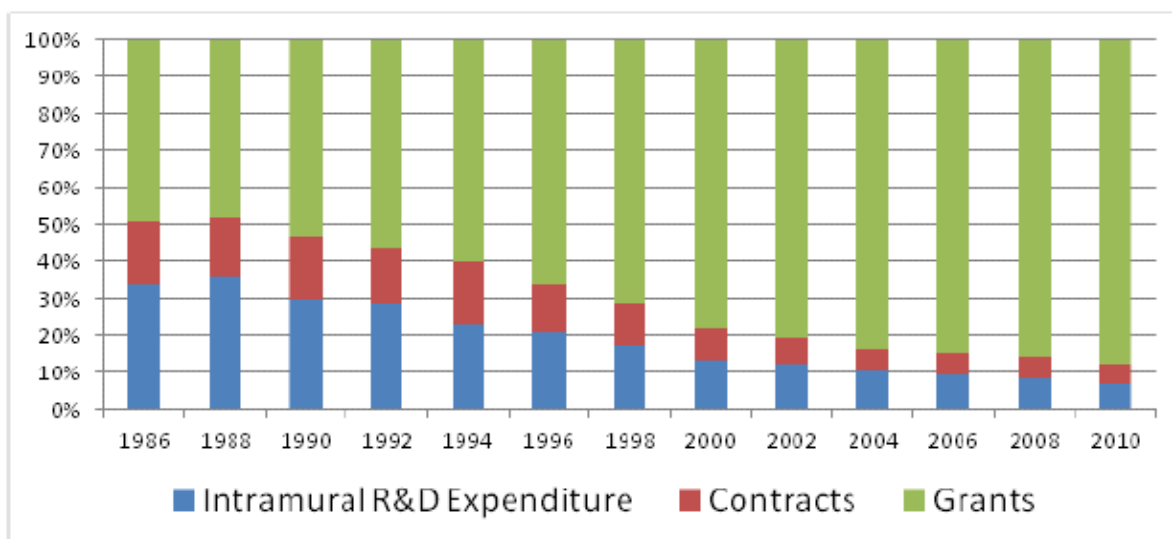
R&D expenditure by the Swiss federal government by funding mode, 1986-2010, in thousand CHF (current prices)

Funding mode	1986	1988	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Intramuros R&D expenditure	244 537	310 540	302 553	339 517	274 560	251 818	192 035	141 292	139 162	139 886	120 800	122 539	124 200
Contracts	121 465	137 603	167 156	174 805	199 371	157 417	133 159	89 527	84 537	80 140	80 337	97 458	101 494
Grants	344 986	405 513	531 369	641 269	731 814	794 930	824 358	817 131	931 285	1 170 790	1 151 138	1 306 567	1 586 878
Total	**710 988**	**853 656**	**1 001 078**	**1 155 591**	**1 205 745**	**1 204 165**	**1 149 552**	**1 047 950**	**1 154 984**	**1 390 816**	**1 352 275**	**1 526 564**	**1 812 572**

R&D expenditure by the Swiss federal government by funding mode, 1986-2010, in %

Funding mode	1986	1988	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Intramuros R&D expenditure	34	36	30	29	23	21	17	13	12	10	9	8	7
Contracts	17	16	17	15	17	13	12	9	7	6	6	6	6
Grants	49	48	53	56	60	66	71	78	81	84	85	86	88
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

For the **beneficiaries of public R&D contracts**, the following data is available (cf. figure and table below).

Public Contracts of R&D by Beneficiary, 1992-2010
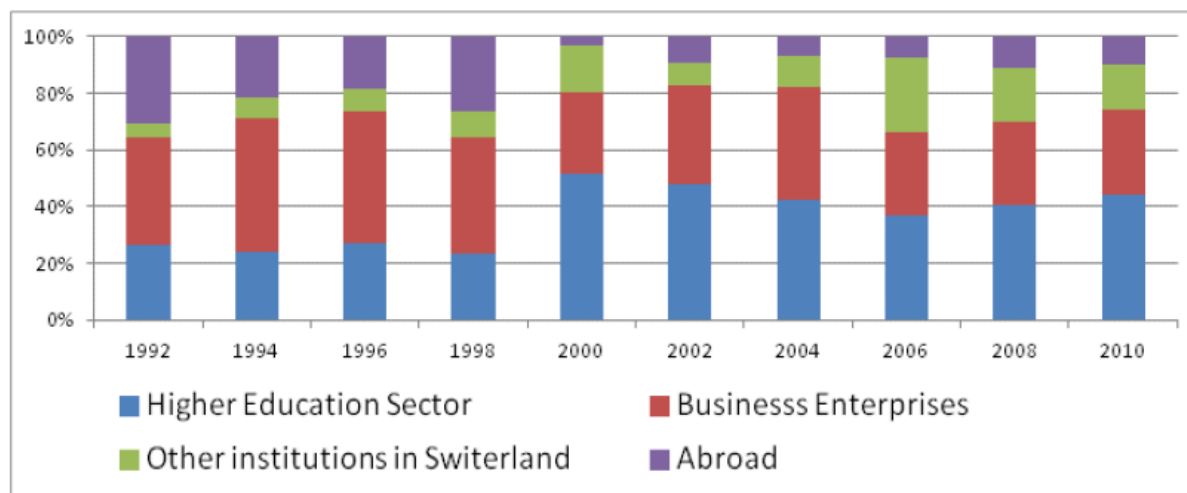
R&D contracts of the federal government by beneficiary, 1992-2010, in thousand CHF (current prices)

Beneficiary	2000	2002	2004	2006	2008	2010
Hautes écoles universitaires (HEU)	*22 665*	*20 010*	*15 271*	*12 896*	*16 250*	*18 986*
Ecoles polytechniques fédérales (EPF)	*20 590*	*16 900*	*13 771*	*14 311*	*16 577*	*18 762*
Hautes écoles spécialisées (HES)	*2 418*	*3 801*	*4 783*	*2 447*	*6 788*	*7 148*
Higher education sector	**45 673**	**40 711**	**33 825**	**29 654**	**39 615**	**44 896**
Private companies	25 894	29 756	31 964	23 542	28 526	30 487
Cantons and communes	458	240	1 376	1 182	2 551	894
Private non-profit organisations	7 117	3 696	5 478	5 993	7 112	5 545
Other organisations in Switzerland	7 652	2 079	1 898	14 026	8 661	9 535
Total Switzerland	**86 794**	**76 482**	**74 541**	**74 397**	**86 465**	**91 357**
Higher education institutions abroad	957	1 425	699	1 401	1 392	1 164
Private companies abroad	221	583	1 501	2 008	2 429	2 329
International organisations abroad	859	2 227	352	1 325	4 358	2 741

Other organisations abroad	696	3 820	3 047	1 206	2 814	3 903
Total abroad	**2 733**	**8 055**	**5 599**	**5 940**	**10 993**	**10 137**
Total	**89 527**	**84 537**	**80 140**	**80 337**	**97 458**	**101 494**

Finally, for the main **funding departments/agencies of R&D procurement contracts**, the Swiss GBAORD statistics provide the data depicted in the table below. Such detailed information is not available for the cantons.

R&D contracts of the federal government by funding department, 2010, in CHF thousand (current prices)	
Funding department of the federal government	**2010**
Federal Chancellery	..
Federal Department of Foreign Affairs	11 166
Swiss Agency for Development and Cooperation	*8 657*
Federal Department of Home Affairs	12 187
Federal Office of Public Health	*9 014*
State Secretariat for Education and Research	*287*
MétéoSuisse	*160*
Federal Department of Justice and Police	602
Federal Department of Defence, Civil Protection and Sport	17 059
armasuisse	*12 776*
Federal Department of Finance	..
Federal Department of Economic Affairs, Education and Research	16 431
Commission for Technology and Innovation	*8 500*
Agroscope	*246*

Federal Department of the Environment, Transport, Energy and Communications	42 997
Federal Office of Energy	*20 802*
Total federal administration	**100 442**
Swiss Alcohol Board	..
Swiss National Museum	1 052
TOTAL	**101 494**

(C) National accounts data for the measurement of R&D OR ICT / R&D of ICT procurement

Switzerland does not produce national account aggregates.

(D) Alternative approaches to the measurement of R&D OR ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

The Swiss BERD and GBAORD statistics are already amongst the most advanced in Europe with regard to the measurement of different modes of R&D funding (contracts vs. grants).

With regard to the measurement of procurement of ICT, no indicators have been developed so far. Yet, the FSO has been asked by public authorities to develop new indicators for ICT. The FSO is pursuing its efforts to refine its R&D statistics and closely follows the relevant OECD recommendations and guidelines. If international guidelines (OECD, EU) with regard to ICT procurement were to be introduced, the FSO would certainly rapidly implement these.

The FSO underlines that in order to establish new statistics, political support is required. This can be best achieved if an international guideline (OECD, EU) recommends such a new statistic.

The FSO has not yet considered the use of administrative public procurement data to compile statistics. The FSO will discuss with SECO, the authority in charge of the Swiss public procurement platform simap.ch, about opportunities to better exploit this data.

3.29 UNITED KINGDOM

This chapter presents estimates of the amount of ICT-related (3.29.a), R&D (3.29.b), and ICT-related R&D procurement (3.29.c) in the United Kingdom. The figures do not include the value of defence contracts, and are based on: (a) EU-regulated contracts published in the OJ/TED and (b) below-threshold contracts, from the national public procurement database.

The collection of data on procurement contracts by the national public authorities is illustrated in paragraph 3.29.d, while the availability of qualitative information that can complement the estimates presented in the report, including the value of defence contracts, when available - is discussed in paragraph 3.29.e.

Full country data set is provided in Excel format (see Annex 3).

3.29.a Public procurement of ICT

The total value of ICT public procurement contracts in the UK in 2011 was about **EUR 13.2 billion**[485].

A breakdown of the overall ICT contract value across different areas of public sector activity is given in *Table 3.29.a. 1*[486]over 2011. The category 'General public services' includes institutions and organisations providing a number of different services, which can be active at the national, regional and local level.

Table 3.29.a. 1 -UK ICT – Contract values by public sector activity

Public Sector Area	2011
Economic and financial affairs	0%
Education	5%
Electricity	1%
Environment	4%

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[485] 96.41% is above EU threshold while 2.05% is below. 1.53% is unknown.
[486] The breakdown is primarily based on the sector classification provided in the TED and national databases. Reliability of the classification might be affected by the fact that contracting authorities or entities performing similar functions can sometimes be classified differently. As an example, the Department of Education of a municipality might be categorised as 'General public services' or 'Education'. This also applies to the analyses carried out on R&D contracts (see the following subsections).

Public Sector Area	2011
Gas, oil and heat	0%
General public services	28%
Health	6%
Other	31%
Postal services	0%
Public order and safety	12%
Transport	4%
Unknown	4%
Water	4%
Total	100%

The contracting authorities that contributed most to expenditure in 2011 are listed in *Table 3.29.a. 2*. Expenditure of these authorities covered 46% of the total and centred on IT services (46% of the total for the key authorities), administration, defence and social security services (16%) and business services (9%). Inclusion in the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of ICT public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.29.a. 2 – UK ICT – Key contracting authorities

Contracting authority / entity	Public sector area
The Department for Work and Pensions	Other
Ministry of Justice	Public order and safety
Buying Solutions	Other
North Somerset Housing Limited	Other
Wandsworth Borough Council	General public services
The Scottish Ministers	General public services

Contracting authority / entity	Public sector area
Scottish Environment Protection Agency	Environment
Sandwell Metropolitan Borough Council	General public services
Skills Solution Limited	Other
London Borough of Barking & Dagenham	General public services

3.29.b Public procurement of R&D

The total value of R&D public procurement contracts in the UK was about **EUR 495.2 million**[487] in 2011. Breakdown of ICT-related R&D overall contract value across different areas of public sector activity over 2011 is given in *Table 3.29.b. 1*.

Table 3.29.b. 1 – The UK R&D -Contract values by public sector activity

Public Sector Area	2011
Education	53%
Environment	1%
General public services	4%
Health	15%
Other	21%
Unknown	3%
Water	2%
Total	100%

The contracting authorities that contributed most to expenditure in 2011 are listed in *Table 3.29.b. 2*. Expenditure of these authorities covered 37% of the total and centred on construction work (EUR 132.9 million or 36% of the total amount), medical equipment, pharmaceuticals and personal care products (EUR 75 million, of which EUR 30.5 million was for the purchase of X-ray devices required by RCUK SSC LTD.), research and development services and related

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[487] 99.24% is above EU threshold while 0.42% is below and 0.34% is unknown.

consultancy services (EUR 64.7 million, especially for the Department for International Development) and IT services (EUR 44.3 million, e.g. consulting services for the European Centre for Connected Health). Contracts also provide laboratory, optical and precision equipment and industrial machinery. Inclusion in the list of key contracting authorities does not necessarily mean the institution or organisation is a major contributor to the total value of R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.29.b. 2 – The UK R&D - Key contracting authorities

Contracting authority / entity	Public sector area
Department for International Development	Other
RCUK SSC LTD	Other
The Common Services Agency (NHS National Services Scotland)	Health
University of Exeter	Education
College Facilities Ltd for and on behalf of King's College London	Education
European Centre for Connected Health	Health
University of Leeds	Education
Health Protection Agency	Health
Bio Products Laboratory Limited	Health
Diamond Light Source Ltd	Other

3.29.c Public procurement of R&D ICT

The total value of R&D ICT-related public procurement contracts in the United Kingdom was about **EUR 149.4 million**[488] in 2011. A breakdown of the overall ICT-related R&D contract value across different areas of public sector activity is given in *Table 3.29.c. 1* over 2011.

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[488] 99.5% of the amount is above EU threshold while 0.18% is below and 0.32% is unknown.

Table 3.29.c. 1- The UK ICT – related R&D – Contract values by public sector activity

Public Sector Area	2011
Education	51%
Environment	1%
General public services	1%
Health	33%
Other	5%
Transport	1%
Unknown	8%
Total	100%

The contracting authorities which contributed most to expenditure in 2011 are listed in *Table 3.29.c. 2*. Expenditure of these authorities covered 53% of the total and centred on IT services (EUR 49.8 million), medical equipment (EUR 27.5 million) and laboratory, optical and precision equipment (EUR 11.6 million).

Inclusion in the list of the key contracting authorities does not mean the institution or organisation is in general a major contributor to ICT-related R&D public procurement contracts in the country. In fact, individual authorities or entities might have launched (multi-annual) contracts related to specific needs that will not be repeated in following years.

Table 3.29.c. 2 -The UK ICT – related R&D 2011 – Key contracting authorities

Contracting authority / entity	Public sector area
The Common Services Agency (NHS National Services Scotland)	Health
European Centre for Connected Health	Health
Swansea University	Education
University College London	Education

United Kingdom Atomic Energy Authority	Unknown
University Hospitals of Leicester	Health
University of Sheffield	Education
Diamond Light Source Ltd	Other
University of Exeter	Education
The Univesrity of Manchester	Education

3.29.d Collection of procurement data by public authorities

Legal context

Public procurement in the UK is regulated by a number of laws and decrees transposing the relevant European legislation[489]:

- **Standard procurement regime:**
    - The Public Contracts Regulations 2006 (as amended by the Public Contracts and Utilities Contracts (Amendment) Regulations 2007 and the Public Procurement (Miscellaneous Amendments) Regulations 2011) (the Public Contracts Regulations) (these cover England & Wales, NI);[490]
    - Public Contracts (Scotland) Regulations 2006.[491]

- **Procurement in the water, energy, transportation and postal sectors:**
    - The Utilities Contracts Regulations 2006 (as amended by the Public Contracts and Utilities Contracts (Amendment) Regulations 2007 and the Public Procurement (Miscellaneous Amendments) Regulations 2011) (the Utilities Contracts Regulations) (cover England & Wales);[492]

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[489] For more details on the legal framework in the UK see: http://www.legislation.gov.uk.
[490] http://www.legislation.gov.uk/uksi/2006/5/contents/made
[491] http://www.legislation.gov.uk/ssi/2006/1/contents/made
[492] http://www.legislation.gov.uk/uksi/2006/6/part/4/made

- o Utilities Contracts (Scotland) Regulations 2006.[493]

- **Defence and security procurement**
  - The Defence and Security Public Contracts Regulations 2011.

The standard **national threshold for the publication of public procurement** in the UK is EUR 10 000.

Public procurement data collection process

Since 2010 there has been a drive within the UK Government to promote transparency and efficiency in procurement. The UK Government has identified the need for greater transparency across all government operations. As part of its transparency agenda, the following requirements were introduced for all central government departments (including their agencies), all non-departmental public bodies, NHS bodies and trading funds:

- all new central government information, communications and technology (ICT) contracts must be published online;

- all new central government tender documents for contracts over GBP 10 000 must be published on a single website made available to the public free of charge; and

- all new central government contracts must be published in full. The portal[494] was launched in January 2011 as the Government's single platform for providing access to the above public sector procurement-related information.[495]

The Efficiency and Reform Group in the Cabinet Office is in charge of policy for collating procurement data and publishing it on the UK's online portal[496].

In addition, part 6 of the Protection of Freedoms Bill requires public sector "datasets" to be made freely available in an open-source format to enable reuse by third parties, thereby expanding the reach of freedom of information legislation.

Responsibility for collecting the information that is uploaded to the system lies with the individual departments. The procurement information is uploaded manually to the Contracts Finder website. Nominated individuals for each

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[493] http://www.legislation.gov.uk/ssi/2006/2/contents/made
[494] www.contractsfinder.businesslink.gov.uk
[495] See inter alia: UK public procurement, Ashurst, October 2012.
[496] www.contractsfinder.businesslink.gov.uk

department were trained when the system was implemented; changes or enhancements to the system are promulgated on an ad hoc basis.

Coverage of the public procurement database

The Public Contracts Regulations apply to public sector "contracting authorities", i.e. state, regional and local authorities, bodies governed by public law, and associations formed by one or several of such authorities or bodies. Schedule 1 to the Public Contracts Regulations contains an express list of public bodies either by category or name. In essence, the term "contracting authority" covers all public bodies that spend public money.

The Public Contracts Regulations require contracting authorities to report contract types, values and location. In Scotland, the same reporting requirements are imposed on public authorities by the Public Contracts (Scotland) Regulations 2006. The Utilities Contracts Regulations apply to "public" utilities, which comprise the same list of public bodies as the Public Contracts Regulations, including public undertakings (i.e. undertakings over which the State exercises a "dominant influence"), so long as they are performing a utility activity. For a private party to qualify as a utility, it must "operate on the basis of special and exclusive rights granted by a competent UK authority" in relation to a utility activity.

General transparency rules, which contain de minimum levels for publication (see above), apply to procurement information. However, some Departments choose to have a lower threshold at which to publish.

Procurement that is subject to the Regulations has to comply with specific advertising obligations (typically a requirement to publish a contract notice in the EU Official Journal). However, in certain very carefully controlled situations, procurement, although subject to the Regulations, does not have to be advertised and can be negotiated directly with a chosen provider. The following exceptions to the requirement to engage in a competitive procurement process are interpreted restrictively and need to be handled with considerable care:

a) **the "sole provider" exemption:** where, for technical or artistic reasons, or reasons connected with the protection of exclusive rights (i.e. intellectual property rights), only a single entity can meet the procurement needs;

b) **the "failure of previous open/restricted procedure" exemption:** where there is an absence of tenders, suitable tenders, or applications in response to an invitation to tender. This exemption may also apply in circumstances where tenders exceed a contracting authority's budget;

c) **the "urgency" exemption:** in cases of extreme urgency for reasons unforeseeable by and not attributable to the contracting authority. Extreme urgency is more likely to persist in circumstances where the health and safety of the public is at stake and the likelihood of harm during the period of delay is considerable; and

d) **the "additional works" exemption:** where a contracting authority requires a contractor to carry out unforeseen additional works or services, further to a competitively tendered project, which could not be provided for separately without major inconvenience and which do not exceed 50 per cent of the original procurement's value (this condition does not apply to the utilities sector). [497]

In addition, the general Defence and National Security transparency exemptions also apply to the public procurement domain.

The study team established a good connection with the Cabinet Office to gather data for the purpose of this study. Data was made available through the following link: http://www.cabinetoffice.gov.uk/resource-library/transparency-progress-reports, which contained contract award data and which was populated with separate datasheets holding contract notice data for ICT contracts advertised directly on Contracts Finder. However, these data did not seem to be complete. In addition, the study team received data from the National Archives, through links on their website and completed by datasets sent by email. These datasets have also proved to be incomplete for the purposes of this study.

3.29.e Other information sources or qualitative information

Other information sources: public procurement in all sectors

A number of UK entities produce statistical and other data on public procurement: the Central Government, through the Public Procurement Expenditure Survey, HM Treasury Economic Affairs, Scottish Procurement and the Northern Irish Central Procurement Directorate.

UK statistics on public procurement are well established and published online and annually in a report:

- Office of Government Commerce makes a yearly (UK central government) Public Procurement Expenditure Survey, which is published on data.gov[498]. This survey includes information on the expenditure of the UK central government (over 130 organisations), as well as English local authorities.

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[497] See inter alia: UK public procurement, Ashurst, October 2012.
[498] http://data.gov.uk/dataset/public-sector-procurement-spend

- HM Treasury Economic affairs has procurement data in its Public Expenditure Statistical Analyses 2011[499].

However, they cannot be relied upon for the study because the reporting departments either (a) only distinguish ICT procurement and not R&D procurement and ICT R&D procurement (Office of Government Commerce) or (b) they do not distinguish these requirements in the same manner (HM Treasury Economic affairs distinguishes 'Science and Technology').

The study team has concluded a cooperation agreement with the *Tender Service Group*, a pan-European private tender alert provider, which inter alia holds public procurement data for the UK. Tender Service has provided the study team with relevant public procurement data for the UK in the end of 2013. The data has been analysed as described in the methodological section using both CPV-based and keyword-based searches.

Other information sources: public procurement in the defence sector

The statistics published in the UK Defence Statistics are taken from the accounting data. The statistics department works with the accountants to ensure the production of data that is comparable over time. The Defence Resources team (DASA) produces and communicates defence expenditure statistics to the EDA. The statistics given to the EDA have not been distilled in accordance with Frascati definitions. DASA produces and communicates Frascati-compliant statistics to the OECD and to EUROSTAT.

According to the data provided by the EDA, "R&D (including R&T) Expenditure" for the UK was EUR 2 770.36 million in 2009 and EUR 2 895.18 million in 2010.[500] The UK "Outsourced Defence Expenditure" amounts to EUR 9 015 million in 2009 and EUR 10 426 million[501] in 2010. This information is recorded by the MOD and published in UK Defence Statistics. The definitions used differ ('Outsourced' in EDA publication, compared to 'extramural' in UK Defence Statistics which relates to any activity undertaken outside the MOD, and would include industry, higher education institutes and research councils.)

According to UK Defence Statistics 2011, about £1.8 Billion was spent on R&D, and about 90% of this was extramural expenditure (N.B. The total figure is lower, as it is Frascati-compliant).

The figure for the amount spent on ICT of the 'outsourced' R&D defence expenditure, is currently unavailable. There are difficulties estimating this figure, due to the way in which data is currently collected within the MOD. Further difficulties arise from the fact that most MoD contracts are long-running (e.g. around 20 years) and multi-task. As a result, although there may be ICT elements to an outsourced R&D contract, it is difficult for the systems to determine that specific strand. However, at the very highest level the accounting

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[499] http://www.hm-treasury.gov.uk/d/pesa_2011_complete.pdf
[500] UK: Initial estimates of outturn, which have yet to be verified against the OECD Frascati definitions, see Defence Data: EDA participating Member States in 2010.
[501] Estimation, see Defence Data: EDA participating Member States in 2010.

data will show results for IT and Communications in accordance with the Treasury Definition.

There is no information available on how much of the total 'outsourced' defence expenditure is spent on ICT.

3.29.f Future data provision to the European Commission

Data provision by public procurement authorities

According to the representative of the UK Cabinet office, the problems that exist with regard to future data provision to the EC, would concern the identification of spend in the identified category. There are already difficulties in assessing what category a spend falls into, slicing it down to ICT / R&D / R&D ICT may not be (a) easy to do or (b) easy to verify. The problem is compounded by the fact that some procurement might have multiple categories of spend, which would include R&D OR ICT / R&D ICT, this would also be a challenge to categorise.

The cost of ensuring quality would be for those who own the information, i.e. the various departments. The Cabinet office is of the opinion that it is very difficult to make an assessment of the possible cost of quality control due to the lack of specificity about the quality required and its elements. Although departments publish the procurement information, they may devolve the activity to individual organisations in the department, and this could be across any organisation, so the devolution could be very expansive.

Data provision by the MoD

There is currently a programme within the MoD to attribute all expenditure to CPV codes, including software, networks, ICT peripherals etc. This stems from the Government's transparency initiatives, so that the same reporting requirements exist for all costs across government. The MoD, as other departments, is currently developing the systems to implement these cross-government reporting requirements. Given that the systems and training are already being put in place for this program, there are few perceived difficulties with providing such breakdowns of R&D OR ICT expenditure as the resource account codes would be used to produce ICT expenditure figures.

In terms of quality assurance, there are mechanisms already in place to ensure that the program is implemented effectively and accurately. For example, the Defence intranet contains a tool kit which includes information on how to use codes and there is a dedicated team to educating and advising MoD staff on CPV code use. In any event, the Data Team is part of the Government Statistical

Service which is governed by strict code of practice and legislated by the UK Statistics Authority. Consequently, there are rigorous quality assurance mechanisms.

As the CPV programme gains traction, data sensitivity issues around defence expenditure will reduce.

If the CPV codes, as planned, become linked to resource account codes, the cost of producing information on an annual basis would be minimal.

Data provision by the national statistical institute

The UK is the only Member State whose NSI collects procurement-specific statistics.

(A) Performer-based measurement of R&D OR ICT / R&D of ICT procurement, BERD

According to a representative of the Office for National Statistics, data collection is somewhat curtailed by awareness that additional burdens may discourage participants.

Thus, the following information is not available under the current GERD/BERD system:

- the proportion of government-funded business R&D performed under public procurement
- the proportion of ICT-related R&D performed under public procurement
- the main government departments and agencies which paid for R&D under public procurement

(B) Funder-based measurement of R&D OR ICT / R&D of ICT procurement, GBAORD

Data was provided in January 2013 to the OECD on public funding of R&D (GBAORD) between 2009 and 2011. According to this, national public funding of R&D decreased from GBP 9,725.5 million to GBP 9,014.4 million. This was further categorised according to the geographical location (domestic (3) and abroad (4)) of R&D funding.

I. *National public funding of R&D, by nature of funding and geographical destination of funds (domestic and abroad)*

GBP Million	2009	2010	2011	Notes
Total national public funding of R&D (1+2+3+4 = GBAORD)	9,725.5	9,375.2	9,014.4	2011 estimated
National public funding of domestic R&D				
Total national public funding of domestic R&D (1+2)	8,798.5	8,699.2		
National public funding of domestic R&D projects (1)				
National public funding of domestic R&D performing institutions (2), as the sum of:				
- Institutional funding of universities (GUF)	2,394.9	2,303.3	2,257.7	2011 estimated
- Other institutional funding				
Not allocated	6,403.6	6,395.9		
National public funding of R&D abroad				
Total national public funding of R&D abroad (3+4)	927.0	676.0		
National public funding of R&D projects abroad (3)				
National public funding of R&D performing institutions abroad (including intergovernmental R&D performing organisations) (4)				
Not allocated	927.0	676.0		

II. *National public funding of domestic R&D by nature of funding and sector of performance, 2009-2011*

	National public project funding	National public institut. funding	Not allocated	Total	Notes
GBP million					
2009					
- Business enterprise sector					
- Higher education sector		2,394.9			
- Government sector					
- Private non-profit sector					
- Not allocated					
- Total		2,394.9	6,403.6	8,798.5	
2010					
- Business enterprise sector					
- Higher education sector		2,303.3			
- Government sector					

- Private non-profit sector				
- Not allocated				
- Total		2,303.3	6,395.9	8,699.2	
2011				
- Business enterprise sector				
- Higher education sector				
- Government sector				
- Private non-profit sector				
- Not allocated				
- Total				

III. *National public funding of domestic R&D projects by national R&D funding agency*

	2009	2010	2011	Notes
National public funding of domestic R&D projects "Modes of R&D funding:(1) National public funding of national R&D projects (including international R&D projects with no cross borders flows of funds)." (1) by national R&D funding agencies				

(million of national currency)				
National (central) government R&D agencies				
- Research and higher education ministry				
- Other ministries				
Intermediary R&D agencies				
Sub-national (e.g. regional) authorities R&D agencies				
Not allocated				
Total national public funding of domestic R&D projects (1)				

IV. Public funding of R&D by funding instruments and geographical destination of funds (domestic and abroad)

	Domestic	Abroad	Not allocated	Total	Notes
Total national public funding of R&D "Modes of R&D funding: (1) National public funding of national R&D projects (including internationalR&D projects with no cross borders flows of funds). (2) National public funding of domestic R&D performing institutions (including internationalR&D performing institutions located inside the national borders) (3) National public fundingof R&D projects abroad (including internationalR&D projects with cross border flows of funds) (4) National public funding of R&D performing institutions abroad (including intergovernmental R&D performing					

organisations located inside or outside the national borders) " (1+2+3+4 = GBAORD, by funding instruments and geographical destination(million of national currency)					
2009					
R&D contracts					
R&D grants					
- of which General University Funds (GUF)	2,394.9			2,394.9	
Loans for R&D included in GBAORD					
Government intramural R&D expenditure					
Not allocated	6,403.6	927.0		7,330.6	
Total national public funding of R&D (1+2+3+4 = GBAORD)	8,798.5	927.0		9,725.5	
2010					
R&D contracts					
R&D grants					
- of which General University Funds (GUF)	2,303.3			2,303.3	
Loans for R&D included in GBAORD					

Government intramural R&D expenditure					
Not allocated	6,395.9	676.0		7,071.9	
Total national public funding of R&D (1+2+3+4 = GBAORD)	8,699.2	676.0		9,375.2	
2011					
R&D contracts					
R&D grants					
- of which General University Funds (GUF)	2,257.7			2,257.7	Estimated
Loans for R&D included in GBAORD					
Government intramural R&D expenditure					
Not allocated			6,756.7	6,756.7	Estimated
Total national public funding of R&D (1+2+3+4 = GBAORD)	2,257.7		6,756.7	9,014.4	Estimated

An investigation is ongoing into the breakdown by type, specifically for projects (1) and institutional funding (2). 2011 data for these categories was estimated, as it is currently unavailable.

National public funding of domestic R&D by type and sector gives figures only for the higher education sector, citing the difficulty that UK cannot specify which funds are GBAORD, only UK GERD.

There were no figures available for national public funding of domestic R&D projects by funding agency or orientation of public funding. Public funding of R&D by funding instruments and geographical destination of funds (domestic and abroad) gives figures for General University Funds only. (This includes public procurement contracts awarded by higher education institutions and public research organisations). Further data collection would require changes to the government survey which collects GBAORD as actual outlays.

The ONS could not identify separate public procurement contracts to business enterprises.

Public procurement contracts awarded by higher education institutions and public research organisations are classified under General University Funds (GUF).

(C) National accounts data for the measurement of R&D OR ICT / R&D of ICT procurement

For the differentiation between R&D and other government expenditure with further splitting within R&D COFOG groups (i.e. ICT-related), the varying levels of detail provided by departments will cause difficulty. The conclusion was that this seems to indicate issues in allocating to different R&D COFOG groups, however further details are not known. A more detailed differentiation based on a new breakdown could be feasible, though perhaps difficult to implement. For institutional and operational steps, there is some question over whether accounting systems would contain the required information, in addition to making changes to current surveys.

(D) Alternative approaches to the measurement of R&D OR ICT / R&D of ICT procurement and feasibility of future methodologies for data collection

Our contact at the Office of National Statistics felt unable to provide an answer to this. They do not know whether accounting systems would contain the required information and it may also be difficult to implement the required changes in the surveys.

4. Analysis of disparities, commonalities and trends

This chapter illustrates the key findings in terms of disparities, commonalities and trends that can be derived from the comparison of the data from different countries. The figures are based on: (a) EU-regulated contracts published in the OJ/TED and (b) reported/published below-threshold contracts, as gathered by private tender alert providers or the national public procurement authorities in the specific country. Due to the inability to gather below-threshold contract information the estimates for Austria and Luxemburg include EU-regulated contracts only. Additionally, the figures in this chapter do not include the value of contracts in the defence sector, which is provided in the individual country analysis reports when available (see Chapter 3)[502].

4.1 ICT

The total estimated reported ICT expenditure in the twenty-nine countries considered is equal to **EUR 50.3 billion**[503]in 2011. Contracts above and below EU thresholds represent 87.8% and 7.0% of the total estimated value respectively, whereas the remaining 5.2% could not be classified according to the EU thresholds[504].

United Kingdom has the highest expenditure (EUR 13.2 billion or 26.3% of the total), followed by France (EUR 9,8 billion or 19.5%) and Germany (EUR 5.1 billion or 10%). The total value of ICT contracts is lower than EUR 1 billion in the vast majority of the countries.

 Figure 4.1.1 shows the expenses incurred in each of the countries grouped by level of expenditure.

Compared to the past[505], **ICT public procurement has increased in thirteen countries,** and especially in Bulgaria, Romania (reference year 2009), Finland,

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[502] Total defence R&D public procurement spend in the Member States can be estimated to be approximately EUR 5.5 billion in 2011. The figure is calculated based on EDA R&D defence expenditure and the share of such expenditure that is outsourced, as collected by the study. See in particular the country reports for France, Germany and the United Kingdom in Chapter 3 (the three countries represented more than 90% of R&D defence expenditure in 2011 according to EDA). Due to the limited data available, it is not possible to estimate the overall spend for defence ICT and ICT-related R&D in the relevant countries.

[503] The figure includes all classes of ICT expenditure identified in section 2.1.

[504] The percentages are calculated net of contracts for Switzerland, which represent 1.3% of the total value.

[505] Due to data availability issues, different years are used as reference to determine trends in the countries. Data for Spain, Switzerland and the United Kingdom are only available for 2011.

Italy and Norway (2008). Hungary, Ireland, Poland and the Slovak Republic have all experienced a significant reduction in spending[506].

Figure 4.1. 1- Total value of ICT contracts in 2011, EUR billion

Total of **50.3 billion EUR of ICT procurements** identified in 29 countries

0-250 million EUR contracting volume
Cyprus, Greece, Ireland, Malta, Luxemburg, Latvia, Lithuania, Estonia

251-500 million EUR contracting volume
Austria, Portugal, Bulgaria, Slovakia, Slovenia

501-750 million EUR contracting volume
Belgium, Czech Republic, Hungary, Switzerland

751-1000 million EUR contracting volume
Romania, Finland

>1000 million EUR contracting volume
United Kingdom, France, Germany, Italy, Spain, Poland, Denmark, Netherlands, Sweden, Norway

Source: study data set

Core **ICT** represents **70%** of the overall estimated expenditure, **ICT+** was **16%**, and **Content & Media**, **6%**. 8% of the total contract value could not be classified according to the ICT categories.

ICT+ expenses are particularly high in Greece, Germany and Denmark (each over 28%), while Content & Media spend is relatively stronger i.e. above 10%, in Cyprus, Bulgaria, Malta, Netherland, Ireland and Sweden. At the **sub-sector level**, i.e. CPV divisions, IT services represent 32% of the total expenses, radio, television, and telecommunication equipment 16%, and software package and information systems 9%. Breakdown of the total expenditure by sub-sector and country is given in *Figure 4.1. 2*.

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[506]As spending trends are analysed in EUR, figures for non-EUR countries are influenced by variations in exchange rates over the period considered.

Figure 4.1. 2- Breakdown of ICT expenditure by country and sub-sector (2011)

Legend:
- IT service
- Office and computing
- Printed matter and related products
- Software package and information system
- Business Services
- Electrical machinery
- Postal and telecommunication services
- Radio, television, telecom eq
- Medical Equipment
- Trasport equipment
- Construction Work
- Repair and mainteinance
- Trasport services
- Unknown
- Other
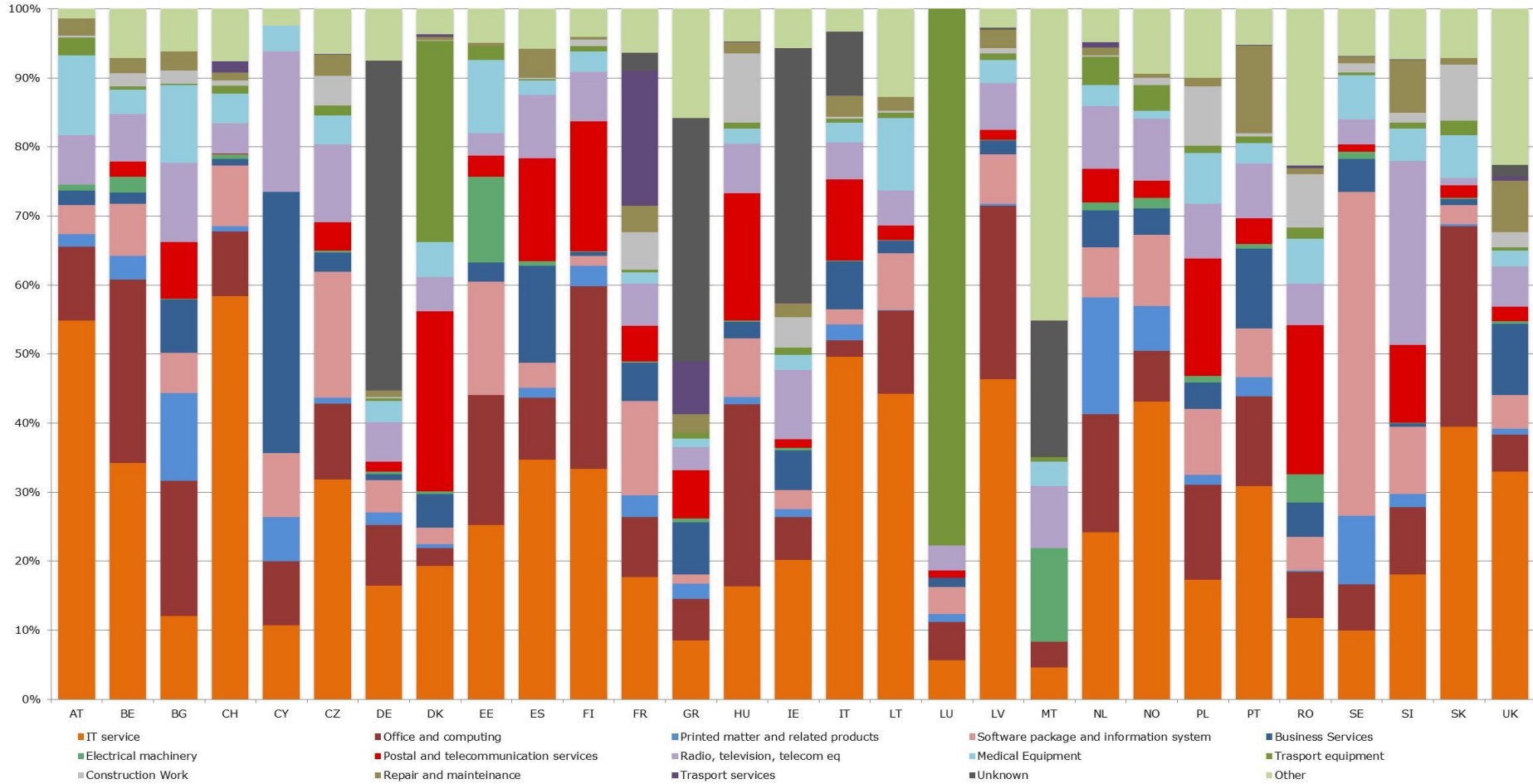
Source: study data set

Authorities providing **General public services** account for **27%** of the ICT expenditure in 2011, while another 24% is spent by authorities or entities falling within the residual category 'Other'[507]. Additionally, sizeable resources are spent by authorities in transport (8.6%) and environment (5.6%). Overall, about two thirds of the ICT total contract value in 2011 refers to authorities falling under one of the above categories.

Breakdown of ICT expenses by main activity and type of contracting authority or entity is provided in *Figure 4.1.3*[508]. The chart shows that central government had the highest ICT expenditure for Economic and financial affairs, the environment, and Public order and safety. Local authorities and the central government represent 51 and 18% respectively of the total ICT expenditure for General public services.

Figure 4.1.3- Breakdown of ICT expenditure by main activity and type of the contracting authority / entity (2011)
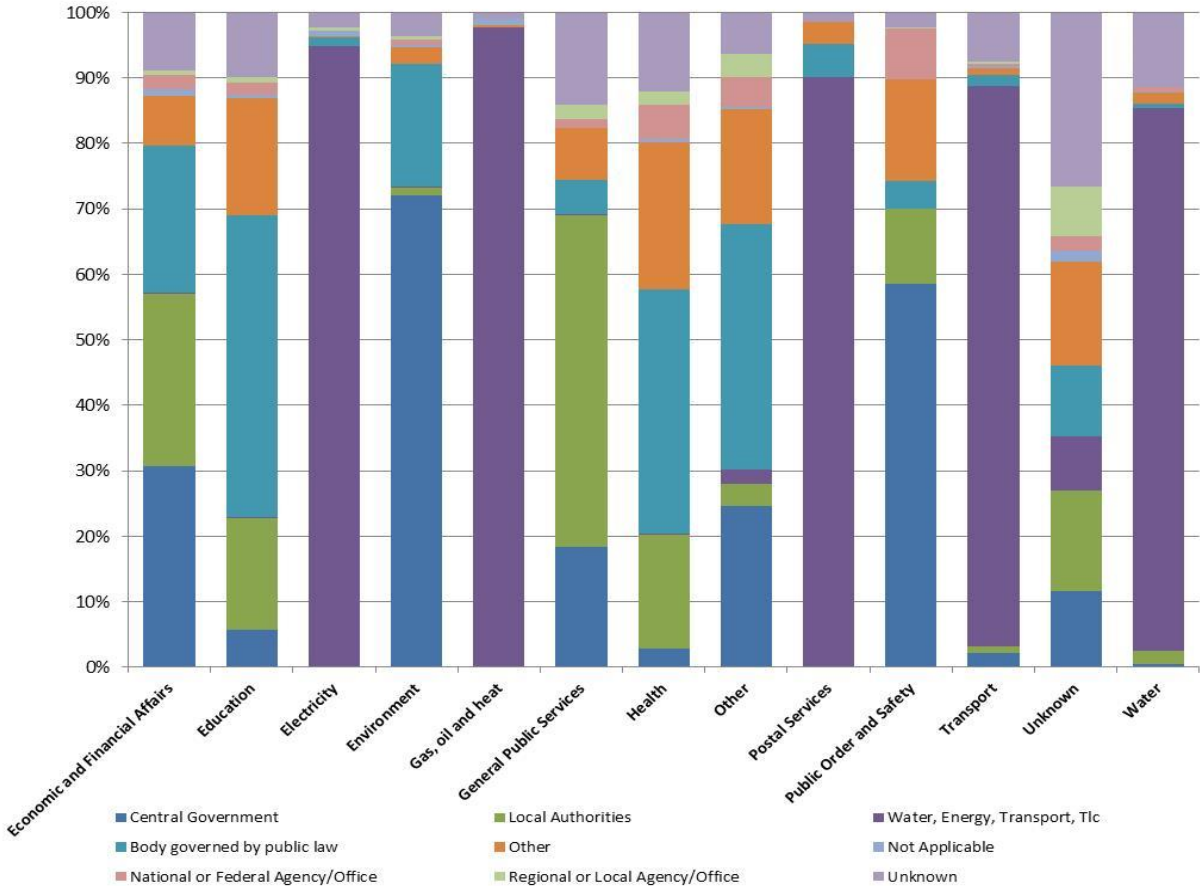
Source: study data set

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[507] The category includes, among others, housing, culture and social protection activities.
[508] Breakdown is given for a total contract value of EUR 19.4 billion or 86% of the total estimated ICT expenses.

At the country level, education authorities' expenditure is substantial in Lithuania (27%), the Slovak Republic (24%), the Netherlands and Ireland (22%), while general public services absorb a particularly high share of the spend in Sweden (68%), Finland (60%), Austria (52%), Norway (48%), and Belgium (40%). Luxemburg (75%), Switzerland (42%) and Denmark (31%) have the highest spending on ICT for transport.

Services contracts represent 60% of the ICT total value, while 25% is spent on **supplies**. **Works** account for the almost 9% of the total value, whereas the remaining 5% could not be classified. Breakdown of ICT expenditure by object of the contract is given in *Figure 4.1.4* for each of the countries analysed. Denmark (80%) and Italy (77%) have the highest spend on services and the lowest on supplies, 12.8% and 12% respectively. On the other hand expenses on supplies are more than half of the total in the Netherlands (52%) and Sweden (63%). France (15%) and Slovenia (22%) have the highest spend on works.

Figure 4.1.4 - Object of ICT contracts, share of total contract value
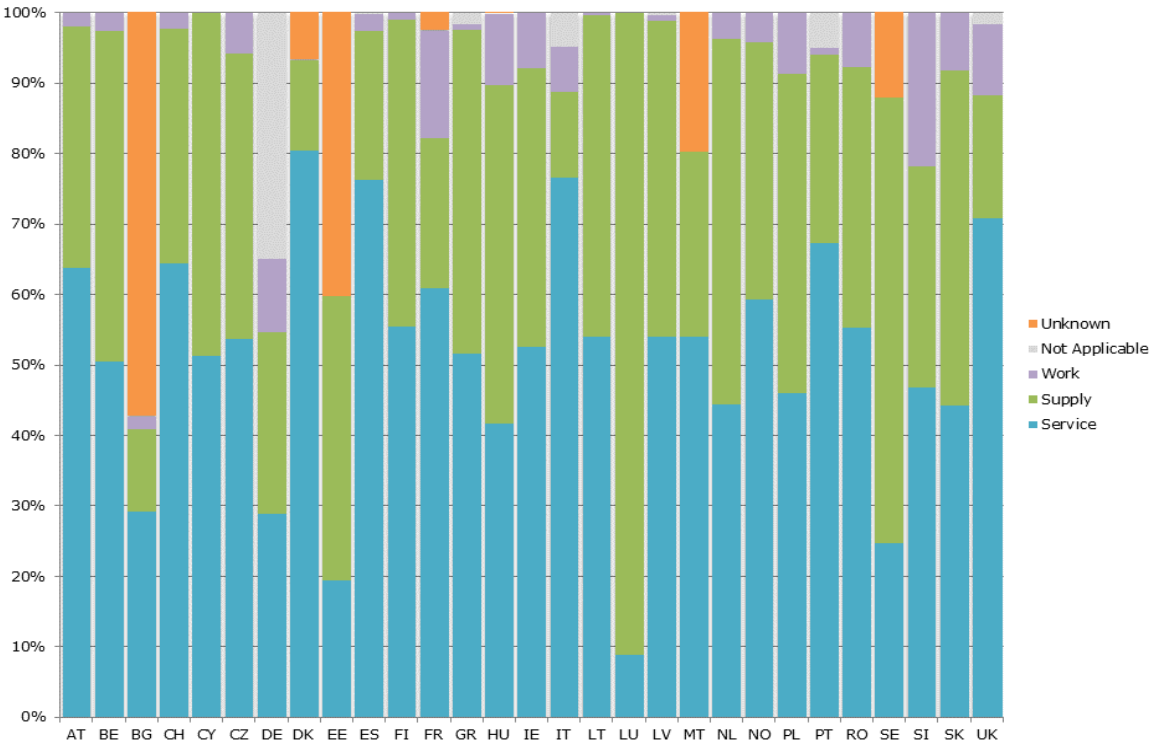
<div align="right">Source: study data set</div>

Figure 4.1.5 shows the country distribution between ICT, content and media and ICT+ that was procured. Cyprus and Malta spend more on content and media while Luxembourg is the country that spends more on ICT+.

Figure 4.1.5 - Breakdown of expenditure by ICT categories per country
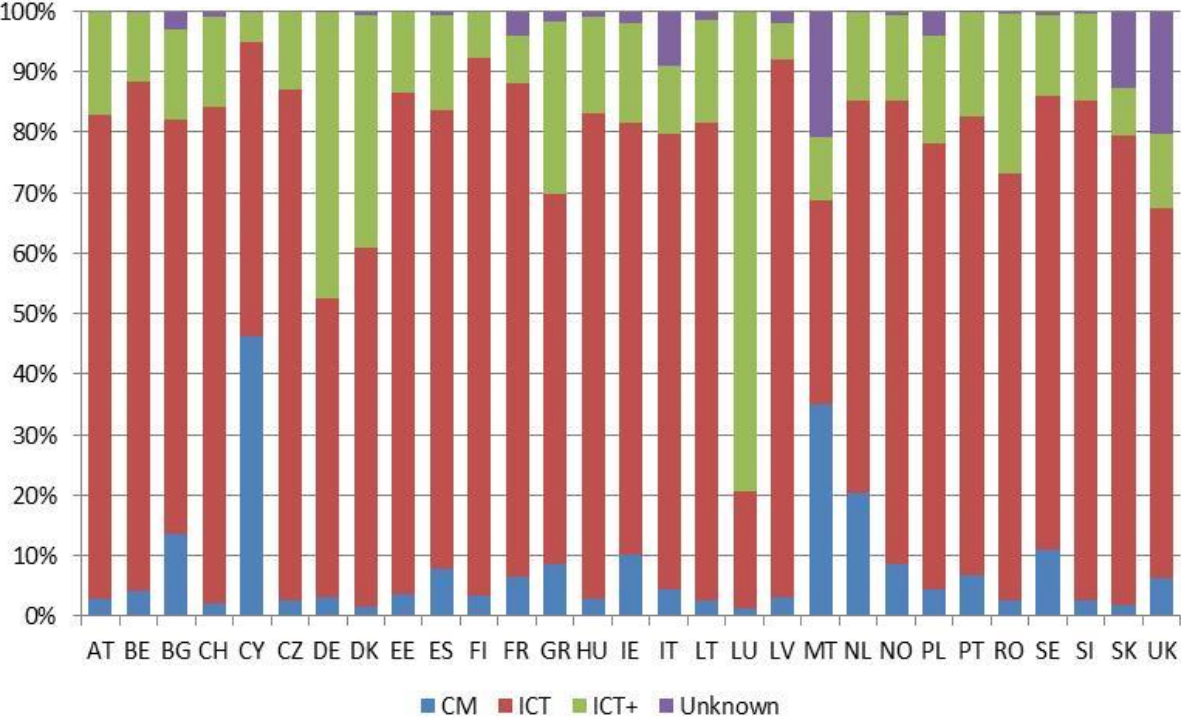
The **median value** (2011) is highest for ICT+ contracts at EUR 47 083 and lowest for C&M (EUR 21 982), whereas the typical size of ICT contracts is EUR 41 942. ICT contracts are generally larger in Italy, Austria and Switzerland, and particularly small in Portugal and Cyprus. Table 4.1.1 provides full details on the median ICT contract value per category and country.

Table 4.1.1 - Median ICT contract value per category and country

Country	C&M	ICT	ICT+
AT	889 000	581 000	709 000
BE	32 000	81 000	134 000
BG	87 000	83 000	73 000
CH	590 000	568 000	520 000

Country	C&M	ICT	ICT+
CY	472 000	12 000	263 000
CZ	142 000	153 000	184 000
DE	21 000	38 000	39 000
DK	19 000	52 000	80 000
EE	25 000	31 000	44 000
ES	199 000	283 000	301 000
FI	472 000	344 000	382 000
FR	296 000	296 000	311 000
GR	267 000	82 000	161 000
HU	62 000	59 000	65 000
IE	23 000	33 000	45 000
IT	793 000	764 000	676 000
LT	10 000	21 000	31 000
LU	346 000	346 000	346 000
LV	12 000	18 000	19 000
MT	7 358 000	502 000	221 000
NL	888 000	500 000	724 000
NO	994 000	173 000	156 000
PL	14 000	23 000	40 000
PT	10 000	14 000	21 000
RO	18 000	41 000	110 000
SE	35 000	49 000	55 000
SI	24 000	38 000	70 000
SK	123 000	139 000	125 000
UK	84 000	170 000	293 000

Source: study data set

The public contracts market is quite concentrated in most countries. The top ten authorities cover almost 52% of national ICT expenditure on average in 2011. Top authorities share of the total ICT spend is especially high in Cyprus (77%), Finland (72%) and Hungary (68%) but remarkably less in Germany (15%), Netherlands (23%) and Poland (29%).

Lastly, the following map shows the above threshold ICT spend in 2011 as a share of estimated value of tenders published in TED (2011) in each of the relevant countries.

Figure 4.1.6 - ICT above threshold spend as a share of estimated value of tenders in TED (2011)

ICT spend as a share of estimated value of tenders published in TED (2011)

<5% of value of tenders in TED
Bulgaria, Cyprus, Estonia, Greece, Ireland, Latvia, Portugal

Between 5% and 7% of value of tenders in TED
Austria, Belgium, Czech Republic, Luxembourg, Malta, Poland, Sweden

Between 7% and 11% of value of tenders in TED
Denmark, Finland, Germany, Italy, Lithuania, Romania, Slovakia

>11% of value of tenders in TED
France, Hungary, Netherlands, Slovenia, Spain, United Kingdom

Source: study data set

The same data is given in table format below.

Table 4.1.2 - ICT above threshold spend as a share of estimated value of tenders in TED (2011)

Country	ICT %	Country	ICT %	Country	ICT %
AT	6.9	FI	9.7	MT	5.7
BE	5.2	FR	11.7	NL	12.4
BG	3.6	GR	2.5	PL	6.4
CY	3.6	HU	11.1	PT	4.2
CZ	6.5	IE	2.9	RO	7.1
DE	7.9	IT	9.3	SE	6.4
DK	10.1	LT	9.7	SI	13.2
EE	2.2	LU	5.0	SK	7.9
ES	12.6	LV	3.4	UK	13.5

Source: study data set

4.2 R&D

The total reported non-defence[509] R&D public procurement expenditure in the twenty-nine countries is estimated at **EUR 2.6 billion** in 2011. Contracts of reported/published procurements above and below EU thresholds represent 74% and 15% respectively of the total estimated value. 8% of the total contract value could not be classified according to the EU thresholds while 2% refers to contracts awarded by authorities in Switzerland.

Germany (EUR 543 million) and the United Kingdom (EUR 495 million) have the highest R&D spend, making up more than 40% of the total expenditure. The total value of R&D contracts is lower than EUR 30 million in the majority of the countries. *Figure 4.2.1* shows the expenses in each of the relevant countries grouped by level of expenditure.

Figure 4.2.1- Total value of R&D contracts in 2011, EUR billion
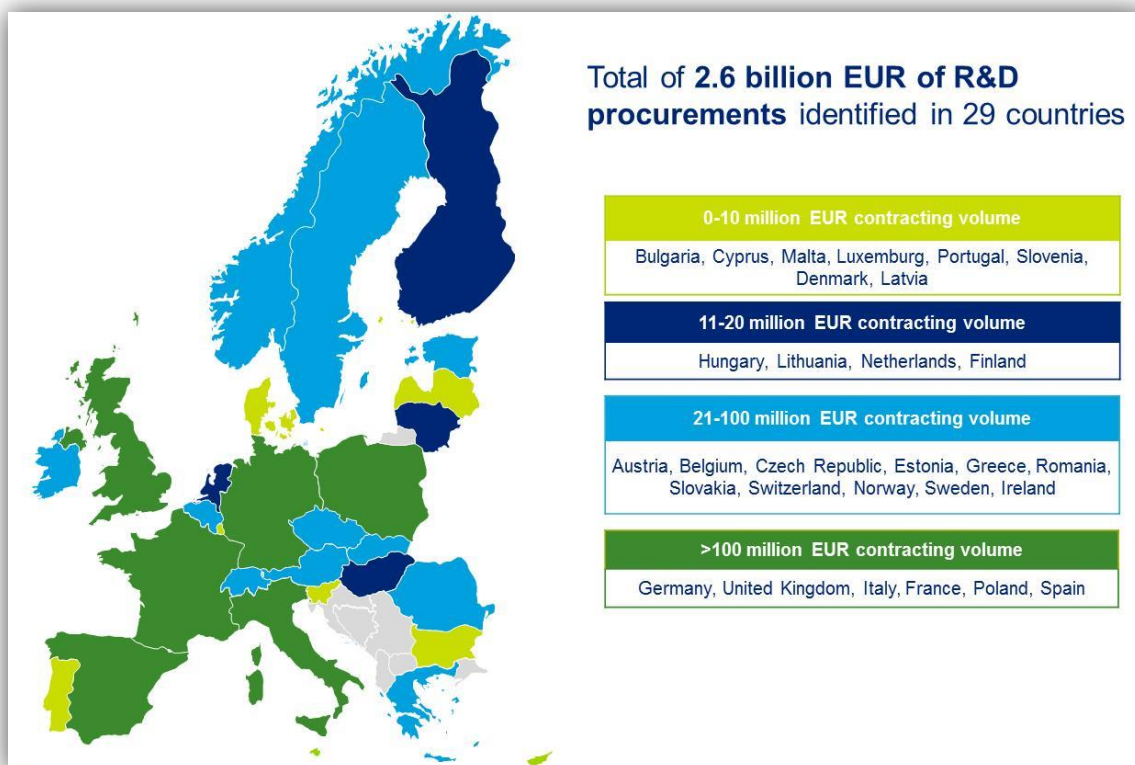
Source: study data set

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[509] See footnote 502.

R&D public procurement expenses in 2011 have **increased** especially in Romania (compared to 2009), Austria (2008) and Sweden (2009). Seven other countries reduced spending. R&D expenditure is made up of a relatively small number of contracts and trends can be significantly influenced by individual high-value contracts awarded in a specific year[510]. Therefore, trend estimates have to be interpreted cautiously.

At the **sub-sector level**, i.e. CPV division, laboratory optical and precision equipment is the 32% of the total expenses, construction work 16%, and medical equipment 9%. Breakdown of the total expenditure by sub-sector and country is given in Figure 4.2.2.

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[510]A total of 8,416 R&D contracts have been identified in the twentynine countries.

Figure 4.2.2 - Breakdown of R&D expenditure by country and sub-sector (2011)

Legend:
- Chemical Products
- Office and Computing Machinery
- Electrical Machinery
- Medical Equipment
- Transport Equipment
- Laboratory, optical, precision equipment
- Office furniture
- Industrial Machinery
- Construction Work
- Software package
- Architectural, construction, engineering services
- IT services
- R&D services
- Business Services
- Unknown
- Other
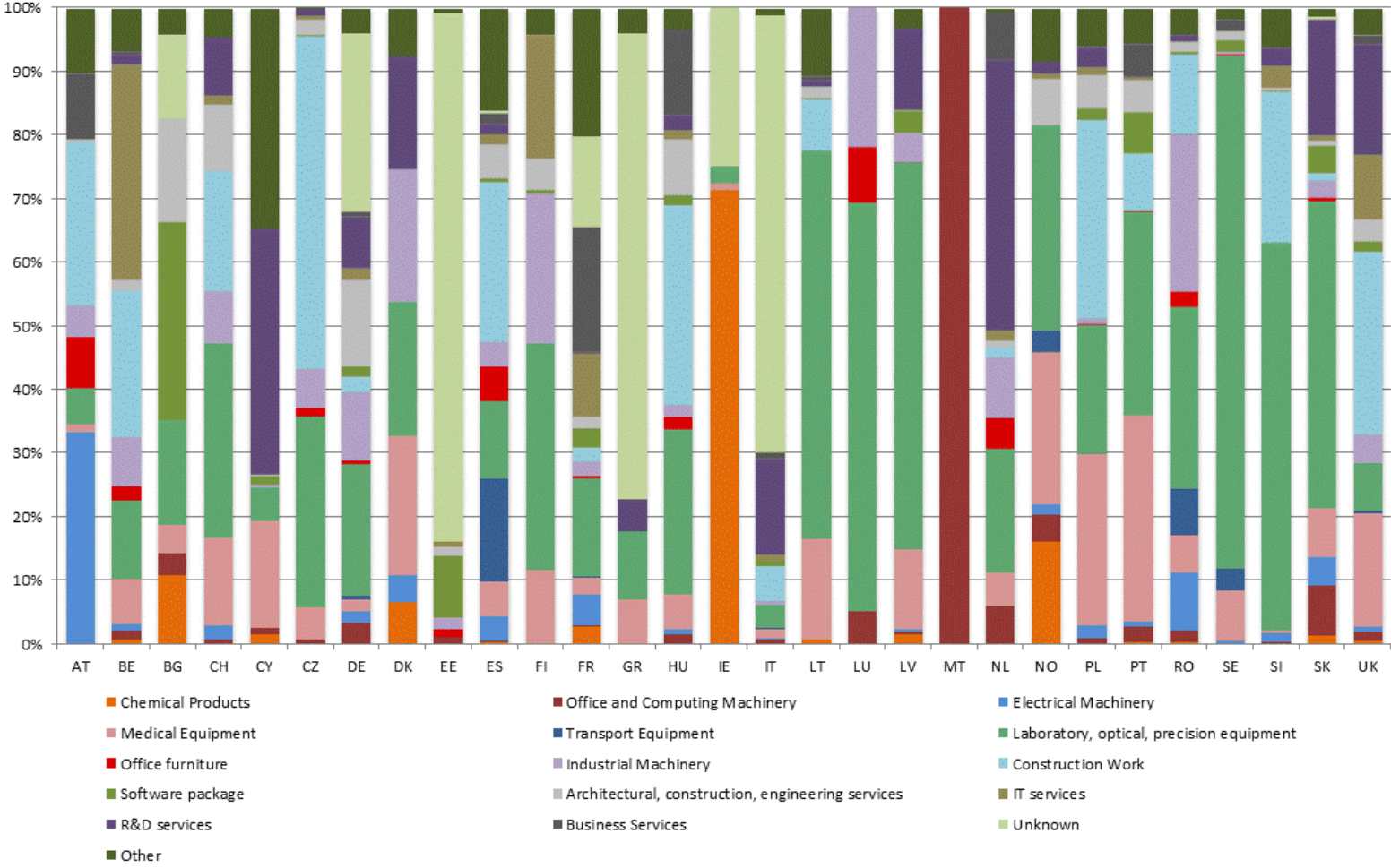
Source :study data set

Almost 40% of the total estimated contract value is awarded by authorities falling in the sector category 'Other'[511]. Expenditure of education authorities is approximately 35%, while the R&D spend of health contractors accounts for 10% of the entire amount.

Central government has the highest R&D expenditure in Public order and safety, General public services and Economic and financial affairs. Local authorities spends on electricity, transport and water

Figure 4.2.3- Breakdown of R&D expenditure by main activity and type of the contracting authority / entity (2011)
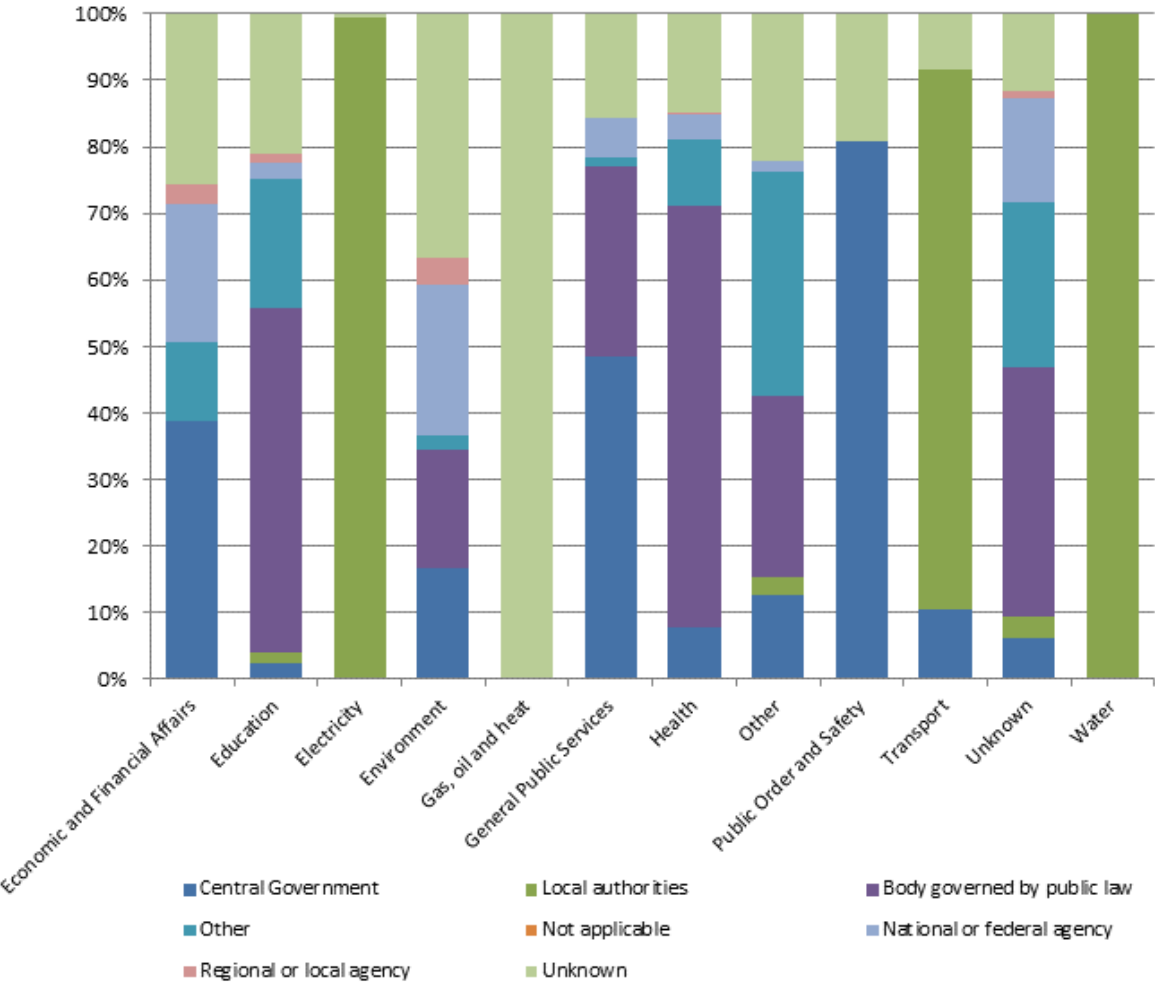
Source: study data set

Supplies contracts are worth **EUR 1.2 billion** in 2011 (48% of the total), while 21% and 23% of the total estimated R&D contract value is spent on public works

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[511]This is due to the fact that the category includes public research organisations.

and services respectively. The Czech Republic (52%) is spending the most on public works, while Cyprus (69%), Netherland (55%) and France (43%) have the largest expenditure on services. A group of five Member States, Malta, Luxemburg, Lithuania, Latvia and Ireland, is spending more than 85% on supplies. Breakdown of R&D expenditure by object of the contract is given in Figure 4.2.4 for each of the countries analysed.

Figure 4.2.4 - Object of R&D contracts, share of total contract value
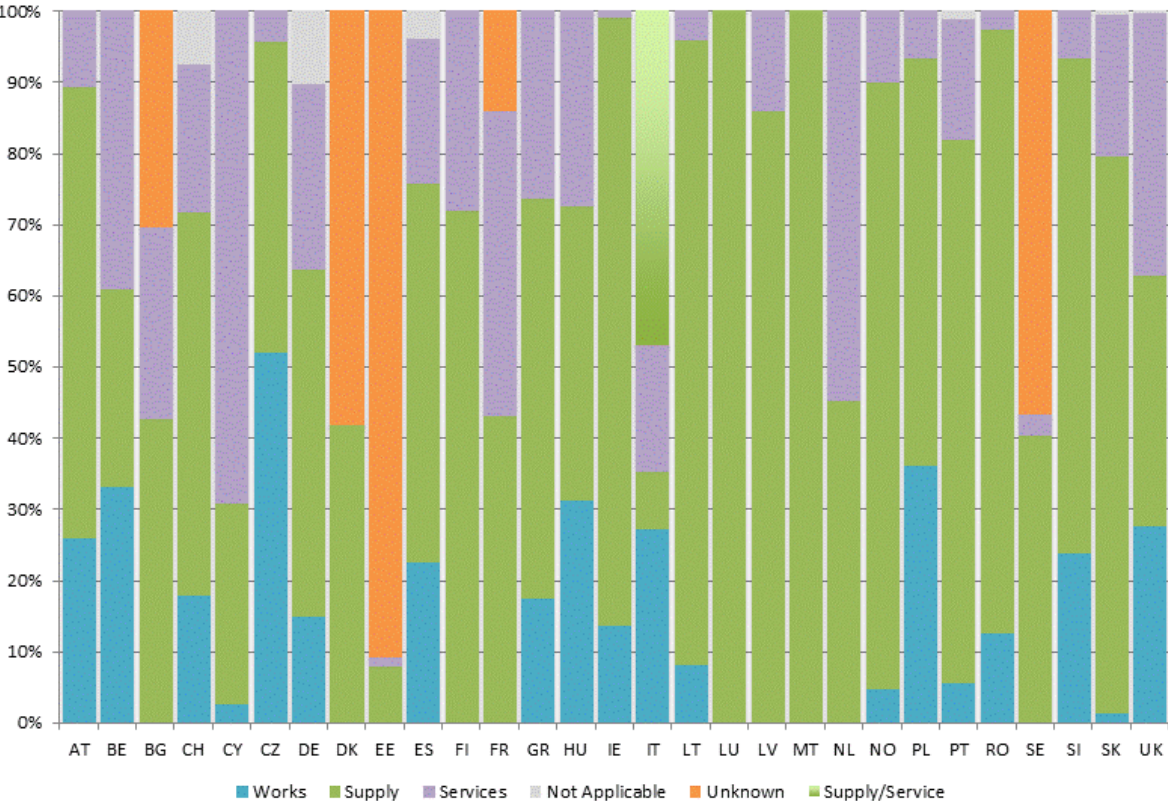
Source: study data set

The **median contract value** (2011) is equal to approximately EUR 130 000. The typical size of contracts is larger on Austria and Switzerland, while it is particularly small in Cyprus, Latvia and Portugal. Table 4.2.1 provides the median R&D contract value per country in 2011.

Table 4.2.1-Number of contracts and median value of R&D contract per country (2011)

Country	Number of R&D contracts	Median value	Country	Number of R&D contracts	Median value
AT	38	410 000	IT	825	101 000
BE	103	214 000	LT	63	133 000
BG	16	95 000	LU	6	637 000
CH	59	525 000	LV	141	16 000
CY	28	8 000	MT	1	504 000
CZ	57	253 000	NL	24	310 000
DE	1 469	138 000	NO	47	275 000
DK	28	131 000	PL	519	217 000
EE	375	27 000	PT	106	24 000
ES	317	113 000	RO	286	57 000
FI	22	250 000	SE	183	120 000
FR	370	182 000	SI	27	204 000
GR	154	63 000	SK	123	112 000
HU	131	52 000	UK	225	308 000
IE	108	108 000			

Source: study data set

Lastly, the following table shows the above threshold R&D spend in 2011 as a share of estimated value of tenders published in TED (2011) in each of the relevant countries.

Table 4.2.2 - R&D above threshold spend as a share of estimated value of tenders in TED (2011)

Country	RD %	Country	RD %	Country	RD %
AT	1.68	FI	0.12	MT	0.17
BE	0.36	FR	0.18	NL	0.20
BG	0.03	GR	0.12	PL	0.80
CY	0.13	HU	0.04	PT	0.04
CZ	0.37	IE	1.79	RO	0.47
DE	1.16	IT	0.12	SE	0.15
DK	0.03	LT	0.75	SI	0.27
EE	0.14	LU	0.54	SK	0.52
ES	0.61	LV	0.17	UK	0.52

Source: study data set

4.3 ICT related R&D

The total reported non-defence[512] **ICT related R&D** expenditure in the twenty-nine countries is equal to **EUR 974 million** in 2011, or about 37% of the estimated contract value. Contracts above and below EU thresholds represent 74% and 12% respectively of the total estimated value. 10% of the total contract value could not be classified according to the EU thresholds.

Germany has the highest expenditure (EUR 268 million or 28% of the total spend), followed by the United Kingdom (EUR 149 million or 15%) and France (EUR 79 million or 8%). Compared to the past[513], **ICT related R&D public procurement expenditure has increased in fifthteen countries,** and especially in Belgio, Czech Republic, Slovenia (reference year 2010), Romania, Sweden (reference year 2009) Lithuania and Norway (2008). Ireland, Finland and Portugal have all experienced a significant reduction in spending.

Figure 4.3. 1 - Total value of ICT related R&D contracts in 2011, EUR billion
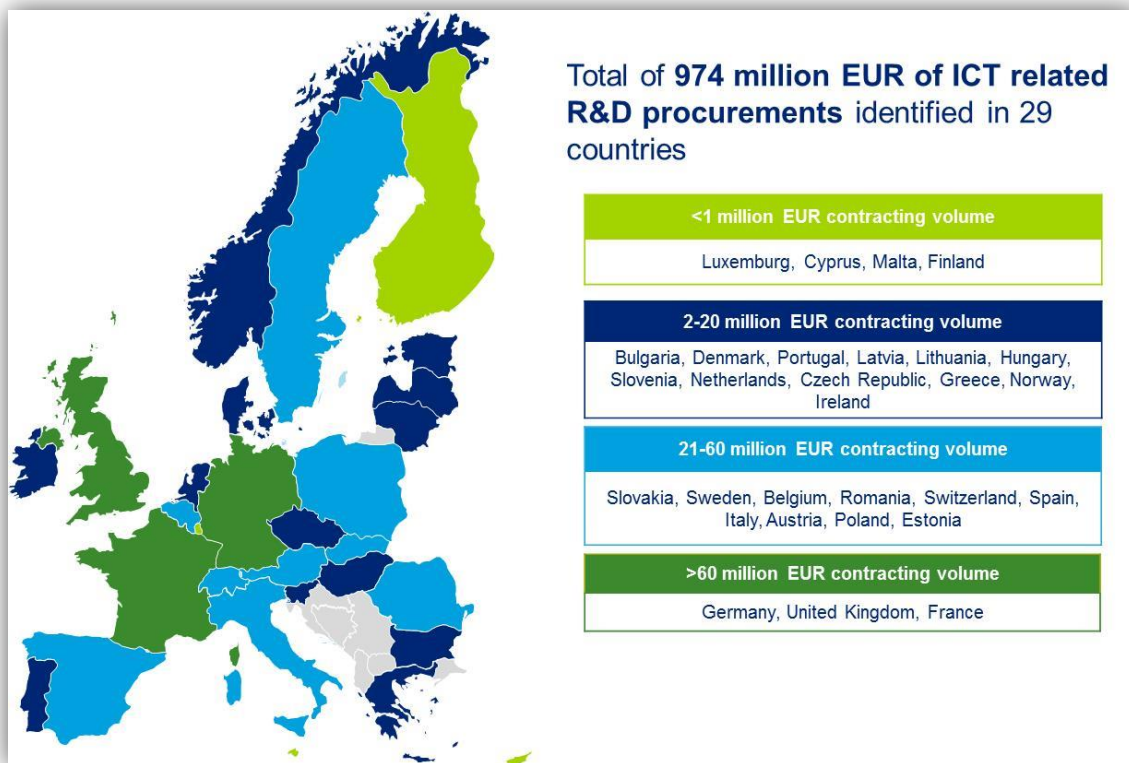
Source: study data set

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[512] See footnote 502.
[513] Due to data availability issues, different years are used as reference to determine trends in the countries. Data for Germany, Luxembourg, Malta, Spain, Switzerland and the United Kingdom are only available for 2011.

Figure 4.3. 2 - Breakdown of ICT related R&D expenditure by country and sub-sector (2011)

Legend:
- Laboratory, optical and precision equipments
- Electrical machinery
- Printed matter and related products
- Office and computing machinery
- Radio, television, communication eq.
- Medical equipments
- Transport equipment
- R&D services and related consultancy services
- Security and defence equipment
- Industrial machinery
- Construction work
- Software package and information systems
- Postal and telecommunications services
- Architectural, construction, engineering services
- IT services
- Unknown

Source: study data set

Authorities providing **Educational** account for **36%** of the R&D ICT expenditure in 2011, while another 35% is spent by authorities or entities falling within the residual category 'Other'[514]. Additionally, sizeable resources are spent by authorities in Health (14%), General public services (4%)and environment (3%).

Breakdown of ICT expenses by main activity and type of contracting authority or entity is provided in *Figure 4.3.3*. The chart shows that central government had the highest R&D ICT expenditure for General public services, Public order and safety and Economic and financial affairs. Central government represent the 51% of the total R&D ICT expenditure for General public services.

Figure 4.3.3 - Breakdown of ICT related R&D expenditure by main activity and type of the contracting authority / entity (2011)
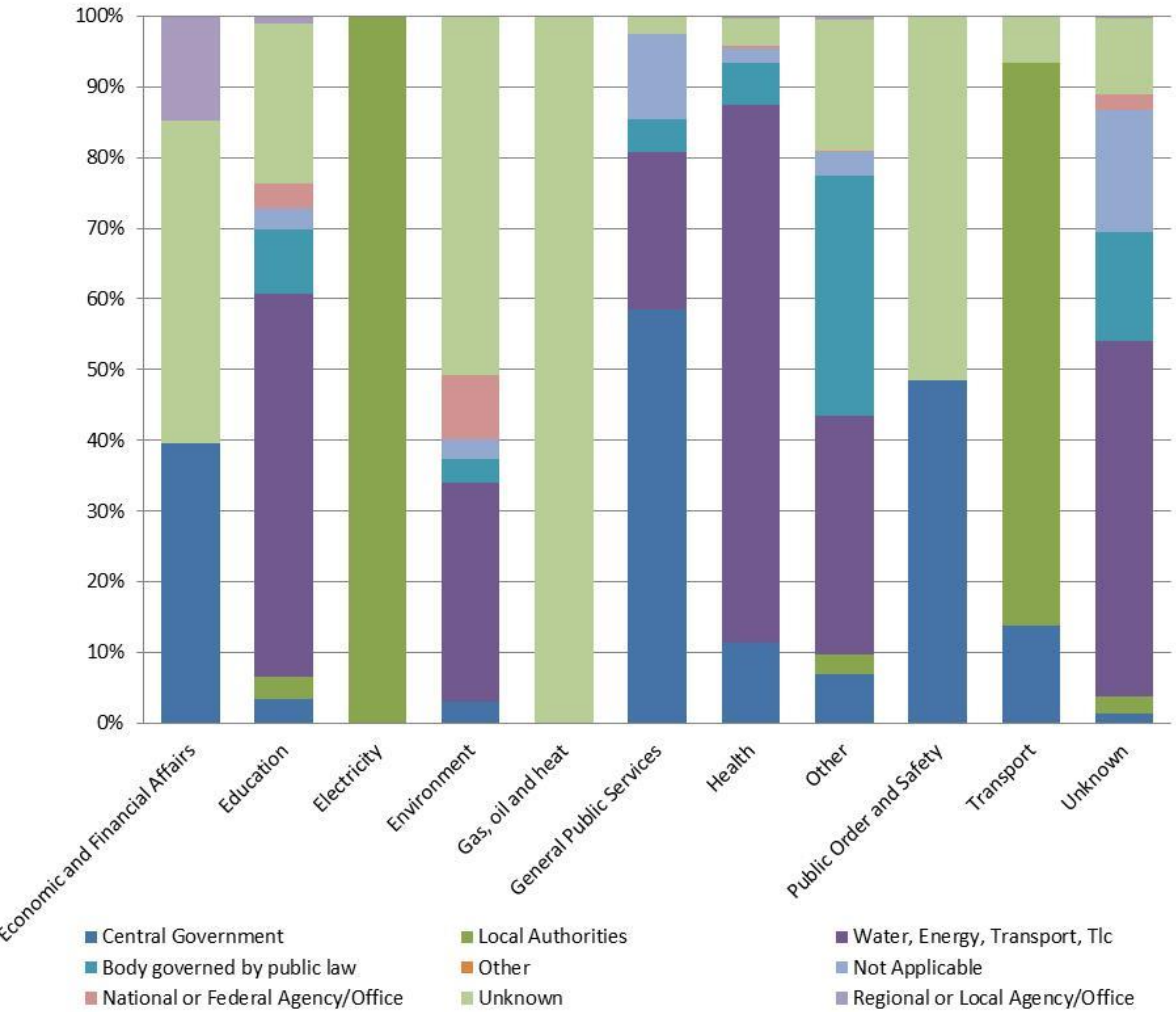
Source: Study data set

Supply contracts represent 66% of the R&D ICT total value, while 19% is spent on **services**. **Works** account for the almost 5% of the total value. Breakdown of

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[514] The category includes, among others, housing, culture and social protection activities.

ICT R&D expenditure by object of the contract is given in *Figure 4.3.4* for each of the countries analysed. Austria(100%) and Lussembourg (100%) have the highest spend on supply and the none on services. On the other hand expenses on services are the highest in Belgium (64%), Bulgaria (51%) and in the United Kingdom (41%).

Figure 4.3.4 - Object of ICT related R&D contracts, share of total contract value

Source: Study data set

The total amount of ICT, R&D and ICT related R&D goods, services and works procured in each country is presented in the following summary table.

ICT, R&D, ICT related R&D and goods/services/works per country (EUR million, 2011)

Country	ICT	R&D	R&D ICT
AT	379.6	92.7	50.2
BE	611.0	65.9	34.7
BG	315.7	3.0	1.6
CH	671.1	60.8	37.5
CY	39.0	1.5	0.3
CZ	689.4	39.5	8.5
DE	5 113.3	543.3	268.3
DK	1 270.0	8.7	2.0
EE	86.7	44.1	34.0
ES	3 230.0	170.5	41.9
FI	801.5	10.7	0.5
FR	9 811.1	177.5	79.2
GR	184.3	21.5	9.3
HU	673.2	11.9	4.6
IE	162.3	83.9	13.6
IT	4 689.6	181.9	50.2
LT	205.9	15.9	4.6
LU	28.4	3.2	0.2
LV	159.8	10.4	4.5
MT	21.0	0.5	0.5
NL	1 219.1	20.1	7.6

Country	ICT	R&D	R&D ICT
NO	1 032.0	27.8	12.0
PL	2 604.5	324.1	58.6
PT	424.5	6.5	3.8
RO	831.6	70.8	36.0
SE	1 131.8	51.6	33.0
SI	335.6	8.0	5.2
SK	331.1	31.3	21.6
UK	13 265.9	495.2	149.4

Source: study data set

5. Proposal for guidelines and methodology for the future

5.1 A TWO-PHASE APPROACH TOWARDS RELIABLE AND REGULAR EU STATISTICS ON PUBLIC PROCUREMENT OF R&D OR ICT / R&D OF ICT

The figure below provides an overview of the proposed approach, which is further described below.

Figure 3- Two-phase approach towards reliable and regular European statistics on public procurement of R&D OR ICT / R&D ICT

Phase 1: Refinement of methodologies and establishment of a regulatory framework for EU-wide statistics

Collection and analysis of administrative public procurement data from public e-notification platforms and from private data providers

Refinement of methodologies, including a crosscheck and completion methodology with national government expenditure data

Regulatory efforts at EU-level in order to introduce harmonized reporting obligations for R&D and ICT procurement

Phase 2: Compilation of harmonized European statistics on a regular basis

Compilation of harmonized European statistics on a regular basis based on administrative public procurement data (from public e-notification platforms) and national government expenditure statistics

During **phase 1**, public procurement data would be collected and analysed following the approach and methodology of the present study, i.e. based on administrative public procurement data. The main data sources would be public e-notification platforms at European, national and regional level.Where these sources are not available or not sufficiently reliable, and the required data would be acquired from private data providers.

During phase 1 the availability, reliability, coverage and comparability of administrative public procurement data from public sources can be expected to continuously increase because of the following trends:

- *E-procurement initiatives*: More and more public authorities across Europe are implementing centralised e-procurement and e-notification systems for public procurement to improve efficiency and transparency of public procurement. These efforts are fostered by the European Commission's

Strategy for e-procurement[515], which aims at a full transition to e-procurement in the EU by mid-2016. As a side effect, these initiatives generate centralised electronic administrative data on public procurement, which may be exploited for statistical purposes.

- *Open Data initiatives*: Open Data refers to the idea that certain data, notably originating from public sector bodies, should be freely available for use and re-use. This includes administrative data on public procurement, which in many countries is still difficult to obtain for re-use (e.g. for statistical purposes). The revised *Directive 2013/37/EU on the re-use of public sector information*[516] as well as numerous initiatives to make public sector information available on Open Data portals[517] are progressively improving the availability of administrative data on public procurement.

- *Statistical initiatives*: Increasingly, national statistical offices and international organisations such as the OECD[518] are looking at administrative data on public procurement as a valuable and unexploited source of information on public procurement. Indeed, compared to traditional statistics on public procurement, administrative data is currently the most detailed, up-to-date and complete data source available on public procurement. New, emerging Big Data analytics technologies and methods may help to make more efficient use of these data sources.

In addition, phase 1 is meant to be a **transition towards more harmonised and reliable statistics**. In order to achieve this goal, methodological work would be undertaken at the European level to refine existing methodologies (as developed in the framework of the present study) to analyse and screen administrative public procurement data for R&D / ICT / R&D of ICT procurement. In addition, the availability, reliability and international comparability of administrative data on public procurement across Europe should be improved.

In parallel, national statistical offices, Eurostat and the OECD should **improve the granularity of national government expenditure statistics**, notably GBAORD statistics, using them for crosschecks and the completion (with relevant government expenditure not covered by administrative public procurement databases) of the statistics based on administrative data for public procurement. Notably, the OECD Frascati Manual recommendation to clearly differentiate between modes of R&D funding (public procurement contracts vs. grants) in GBAORD statistics should be implemented. The Swiss Federal Statistical Office has been leading in Europe in implementing this recommendation (see section 3.28) and may provide guidance to other statistical offices. In addition statistical

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[515] European Commission (2012): A strategy for e-procurement, COM(2012) 179 final, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0179:FIN:EN:PDF
[516] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:175:0001:0008:EN:PDF
[517] See for instance: http://ec.europa.eu/digital-agenda/en/open-data-portals
[518] For example, the OECD project "Measuring the link between public procurement and innovation".

organisations across Europe should cooperate to develop a crosschecking and completion methodology for statistics based on administrative data for public procurement using the (improved) national government expenditure data.

This methodological work suggested should involve national-level stakeholders (public procurement authorities, central procurement agencies, national statistical offices, ministries of defence, etc.), experts from Eurostat and the OECD, European Commission officials from relevant Directorates-General (incl. DG CNECT, DG ENTR, DG RTD and DG MARKT) as well as the European Commission's contractors in charge of data collection and analysis. The aim of this work would be to **develop a commonly agreed and harmonised methodology to collect data on public procurement R&D / ICT / R&D of ICT at national level** in the future (i.e. in phase 2).

Based on the outcomes of these methodological developments and discussions at national and EU level, regulatory efforts should then be undertaken at EU-level in order to introduce harmonised reporting obligations for R&D and ICT procurement. The introduction of such **reporting obligations in EU legislation** would ensure timely provision of national data according to harmonised quality and methodological standards in the future (i.e. in phase 2).

In **phase 2** harmonised European statistics would be compiled on a regular basis from public e-notification platforms with crosschecks/completion based on (improved) national government expenditure statistics. Harmonised quality standards and methodological guidance in EU legislation would ensure the reliability and comparability of data across Europe.

5.3 FUTURE DATA PROVISION TO THE EUROPEAN COMMISSION, STATE OF PLAY

In this section, we provide an overview of currently **available sources for phase 1 collection of administrative public procurement data**. We indicate whether the national public procurement authorities are willing to provide the European Commission (or a contractor) with administrative public procurement data on a regular basis (potentially at a fee or under specific confidentiality conditions). Where the study team has established agreements with private data providers, which would be willing to also provide their data to the European Commission (or a contractor) in future (potentially for a fee), this has been indicated.[519]

Additionally, we give information, for each national dataset, on:

- significance of contracts below EU thresholds, i.e. percentage of below EU-thresholds contract value out of country total;
- availability of contract prices, i.e. share of contract documents with price information out of total contract documents considered;
- data quality, in terms of availability of CPV codes, level of detail of contract descriptions (average text length), availability of type of contract and type of authority information, availability of contract award notices (as opposed to contract notices).

A quintile ranking has been calculated of national datasets for each dimension. The results of the exercise are reported in the following table, where ***** indicates the highest i.e. significance, availability, quality, and * the lowest score.

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[519]Additional private providers of public procurement data exist (see notably in the country fiches of the inception report). Yet, the actual availability and willingness to cooperate with the European Commission (or a contractor) in future has only been confirmed in the indicated cases.

Table 5.2.1- Available sources for the phase 1 data collection of administrative public procurement data

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Austria	FPA data potentially available, with added costs of processing; currently 99.9% of FPA contracts are above the EU threshold i.e. published on TED.	Yes, Tender Service Group.	N.A.	N.A.	N.A.	**Database:** http://www.bbg.gv.at/lieferanten/ausschreibungen/alle/ **Responsible Authority**: Bundesbeschaffung GmbH
Belgium	Yes, data could be provided.	None.	*	*	***	**Database:** http://www.publicprocurement.be **Responsible authority:** Federal Directorate-General for Personnel and Organisation (SPF P&O)

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Bulgaria	Data provision would be technically possible, but is to be negotiated with the public authorities.	Yes, Tender Service Group.	*****	*	**	**Database:** http://www.aop.bg **Responsible authority:** Public Procurement Agency of the Republic of Bulgaria
Cyprus	Yes, data could be provided.	Yes, Tender Service Group.	***	****	*****	**Database:** https://www.eprocurement.gov.cy/ceproc/home.do **Responsible authority**: Public Procurement Directorate of the Treasury of the Republic of Cyprus
Czech Republic	Yes, data could be provided.	Yes, Tender Service Group.	**	****	*****	**Database**: http://www.isvzus.cz/cs **Responsible authority:** Ministry for Regional Development

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Denmark	Data provision would be technically possible, but is to be negotiated with the public authorities.	Yes, Mercell Group.	**	*	**	**Database:** http://www.udbud.dk **Responsible authority:** Danish Competition and Consumer Authority National one-stop portal established in March 2012.
Estonia	Yes, data could be provided, however the authorities do not have the resources.	Yes, Mercell Group.	N.A.	N.A.	N.A.	**Database:** https://riigihanked.riik.ee/lr1/web/guest **Responsible authority**: Public Procurement Register
Finland	Yes, data could be provided.	Yes, Mercell Group.	*	**	****	**Database:** www.hankintailmoitukset.fi **Responsible authority**: Public Procurement Register HILMA (Ministry of Employment and Economy)

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
France	Yes, data could be provided but the authorities would charge a fee.	Yes, Vecteur Plus.	*	*	**	**Database**: http://www.boamp.fr/ **Responsible authority**: Direction d' Administration Centrale des Services du Premier Ministre' (DILA)
Germany	No. There is no mandatory central public procurement platform.	Yes, Tender Service Group	****	*	*	**Database**: http://www.bund.de/DE/Ausschreibungen/ausschreibungen_node.html **Responsible authority**: Bundesverwaltungsamt (Federal Office of Administration)
Greece	Yes, data could be provided.	Yes, Tender Service Group.	****	***	**	**Database**: http://staging.agora.gov.gr/ **Responsible authority**: Ministry of Development, Competitiveness and Shipping Central database set up recently (not yet fully operational).

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Hungary	Yes, data could be provided.	Yes, Tender Service Group.	***	***	****	**Database**: www.kozbeszerzes.hu **Responsible authority**: The Public Procurement Authority
Ireland	Yes, data could be provided.	Yes, Tendersdirect.	****	*	***	**Database**: www.eTenders.gov.ie **Responsible authority**: the National Procurement Service ('NPS') of the Office of Public Works ('OPW')
Italy	Data provision would be technically possible, but needs to be negotiated with the public authorities.	Yes, Telemat.	**	**	**	**Database:** http://www.avcp.it/portal/public/classic/ **Responsible authority**: *Autoritá´ per la Vigilanza sui Contratti Pubblici- AVCP* (Italian Public Procurement Surveillance Authority) *Osservatorio per i contratti pubblici (AVCP´s department, Observatory for Public Procurement)*

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Latvia	Yes, data could be provided.	Yes, Mercell Group.	****	***	***	**Database:** http://www.iub.gov.lv **Responsible authority:** Latvian Procurement Monitoring Bureau
Lithuania	Yes, data could be provided.	Yes, Mercell Group.	***	*****	*****	**Database**: http://pirkimai.eviesiejipirkimai.lt **Responsible authority:** Public Procurement Office
Luxembourg	Data provision would be technically possible, but needs to be negotiated with the public authorities.	None.	N.A.	N.A.	N.A.	**Database:** https://pmp.b2g.etat.lu **Responsible authority:** Ministry for Sustainable Development and Infrastructure, Department for Public Works, Directorate for Public Procurement
Malta	Yes, data could be provided, although archive is currently incomplete.	Yes, Tenders MT (although data is limited before 2009).	***	**	*	**Database**: www.etenders.gov.mt **Responsible authority:** Ministry of Finance, Economy and Investment Central database was set up in 2011.

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Netherlands	Yes, data could be provided, however there is almost no under EU threshold data and archive is limited.	Yes, CROW (Aanbestedings kalender).	*	*	****	**Database:** http://www.tenderned.nl/ New system recently set up (old now privately owned). **Responsible authority:** TenderNed (Ministry of Economic Affairs)
Norway	Yes, data could be provided.	Yes, Mercell Group.	**	**	****	**Database**: http://www.doffin.no/ **Responsible authority:** Direktoratet for forvaltning og IKT - DiFi (Agency for Public Management and eGovernment)
Poland	Yes, data could be provided.	Yes, Tender Service Group.	****	*****	****	**Database:** http://bzp1.portal.uzp.gov.pl/index.php?ogloszenie=browser **Responsible authority:** Public Procurement Office

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Portugal	Yes, data could be provided.	No suitable private providers available.	*****	*****	****)	**Database:** http://www.base.gov.pt/base2/en/html/portal/base.shtml **Responsible authority:** Instituto da Construção e do Imobiliário (INCI, the Ministry of Public Works)
Romania	Data provision would be technically possible, but needs to be negotiated with the public authorities. No data provision for the present study.	Yes, Tender Service Group.	**	*****	****	**Database**: www.e-licitatie.ro **Responsible authority:** National Authority for Regulation and Monitoring of Public Procurements (ANRMAP)

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Slovakia	Data provision would be technically possible, but needs to be negotiated with the public authorities.	Yes, Tender Service Group.	*	****	****	**Database**: http://www.e-vestnik.sk/EVestnik/Aktualne **Responsible authority:** Office for Public Procurement
Slovenia	Yes, data could be provided.	Yes, Tender Service Group.	****	***	*****	**Database:** http://www.enarocanje.si **Responsible authority:** Ministry of Finance, Department for Public Private Partnership and Public Procurement System; Official Gazette of the Republic of Slovenia
Spain	Data provision would be technically possible, but needs to be negotiated with the public authorities.	Yes, Tender Service Group.	*	****	****	**Database:** http://contrataciondelestado.es **Responsible authority:** Treasury and Public Administrations Ministry, State Consultative Board of Administrative Procurement

Country	Possibility of future data provision to the EC by national public authorities	Availability of alternative private data sources	Significance (in value) of contracts below EU thresholds	Availability of contract prices	Data Quality	Database details
Sweden	No. There is no mandatory central public procurement platform.	Yes, Mercell Group.	***	*	**	**Database:** N/A **Responsible authority:** Swedish Competition Authority
Switzerland	Yes, data could be provided (confidentiality conditions are to be negotiated with the simap.ch association).	Yes, Tender Service Group	*	***	*****	**Database:** http://www.simap.ch **Responsible authority:** Federal State Secretariat for Economic Affairs (SECO)
United Kingdom	Yes, data could be provided.	Yes, Tender Service Group	*	**	**	**Database:** www.contractsfinder.businesslink.gov.uk **Responsible authority:** Efficiency and Reform Group, Cabinet Office

As explained above, the availability of administrative data on public procurement can be expected to continuously improve in the coming years due to numerous e-procurement and Open Data initiatives across Europe.

Annex 1 – ICT sector definition

Table 1.1 - The 2006-07 OECD ICT sector definition (source: Guide to measuring information society. OECD 2011 and 2009)

ISIC rev.4	Description
ICT manufacturing industries	
2610	*Manufacture of electronic components and boards*
2620	*Manufacture of computers and peripheral equipment*
2630	*Manufacture of communication equipment*
2640	*Manufacture of consumer electronics*
2680	*Manufacture of magnetic and optical media*
ICT trade industries	
4651	*Wholesale of computers, computer peripheral equipment and software,*
4652	*Wholesale of electronic and telecommunications equipment and parts*
ICT services industries	
5820	*Software publishing*
6110	*Wired telecommunications activities*
6120	*Wireless telecommunications activities*
6130	*Satellite telecommunications activities*
6190	*Other telecommunications activities*
6201	*Computer programming activities*
6202	*Computer consultancy and computer facilities management activities*
6209	*Other information technology and computer service activities*
6311	*Data processing, hosting and related activities*
6312	*Web portals*
9511	*Repair of computers and peripheral equipment*

9512   *Repair of communication equipment*

Table 1. 2 - ICT products (source: Guide to measuring information society. OECD 2011)

CPC ver.2	Description
38581	*Video game consoles*
45142	*Point-of-sale terminals, ATMs and similar machines*
45221	*Portable automatic data processing machines weighing not more than 10 kg, such as laptop and notebook computers*
45222	*Personal digital assistants and similar computers*
45230	*Automatic data processing machines, comprising in the same housing at least a central processing unit and an input and output unit, whether or not combined*
45240	*Automatic data processing machines presented in the form of systems*
45250	*Other automatic data processing machines whether or not containing in the same housing one or two of the following types of units: storage units, input units, output units*
45261	*Input peripherals (keyboard, joystick, mouse etc.)*
45262	*Scanners (except combination of printer, scanner, copier and/or fax)*
45263	*Inkjet printers used with data processing machines*
45264	*Laser printers used with data processing machines*
45265	*Other printers used with data processing machines*
45266	*Units performing two or more of the following functions: printing, scanning, copying, faxing*
45269	*Other input or output peripheral devices*
45271	*Fixed media storage units*
45272	*Removable media storage units*
45281	*Sound, video, network and similar cards for automatic data processing machines*

CPC ver.2	Description
45289	Other units of automatic data processing machines
45290	Parts and accessories of computing machines
46921	Burglar or fire alarms and similar apparatus
47130	Printed circuits
47140	Thermionic, cold cathode or photo-cathode valves and tubes (including cathode ray tubes)
47150	Diodes, transistors and similar se mi-conductor devices; photosensitive semi-conductor devices; light emitting diodes; mounted piezo-electric crystals
47160	Electronic integrated circuits
47173	Parts for the goods of subclasses 47140 to 47160
47211	Transmission apparatus incorporating reception apparatus
47212	Transmission apparatus not incorporating reception apparatus
47213	Television cameras
47214	Video camera recorders
47215	Digital cameras
47221	Line telephone sets with cordless handsets
47222	Telephones for cellular networks or for other wireless networks
47223	Other telephone sets and apparatus for transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network)
47311	Radio broadcast receivers (except of a kind used in motor vehicles), whether or not combined with sound recording or reproducing apparatus or a clock
47312	Radio broadcast receivers not capable of operating without an external source of power, of a kind used in motor vehicles
47313	Television receivers, whether or not combined with radio-broadcast receivers or sound or video recording or reproducing apparatus
47314	Monitors and projectors, not incorporating television reception apparatus and not principally used in an automatic data processing system

CPC ver.2	Description
47315	Monitors and projectors, principally used in an automatic data processing system
47321	Sound recording or reproducing apparatus
47323	Video recording or reproducing apparatus
47330	Microphones and stands there for; loudspeakers; headphones, earphones and combined microphone/speaker sets; audio-frequency electric amplifiers; electric sound amplifier sets
47401	Parts for the goods of subclasses 47221 to 47223
47402	Parts for the goods of subclasses 47321, 47323 and 47330
47403	Parts for the goods of subclasses 47211 to 47213, 47311 to 47315 and 48220
47530	Magnetic media, not recorded, except cards with a magnetic stripe
47540	Optical media, not recorded
47550	Solid-state non-volatile storage devices
47590	Other recording media, including matrices and masters for the production of disks
47811	Operating systems, packaged
47812	Network software, packaged
47813	Database management software, packaged
47814	Development tools and programming languages software, packaged
47821	General business productivity and home use applications, packaged
47829	Other application software, packaged
47910	Cards with a magnetic stripe
47920	"Smart cards"
48315	Liquid crystal devices n.e.c.; lasers, except laser diodes; other optical appliances and instruments n.e.c.
48354	Parts and accessories for the goods of subclass 48315
73124	Leasing or rental services concerning computers without operator

CPC ver.2	Description
73125	*Leasing or rental services concerning telecommunications equipment without operator*
73210	*Leasing or rental services concerning televisions, radios, video cassette recorders and related equipment and accessories*
73311	*Licensing services for the right to use computer software*
83117	*Business process management services*
83131	*IT consulting services*
83132	*IT support services*
83141	*IT design and development services for applications*
83142	*IT design and development services for networks and systems*
83143	*Software originals*
83151	*Website hosting services*
83152	*Application service provisioning*
83159	*Other hosting and IT infrastructure provisioning services*
83161	*Network management services*
83162	*Computer systems management services*
83325	*Engineering services for telecommunications and broadcasting projects*
84110	*Carrier services*
84121	*Fixed telephony services, access and use*
84122	*Fixed telephony services, calling features*
84131	*Mobile telecommunications services, access and use*
84132	*Mobile telecommunications services, calling features*
84140	*Private network services*
84150	*Data transmission services*
84190	*Other telecommunications services*
84210	*Internet backbone services*

CPC ver.2	Description
84221	*Narrowband Internet access services*
84222	*Broadband Internet access services*
84290	*Other Internet telecommunications services*
84341	*System software downloads*
84342	*Application software downloads*
84392	*On-line software*
87130	*Maintenance and repair services of computers and peripheral equipment*
87153	*Maintenance and repair services of telecommunication equipment and apparatus*
87331	*Installation services of mainframe computers*
87332	*Installation services of personal computers and peripheral equipment*
87340	*Installation services of radio, television and communications equipment and apparatus*
88741	*Electronic component and board manufacturing services*
88742	*Computer and peripheral equipment manufacturing services*
88743	*Communication equipment manufacturing services*
88744	*Consumer electronics manufacturing services*
88749	*Magnetic and optical media manufacturing services*

Table 1.3 – ICT definition of the study: selected CPV codes

CPV Code	CPV Title
30110000-3	Word-processing machines
30111000-0	Word processors
30121000-3	Photocopying and thermocopying equipment
30121100-4	Photocopiers
30121200-5	Photocopying equipment

CPV Code	CPV Title
30121300-6	Reproduction equipment
30121400-7	Duplicating machines
30121410-0	Faxswitch machines
30121420-3	Digital senders
30121430-6	Digital duplicators
30122000-0	Office-type offset printing machinery
30122100-1	Digital offset systems
30122200-2	Digital offset equipment
30123100-8	Ticket-validation machines
30123200-9	Automatic cash dispensers
30123600-3	Coin-handling machines
30123610-6	Coin-sorting machines
30123620-9	Coin-counting machines
30123630-2	Coin-wrapping machines
30124500-9	Scanner accessories
30124510-2	Endorsers
30124520-5	Scanner document feeders
30124530-8	Scanner transparency adapters
30125000-1	Parts and accessories of photocopying apparatus
30125100-2	Toner cartridges
30125110-5	Toner for laser printers/fax machines
30125120-8	Toner for photocopiers
30125130-1	Toner for data-processing and research and documentation centres
30144400-4	Automatic fare collection
30160000-8	Magnetic cards

CPV Code	CPV Title
30161000-5	Credit cards
30162000-2	Smart cards
30163000-9	Charge cards
30163100-0	Agency fuel cards
30191200-6	Overhead projectors
30199761-2	Bar-coded labels
30199763-6	Theft protection labels
30200000-1	Computer equipment and supplies
30210000-4	Data-processing machines (hardware)
30211000-1	Mainframe computer
30211100-2	Super computer
30211200-3	Mainframe hardware
30211300-4	Computer platforms
30211400-5	Computer configurations
30211500-6	Central processing unit (CPU) or processors
30212000-8	Minicomputer hardware
30212100-9	Central processing units for minicomputers
30213000-5	Personal computers
30213100-6	Portable computers
30213200-7	Tablet computer
30213300-8	Desktop computer
30213400-9	Central processing units for personal computers
30213500-0	Pocket computers
30214000-2	Workstations
30215000-9	Microcomputer hardware

CPV Code	CPV Title
30215100-0	Central processing units for microcomputers
30216000-6	Magnetic or optical readers
30216100-7	Optical readers
30216110-0	Scanners for computer use
30216120-3	Optical-character-recognition equipment
30216130-6	Barcode readers
30216200-8	Magnetic card readers
30216300-9	Punchcard readers
30220000-7	Digital cartography equipment
30221000-4	Digital cadastral maps
30230000-0	Computer-related equipment
30231000-7	Computer screens and consoles
30231100-8	Computer terminals
30231200-9	Consoles
30231300-0	Display screens
30231310-3	Flat panel displays
30231320-6	Touch screen monitors
30232000-4	Peripheral equipment
30232100-5	Printers and plotters
30232110-8	Laser printers
30232120-1	Dot-matrix printers
30232130-4	Colour graphics printers
30232140-7	Plotters
30232150-0	Inkjet printers
30232600-0	Encoders

CPV Code	CPV Title

CPV Code	CPV Title
30232700-1	Central controlling unit
30233000-1	Media storage and reader devices
30233100-2	Computer storage units
30233110-5	Magnetic card storage units
30233120-8	Magnetic tape storage units
30233130-1	Magnetic disk storage units
30233131-8	Floppy-disk drives
30233132-5	Hard-disk drives
30233140-4	Direct-access storage devices (DASD)
30233141-1	Redundant Array of Independent Disk (RAID)
30233150-7	Optical-disk drives
30233151-4	Compact disk (CD) reader and/or burner
30233152-1	Digital versatile disc (DVD) reader and/or burner
30233153-8	Compact disk (CD) and digital versatile disk (DVD) reader and/or burner
30233160-0	Tape streamers
30233161-7	Cassette-handling equipment
30233170-3	Carousel units
30233180-6	Flash memory storage devices
30233190-9	Disk controller
30233300-4	Smart card readers
30233310-7	Fingerprint readers
30233320-0	Combined smart card and fingerprint readers
30234000-8	Storage media
30234100-9	Magnetic disk

CPV Code	CPV Title
30234200-0	Optical disks
30234300-1	Compact disks (CDs)
30234400-2	Digital versatile disks (DVDs)
30234500-3	Memory storage media
30234600-4	Flash memory
30234700-5	Magnetic tapes
30236000-2	Miscellaneous computer equipment
30236100-3	Memory-expansion equipment
30236110-6	Random access memory (RAM)
30236111-3	Dynamic random access memory (DRAM)
30236112-0	Static random access memory (SRAM)
30236113-7	Synchronous dynamic random access memory (SDRAM)
30236114-4	Rambus dynamic random access memory (RDRAM)
30236115-1	Synchronous graphic random access memory (SGRAM)
30236120-9	Read only memory (ROM)
30236121-6	Programmable read only memory (PROM)
30236122-3	Erasable programmable read only memory (EPROM)
30236123-0	Electronically erasable programmable read only memory (EEPROM)
30236200-4	Data-processing equipment
30237000-9	Parts, accessories and supplies for computers
30237100-0	Parts of computers
30237110-3	Network interfaces
30237120-6	Computer ports
30237121-3	Serial infrared ports
30237130-9	Computer cards

CPV Code	CPV Title
30237131-6	Electronic cards
30237132-3	Universal Serial Bus (USB) Interfaces
30237133-0	Personal Computer Memory Card International Association (PCMCIA) adaptors and interfaces
30237134-7	Graphic accelerator cards
30237135-4	Network interfaces cards
30237136-1	Audio cards
30237140-2	Motherboards
30237200-1	Computer accessories
30237210-4	Anti-glare screens
30237220-7	Mousepads
30237230-0	Caches
30237240-3	Web camera
30237250-6	Computer cleaning accessories
30237251-3	Computer cleaning kits
30237252-0	Pressurised air dusters
30237253-7	Dust covers for computer equipment
30237260-9	Monitor wall mount arms
30237270-2	Portable computer carrying cases
30237280-5	Power supply accessories
30237290-8	Keyboard wrist rests
30237295-3	Keyguards
30237300-2	Computer supplies
30237310-5	Font cartridges for printers
30237320-8	Diskettes

CPV Code	CPV Title

CPV Code	CPV Title
30237330-1	Digital Audio Tape (DAT) cartridges
30237340-4	Digital Linear Tape (DLT) cartridges
30237350-7	Data cartridges
30237360-0	Linear Tape-Open (LTO) cartridges
30237370-3	Recording cartridges
30237380-6	CD-ROM
30237400-3	Data entry accessories
30237410-6	Computer mouse
30237420-9	Joysticks
30237430-2	Light pens
30237440-5	Trackballs
30237450-8	Graphics tablets
30237460-1	Computer keyboards
30237461-8	Programmable keyboards
30237470-4	Braille pads
30237475-9	Electric sensors
30237480-7	Input units
30238000-6	Library automation equipment
31620000-8	Sound or visual signalling apparatus
31625000-3	Burglar and fire alarms
31625100-4	Fire-detection systems
31625200-5	Fire-alarm systems
31625300-6	Burglar-alarm systems
31644000-2	Miscellaneous data recorders
31671200-2	Cathode-ray tubes
CPV Code	CPV Title

CPV Code	CPV Title
31711000-3	Electronic supplies
31711100-4	*<u>Electronic components</u>*
31711110-7	Transceivers
31711120-0	Transducers
31711130-3	Resistors
31711131-0	Electrical resistors
31711140-6	Electrodes
31711150-9	Electrical capacitors
31711151-6	Fixed capacitors
31711152-3	Variable or adjustable capacitors
31711154-0	Capacitor banks
31711155-7	Capacitor networks
31711200-5	Electronic scoreboards
31711300-6	Electronic timekeeping systems
31711310-9	System for recording attendance
31711400-7	Valves and tubes
31711410-0	Cathode-ray television picture tubes
31711411-7	Television camera tubes
31711420-3	Microwave tubes and equipment
31711421-0	Magnetrons
31711422-7	Microwave equipment
31711423-4	Microwave radio equipment
31711424-1	Klystrons
31711430-6	Valve tubes
31711440-9	Receiver or amplifier valves and tubes

CPV Code	CPV Title
31711500-8	*Parts of electronic assemblies*
31711510-1	Parts of electrical capacitors
31711520-4	Parts of electrical resistors, rheostats and potentiometers
31711530-7	Parts of electronic valves and tubes
31712000-0	Microelectronic machinery and apparatus and microsystems
31712100-1	Microelectronic machinery and apparatus
31712110-4	Electronic integrated circuits and microassemblies
31712111-1	Phone cards
31712112-8	SIM cards
31712113-5	Cards containing integrated circuits
31712114-2	Integrated electronic circuits
31712115-9	Microassemblies
31712116-6	Microprocessors
31712117-3	Integrated circuit packages
31712118-0	Integrated circuit sockets or mounts
31712119-7	Integrated circuit lids
31712200-2	Microsystems
31712300-3	Printed circuits
31712310-6	Populated printed circuit boards
31712320-9	Unpopulated printed circuit boards
31712330-2	Semiconductors
31712331-9	Photovoltaic cells
31712332-6	Thyristors
31712333-3	Diacs
31712334-0	Triacs
CPV Code	CPV Title

CPV Code	CPV Title
31712335-7	Optical coupled isolators
31712336-4	Crystal oscillators
31712340-5	Diodes
31712341-2	Light-emitting diodes
31712342-9	Microwave or small signal diodes
31712343-6	Zener diodes
31712344-3	Schottky diodes
31712345-0	Tunnel diodes
31712346-7	Photosensitive diodes
31712347-4	Power or solar diodes
31712348-1	Laser diodes
31712349-8	Radio frequency (RF) diodes
31712350-8	Transistors
31712351-5	Photo sensitive transistors
31712352-2	Field effect transistors (FET)
31712353-9	Metal oxide field effect transistors (MOSFET)
31712354-6	Transistor chips
31712355-3	Bipolar darlington or radio frequency (RF) transistors
31712356-0	Unijunction transistors
31712357-7	Insulated gate bipolar transistors (IGBT)
31712358-4	Junction field effect transistors (JFET)
31712359-1	Bipolar junction transistors (BJT)
31712360-1	Mounted piezo-electric crystals
32000000-3	Radio, television, communication, telecommunication and related equipment

CPV Code	CPV Title
32200000-5	Transmission apparatus for radiotelephony, radiotelegraphy, radio broadcasting and television
32210000-8	*Broadcasting equipment*
32211000-5	Broadcast production equipment
32220000-1	*Television transmission apparatus without reception apparatus*
32221000-8	Radio beacons
32222000-5	Video-signal coding machines
32223000-2	Video transmission apparatus
32224000-9	Television transmission apparatus
32230000-4	Radio transmission apparatus with reception apparatus
32231000-1	Closed-circuit television apparatus
32232000-8	Video-conferencing equipment
32233000-5	Radio-frequency booster stations
32234000-2	Closed-circuit television cameras
32235000-9	Closed-circuit surveillance system
32236000-6	Radio telephones
32237000-3	Walkie-talkies
32240000-7	Television cameras
32250000-0	Mobile telephones
32251000-7	Car telephones
32251100-8	Hands-free set
32252000-4	GSM telephones
32252100-5	Hands-free mobile telephones
32252110-8	Hands-free mobile telephones (wireless)
32260000-3	Data-transmission equipment

CPV Code	CPV Title

CPV Code	CPV Title
32270000-6	Digital transmission apparatus
32300000-6	Television and radio receivers, and sound or video recording or reproducing apparatus
32310000-9	Radio broadcast receivers
32320000-2	Television and audio-visual equipment
32321000-9	Television projection equipment
32321100-0	Film equipment
32321200-1	Audio-visual equipment
32321300-2	Audio-visual materials
32322000-6	Multimedia equipment
32323000-3	Video monitors
32323100-4	Colour video monitors
32323200-5	Monochrome video monitors
32323300-6	Video equipment
32323400-7	Video-playback equipment
32323500-8	Video-surveillance system
32324000-0	Televisions
32324100-1	Colour televisions
32324200-2	Monochrome televisions
32324300-3	Television equipment
32324310-6	Satellite antennas
32324400-4	Television aerials
32324500-5	Video tuners
32324600-6	Digital-TV boxes
32330000-5	Apparatus for sound, video-recording and reproduction

CPV Code	CPV Title
32331000-2	Turntables
32331100-3	Record players
32331200-4	Cassette players
32331300-5	Sound-reproduction apparatus
32331500-7	Recorders
32331600-8	MP3 player
32332000-9	Magnetic tape recorders
32332100-0	Dictating machines
32332200-1	Telephone-answering machines
32332300-2	Sound recorders
32333000-6	Video recording or reproducing apparatus
32333100-7	Video recorders
32333200-8	Video camcorders
32333300-9	Video-reproducing apparatus
32333400-0	Video players
32340000-8	Microphones and loudspeakers
32341000-5	Microphones
32342000-2	Loudspeakers
32342100-3	Headphones
32342200-4	Earphones
32342300-5	Microphones and speaker sets
32342400-6	Acoustic devices
32342410-9	Sound equipment
32342411-6	Mini speakers
32342412-3	Speakers

CPV Code	CPV Title
32342420-2	Studio mixing console
32342430-5	Speech-compression system
32342440-8	Voice-mail system
32342450-1	Voice recorders
32343000-9	Amplifiers
32343100-0	Audio-frequency amplifiers
32343200-1	Megaphones
32344000-6	Reception apparatus for radiotelephony or radiotelegraphy
32344100-7	Portable receivers for calling and paging
32344110-0	Voice-logging system
32344200-8	Radio receivers
32344210-1	Radio equipment
32344220-4	Radio pagers
32344230-7	Radio stations
32344240-0	Radio tower
32344250-3	Radio installations
32344260-6	Radio and multiplex equipment
32344270-9	Radio and telephone control system
32344280-2	Portable radios
32350000-1	Parts of sound and video equipment
32351000-8	Accessories for sound and video equipment
32351100-9	Video-editing equipment
32351200-0	Screens
32351300-1	Audio equipment accessories
32352000-5	Aerials and reflectors

CPV Code	CPV Title
32352100-6	Parts of radio and radar equipment
32352200-7	Radar spare parts and accessories
32360000-4	Intercom equipment
32400000-7	Networks
32410000-0	Local area network
32411000-7	Token-ring network
32412000-4	Communications network
32412100-5	Telecommunications network
32412110-8	Internet network
32412120-1	Intranet network
32413000-1	Integrated network
32413100-2	Network routers
32415000-5	Ethernet network
32416000-2	ISDN network
32416100-3	ISDX network
32417000-9	Multimedia networks
32418000-6	Radio network
32420000-3	Network equipment
32421000-0	Network cabling
32422000-7	Network components
32423000-4	Network hubs
32424000-1	Network infrastructure
32425000-8	Network operating system
32426000-5	Network publishing system
32427000-2	Network system

CPV Code	CPV Title
32428000-9	Network upgrade
32429000-6	Telephone network equipment
32430000-6	Wide area network
32440000-9	Telemetry and terminal equipment
32441000-6	Telemetry equipment
32441100-7	Telemetry surveillance system
32441200-8	Telemetry and control equipment
32441300-9	Telematics system
32442000-3	Terminal equipment
32442100-4	Terminal boards
32442200-5	Terminal boxes
32442300-6	Terminal emulators
32442400-7	Termination blocks
32510000-1	Wireless telecommunications system
32522000-8	Telecommunications equipment
32523000-5	Telecommunications facilities
32524000-2	Telecommunications system
32530000-7	Satellite-related communications equipment
32531000-4	Satellite communications equipment
32532000-1	Satellite dishes
32533000-8	Satellite earth stations
32534000-5	Satellite platforms
32540000-0	Switchboards
32541000-7	Switchboard equipment
32542000-4	Switchboard panels
CPV Code	CPV Title

CPV Code	CPV Title
32543000-1	Telephone switchboards
32544000-8	PABX equipment
32545000-5	PABX systems
32546000-2	Digital switching equipment
32546100-3	Digital switchboards
32547000-9	Vacuum switchboards
32551200-2	Telephone exchanges
32551300-3	Telephone headsets
32551400-4	Telephone network
32552000-7	Electrical apparatus for line telephony or line telegraphy
32552100-8	Telephone sets
32552110-1	Cordless telephones
32552120-4	Emergency telephones
32552130-7	Public telephones
32552140-0	Payphone equipment
32552150-3	Telephones for visually-impaired
32552160-6	Telephones for hearing-impaired
32552200-9	Teleprinters
32552300-0	Telephonic or telegraphic switching apparatus
32552310-3	Digital telephone exchanges
32552320-6	Multiplexers
32552330-9	Telephone switching apparatus
32552400-1	Audio-frequency signal conversion apparatus
32552410-4	Modems
32552420-7	Frequency converter

CPV Code	CPV Title
32552430-0	Coding equipment
32552500-2	Teletext apparatus
32552510-5	Videotext terminals
32552520-8	Telex equipment
32552600-3	Entrance telephones
32553000-4	Parts of electrical telephonic or telegraphic apparatus
32573000-0	Communications control system
32581200-1	Fax equipment
32581210-4	Accessories and components for fax equipment
32582000-6	Data carriers
32583000-3	Data and voice media
32584000-0	Data-bearing media
35121600-4	Tags
35121700-5	Alarm systems
35123000-2	Site-identification equipment
35123100-3	Magnetic-card system
35123200-4	Flexible-working-hours equipment
35123300-5	Timekeeping system
35123400-6	Identification badges
35123500-7	Video identification systems
35125000-6	Surveillance system
35125100-7	Sensors
35125110-0	Biometric sensors
35125200-8	Time control system or working time recorder
35125300-2	Security cameras

CPV Code	CPV Title
35126000-3	Bar code scanning equipment
35261100-2	Changing message indicator panels
35422000-8	Electronic and electrical spare parts for military vehicles
35631000-6	Military satellites
35631100-7	Communication satellites
35631200-8	Observation satellites
35631300-9	Navigation satellites
35710000-4	Command, control, communication and computer systems
35711000-1	Command, control, communication systems
35712000-8	Tactical command, control and communication systems
35720000-7	Intelligence, surveillance, target acquisition and reconnaissance
35721000-4	Electronic intelligence system
35722000-1	Radar
35723000-8	Air defence radar
35730000-0	Electronic warfare systems and counter measures
38112100-4	Global navigation and positioning systems (GPS or equivalent)
38113000-0	Sonars
38114000-7	Echo sounders
38115000-4	Radar apparatus
38115100-5	Radar surveillance equipment
38221000-0	Geographic information systems (GIS or equivalent)
38636000-2	Specialist optical instruments
38636100-3	Lasers
38636110-6	Industrial lasers
38640000-3	Liquid crystal devices
CPV Code	CPV Title

CPV Code	CPV Title
38651600-9	Digital cameras
42964000-1	Office automation equipment
42965000-8	Information-processing equipment
45232330-4	Erection of aerials
45232340-7	Mobile-telephone base-stations construction work
45312100-8	Fire-alarm system installation work
45312200-9	Burglar-alarm system installation work
45312300-0	Antenna installation work
45312320-6	Television aerial installation work
45312330-9	Radio aerial installation work
45314100-2	Installation of telephone exchanges
45314120-8	Installation of switchboards
48100000-9	Industry specific software package
48110000-2	Point of sale (POS) software package
48120000-5	Flight control software package
48121000-2	Air traffic control software package
48130000-8	Aviation ground support and test software package
48131000-5	Aviation ground support software package
48132000-2	Aviation test software package
48140000-1	Railway traffic control software package
48150000-4	Industrial control software package
48151000-1	Computer control system
48160000-7	Library software package
48161000-4	Library management system
48170000-0	Compliance software package
CPV Code	CPV Title

CPV Code	CPV Title
48180000-3	Medical software package
48190000-6	Educational software package
48200000-0	Networking, Internet and intranet software package
48210000-3	Networking software package
48211000-0	Platform interconnectivity software package
48212000-7	Optical jukebox server software package
48213000-4	Operating system enhancement software package
48214000-1	Network operating system software package
48215000-8	Networking developers' software package
48216000-5	Network connectivity terminal emulation software package
48217000-2	Transaction-processing software package
48217100-3	Mainframe transaction processing software package
48217200-4	Minicomputer transaction processing software package
48217300-5	Microcomputer transaction processing software package
48218000-9	License management software package
48219000-6	Miscellaneous networking software package
48219100-7	Gateway software package
48219200-8	Compact disk (CD) server software package
48219300-9	Administration software package
48219400-0	Transaction server software package
48219500-1	Switch or router software package
48219600-2	Multiplexer software package
48219700-3	Communications server software package
48219800-4	Bridge software package
48220000-6	Internet and intranet software package

CPV Code	CPV Title
48221000-3	Internet browsing software package
48222000-0	Web server software package
48223000-7	Electronic mail software package
48224000-4	Web page editing software package
48300000-1	Document creation, drawing, imaging, scheduling and productivity software package
48310000-4	Document creation software package
48311000-1	Document management software package
48311100-2	Document management system
48312000-8	Electronic publishing software package
48313000-5	Optical-character-recognition (OCR) software package
48313100-6	Optical reading system
48314000-2	Voice recognition software package
48315000-9	Desktop-publishing software package
48316000-6	Presentation software package
48317000-3	Word-processing software package
48318000-0	Scanner software package
48319000-7	Spell checkers
48320000-7	Drawing and imaging software package
48321000-4	Computer-aided design (CAD) software package
48321100-5	Computer-aided design (CAD) system
48322000-1	Graphics software package
48323000-8	Computer-aided manufacturing (CAM) software package
48324000-5	Charting software package
48325000-2	Form-making software package

CPV Code	CPV Title
48326000-9	Mapping software package
48326100-0	Digital mapping system
48327000-6	Drawing and painting software package
48328000-3	Image-processing software package
48329000-0	Imaging and archiving system
48330000-0	Scheduling and productivity software package
48331000-7	Project management software package
48332000-4	Scheduling software package
48333000-1	Contact management software package
48400000-2	Business transaction and personal business software package
48410000-5	Investment management and tax preparation software package
48411000-2	Investment management software package
48412000-9	Tax preparation software package
48420000-8	Facilities management software package and software package suite
48421000-5	Facilities management software package
48422000-2	Software package suites
48430000-1	Inventory management software package
48440000-4	Financial analysis and accounting software package
48441000-1	Financial analysis software package
48442000-8	Financial systems software package
48443000-5	Accounting software package
48444000-2	Accounting system
48444100-3	Billing system
48445000-9	Customer Relation Management software package
48450000-7	Time accounting or human resources software package

CPV Code	CPV Title

CPV Code	CPV Title
48451000-4	Enterprise resource planning software package
48460000-0	Analytical, scientific, mathematical or forecasting software package
48461000-7	Analytical or scientific software package
48462000-4	Mathematical or forecasting software package
48463000-1	Statistical software package
48470000-3	Auction software package
48480000-6	Sales, marketing and business intelligence software package
48481000-3	Sales or marketing software package
48482000-0	Business intelligence software package
48490000-9	Procurement software package
48500000-3	Communication and multimedia software package
48510000-6	Communication software package
48511000-3	Desktop communications software package
48512000-0	Interactive voice response software package
48513000-7	Modem software package
48514000-4	Remote access software package
48515000-1	Video conferencing software package
48516000-8	Exchange software package
48517000-5	IT software package
48518000-2	Emulation software package
48519000-9	Memory-management software package
48520000-9	Multimedia software package
48521000-6	Music or sound editing software package
48522000-3	Virtual keyboard software package
48600000-4	Database and operating software package

CPV Code	CPV Title
48610000-7	Database systems
48611000-4	Database software package
48612000-1	Database-management system
48613000-8	Electronic data management (EDM)
48614000-5	Data-acquisition system
48620000-0	Operating systems
48621000-7	Mainframe operating system software package
48622000-4	Minicomputer operating system software package
48623000-1	Microcomputer operating system software package
48624000-8	Personal computer (PC) operating system software package
48625000-5	Open systems operating systems
48626000-2	Clustering software package
48627000-9	Real-time operating system software package
48628000-9	Micro-channel architecture
48700000-5	Software package utilities
48710000-8	Backup or recovery software package
48720000-1	Bar coding software package
48730000-4	Security software package
48731000-1	File security software package
48732000-8	Data security software package
48740000-7	Foreign language translation software package
48750000-0	Storage media loading software package
48760000-3	Virus protection software package
48761000-0	Anti-virus software package
48770000-6	General, compression and print utility software package
CPV Code	CPV Title

CPV Code	CPV Title
48771000-3	General utility software package
48772000-0	Compression utilities
48773000-7	Print utility software package
48773100-8	Print-spooling software package
48780000-9	System, storage and content management software package
48781000-6	System management software package
48782000-3	Storage management software package
48783000-0	Content management software package
48790000-2	Version checker software package
48800000-6	Information systems and servers
48810000-9	Information systems
48811000-6	E-mail system
48812000-3	Financial information systems
48813000-0	Passenger information system
48813100-1	Electronic bulletin boards
48813200-2	Real-time passenger information system
48814000-7	Medical information systems
48814100-8	Nursing information system
48814200-9	Patient-administration system
48814300-0	Theatre management system
48814400-1	Clinical information system
48814500-2	Casemix system
48820000-2	Servers
48821000-9	Network servers
48822000-6	Computer servers
CPV Code	CPV Title

CPV Code	CPV Title
48823000-3	File servers
48824000-0	Printer servers
48825000-7	Web servers
48913000-1	Screen savers
48920000-3	Office automation software package
48921000-0	Automation system
48940000-9	Pattern design and calendar software package
48941000-6	Pattern design software package
48942000-3	Calendar software package
48950000-2	Boat-location and public address system
48951000-9	Boat-location system
48952000-6	Public address systems
48960000-5	Drivers and system software package
48961000-2	Ethernet drivers
48962000-9	Graphics card drivers
48970000-8	Print shop software package
48971000-5	Address book making software package
48972000-2	Label making software package
48980000-1	Programming languages and tools
48981000-8	Compiling software packages
48982000-5	Configuration management software package
48983000-2	Development software package
48984000-9	Graphical user interface (GUI) tools
48985000-6	Programming languages
48986000-3	Program testing software package

CPV Code	CPV Title
48987000-0	Debugging software package
48990000-4	Spreadsheets and enhancement software package
48991000-1	Spreadsheet software package
50300000-8	Repair, maintenance and associated services related to personal computers, office equipment, telecommunications and audio-visual equipment
50310000-1	Maintenance and repair of office machinery
50311000-8	Maintenance and repair of office accounting machinery
50311400-2	Maintenance and repair of calculators and accounting machinery
50312000-5	Maintenance and repair of computer equipment
50312100-6	Maintenance and repair of mainframe computers
50312110-9	Maintenance of mainframe computers
50312120-2	Repair of mainframe computers
50312200-7	Maintenance and repair of minicomputers
50312210-0	Maintenance of minicomputers
50312220-3	Repair of minicomputers
50312300-8	Maintenance and repair of data network equipment
50312310-1	Maintenance of data network equipment
50312320-4	Repair of data network equipment
50312400-9	Maintenance and repair of microcomputers
50312410-2	Maintenance of microcomputers
50312420-5	Repair of microcomputers
50312600-1	Maintenance and repair of information technology equipment
50312610-4	Maintenance of information technology equipment
50312620-7	Repair of information technology equipment
50313000-2	Maintenance and repair of reprographic machinery

CPV Code	CPV Title

CPV Code	CPV Title
50313100-3	Photocopier repair services
50313200-4	Photocopier maintenance services
50314000-9	Repair and maintenance services of facsimile machines
50315000-6	Repair and maintenance services of telephone-answering machines
50316000-3	Maintenance and repair of ticket- issuing machinery
50317000-0	Maintenance and repair of ticket-validation machinery
50320000-4	Repair and maintenance services of personal computers
50321000-1	Repair services of personal computers
50322000-8	Maintenance services of personal computers
50323000-5	Maintenance and repair of computer peripherals
50323100-6	Maintenance of computer peripherals
50323200-7	Repair of computer peripherals
50324000-2	Support services of personal computers
50324100-3	System maintenance services
50324200-4	Preventive maintenance services
50330000-7	Maintenance services of telecommunications equipment
50331000-4	Repair and maintenance services of telecommunications lines
50332000-1	Telecommunications-infrastructure maintenance services
50333000-8	Maintenance services of radio-communications equipment
50333100-9	Repair and maintenance services of radio transmitters
50333200-0	Repair and maintenance services of radiotelephony apparatus
50334000-5	Repair and maintenance services of line telephony and line telegraphy equipment
50334100-6	Repair and maintenance services of line telephony equipment
50334110-9	Telephone network maintenance services

CPV Code	CPV Title

CPV Code	CPV Title
50334120-2	Upgrade services of telephone switching equipment
50334130-5	Repair and maintenance services of telephone switching apparatus
50334140-8	Repair and maintenance services of telephone sets
50334200-7	Repair and maintenance services of line telegraphy equipment
50334300-8	Repair and maintenance services of line telex equipment
50334400-9	Communications system maintenance services
50340000-0	Repair and maintenance services of audio-visual and optical equipment
50341000-7	Repair and maintenance services of television equipment
50341100-8	Repair and maintenance services of videotext equipment
50341200-9	Repair and maintenance services of television transmitters
50342000-4	Repair and maintenance services of audio equipment
50343000-1	Repair and maintenance services of video equipment
50344000-8	Repair and maintenance services of optical equipment
50344100-9	Repair and maintenance services of photographic equipment
50344200-0	Repair and maintenance services of cinematographic equipment
50660000-9	Repair and maintenance services of military electronic systems
51240000-6	Installation services of navigating equipment
51300000-5	Installation services of communications equipment
51310000-8	Installation services of radio, television, sound and video equipment
51311000-5	Installation services of radio equipment
51312000-2	Installation services of television equipment
51313000-9	Installation services of sound equipment
51314000-6	Installation services of video equipment
51320000-1	Installation services of radio and television transmitters

CPV Code	CPV Title
51321000-8	Installation services of radio transmitters
51322000-5	Installation services of television transmitters
51330000-4	Installation services of radiotelephony apparatus
51340000-7	Installation services of line telephony equipment
51350000-0	Installation services of line telegraphy equipment
51600000-8	Installation services of computers and office equipment
51610000-1	Installation services of computers and information-processing equipment
51611000-8	Installation services of computers
51611100-9	Hardware installation services
51612000-5	Installation services of information-processing equipment
51620000-4	Installation services of office equipment
64200000-8	Telecommunications services
64210000-1	Telephone and data transmission services
64211000-8	Public-telephone services
64211100-9	Local telephone services
64211200-0	Long distance telephone services
64212000-5	Mobile-telephone services
64212100-6	Short Message Service (SMS) services
64212200-7	Enhanced Messaging Service (EMS) services
64212300-8	Multimedia Message Service (MMS) services
64212400-9	Wireless Application Protocol (WAP) services
64212500-0	General Packet Radio Services (GPRS) services
64212600-1	Enhanced Data for GSM Evolution (EDGE) services
64212700-2	Universal Mobile Telephone System (UMTS) services

CPV Code	CPV Title

CPV Code	CPV Title
64212800-3	Pay phone provider services
64212900-4	Pre-paid phone card provider services
64213000-2	Shared-business telephone network services
64214000-9	Dedicated-business telephone network services
64214100-0	Satellite circuit rental services
64214200-1	Telephone switchboard services
64214400-3	Communication land-line rental
64215000-6	IP telephone services
64216000-3	Electronic message and information services
64216100-4	Electronic message services
64216110-7	Electronic data exchange services
64216120-0	Electronic mail services
64216130-3	Telex services
64216140-6	Telegraph services
64216200-5	Electronic information services
64216210-8	Value-added information services
64216300-6	Teletext services
64220000-4	Telecommunication services except telephone and data transmission services
64221000-1	Interconnection services
64222000-8	Teleworking services
64223000-5	Paging services
64224000-2	Teleconferencing services
64225000-9	Air-to-ground telecommunications services
64226000-6	Telematics services

CPV Code	CPV Title
64227000-3	Integrated telecommunications services
64228000-0	Television and radio broadcast transmission services
64228100-1	Television broadcast transmission services
64228200-2	Radio broadcast transmission services
71316000-6	Telecommunication consultancy services
72000000-5	IT services: consulting, software development, Internet and support
72100000-6	Hardware consultancy services
72110000-9	Hardware selection consultancy services
72120000-2	Hardware disaster-recovery consultancy services
72130000-5	Computer-site planning consultancy services
72140000-8	Computer hardware acceptance testing consultancy services
72150000-1	Computer audit consultancy and hardware consultancy services
72200000-7	Software programming and consultancy services
72210000-0	Programming services of packaged software products
72211000-7	Programming services of systems and user software
72212000-4	Programming services of application software
72212100-0	Industry specific software development services
72212110-3	Point of sale (POS) software development services
72212120-6	Flight control software development services
72212121-3	Air traffic control software development services
72212130-9	Aviation ground support and test software development services
72212131-6	Aviation ground support software development services
72212132-3	Aviation test software development services
72212140-2	Railway traffic control software development services
72212150-5	Industrial control software development services

CPV Code	CPV Title

CPV Code	CPV Title
72212160-8	Library software development services
72212170-1	Compliance software development services
72212180-4	Medical software development services
72212190-7	Educational software development services
72212200-1	Networking, Internet and intranet software development services
72212210-4	Networking software development services
72212211-1	Platform interconnectivity software development services
72212212-8	Optical jukebox server software development services
72212213-5	Operating system enhancement software development services
72212214-2	Network operating system software development services
72212215-9	Networking developers software development services
72212216-6	Network connectivity terminal emulation software development services
72212217-3	Transaction-processing software development services
72212218-0	License management software development services
72212219-7	Miscellaneous networking software development services
72212220-7	Internet and intranet software development services
72212221-4	Internet browsing software development services
72212222-1	Web server software development services
72212223-8	Electronic mail software development services
72212224-5	Web page editing software development services
72212300-2	Document creation, drawing, imaging, scheduling and productivity software development services
72212310-5	Document creation software development services
72212311-2	Document management software development services
72212312-9	Electronic publishing software development services

CPV Code	CPV Title

CPV Code	CPV Title
72212313-6	Optical-character-recognition (OCR) software development services
72212314-3	Voice recognition software development services
72212315-0	Desktop-publishing software development services
72212316-7	Presentation software development services
72212317-4	Word-processing software development services
72212318-1	Scanner software development services
72212320-8	Drawing and imaging software development services
72212321-5	Computer-aided design (CAD) software development services
72212322-2	Graphics software development services
72212323-9	Computer-aided manufacturing (CAM) software development services
72212324-6	Charting software development services
72212325-3	Form making software development services
72212326-0	Mapping software development services
72212327-7	Drawing and painting software development services
72212328-4	Image-processing software development services
72212330-1	Scheduling and productivity software development services
72212331-8	Project management software development services
72212332-5	Scheduling software development services
72212333-2	Contact management software development services
72212400-3	Business transaction and personal business software development services
72212410-6	Investment management and tax preparation software development services
72212411-3	Investment management software development services
72212412-0	Tax preparation software development services

CPV Code	CPV Title
72212420-9	Facilities management software development services and software development services suite
72212421-6	Facilities management software development services
72212422-3	Software development services suites
72212430-2	Inventory management software development services
72212440-5	Financial analysis and accounting software development services
72212441-2	Financial analysis software development services
72212442-9	Financial systems software development services
72212443-6	Accounting software development services
72212445-0	Customer Relation Management software development services
72212450-8	Time accounting or human resources software development services
72212451-5	Enterprise resource planning software development services
72212460-1	Analytical, scientific, mathematical or forecasting software development services
72212461-8	Analytical or scientific software development services
72212462-5	Mathematical or forecasting software development services
72212463-2	Statistical software development services
72212470-4	Auction software development services
72212480-7	Sales, marketing and business intelligence software development services
72212481-4	Sales or marketing software development services
72212482-1	Business intelligence software development services
72212490-0	Procurement software development services
72212500-4	Communication and multimedia software development services
72212510-7	Communication software development services
72212511-4	Desktop communications software development services

CPV Code	CPV Title

CPV Code	CPV Title
72212512-1	Interactive voice response software development services
72212513-8	Modem software development services
72212514-5	Remote access software development services
72212515-2	Video conferencing software development services
72212516-9	Exchange software development services
72212517-6	IT software development services
72212518-3	Emulation software development services
72212519-0	Memory-management software development services
72212520-0	Multimedia software development services
72212521-7	Music or sound editing software development services
72212522-4	Virtual keyboard software development services
72212600-5	Database and operating software development services
72212610-8	Database software development services
72212620-1	Mainframe operating system software development services
72212630-4	Minicomputer operating system software development services
72212640-7	Microcomputer operating system software development services
72212650-0	Personal computer (PC) operating system software development services
72212660-3	Clustering software development services
72212670-6	Real time operating system software development services
72212700-6	Software development services utilities
72212710-9	Backup or recovery software development services
72212720-2	Bar coding software development services
72212730-5	Security software development services
72212731-2	File security software development services

CPV Code	CPV Title

CPV Code	CPV Title
72212732-9	Data security software development services
72212740-8	Foreign language translation software development services
72212750-1	Storage media loading software development services
72212760-4	Virus protection software development services
72212761-1	Anti-virus software development services
72212770-7	General, compression and print utility software development services
72212771-4	General utility software development services
72212772-1	Print utility software development services
72212780-0	System, storage and content management software development services
72212781-7	System management software development services
72212782-4	Storage management software development services
72212783-1	Content management software development services
72212790-3	Version checker software development services
72212900-8	Miscellaneous software development services and computer systems
72212920-4	Office automation software development services
72212940-0	Pattern design and calendar software development services
72212941-7	Pattern design software development services
72212942-4	Calendar software development services
72212960-6	Drivers and system software development services
72212970-9	Print shop software development services
72212971-6	Address book making software development services
72212972-3	Label making software development services
72212980-2	Programming languages and tools development services
72212981-9	Compiling software development services

CPV Code	CPV Title

CPV Code	CPV Title
72212982-6	Configuration management software development services
72212983-3	Development software development services
72212984-0	Program testing software development services
72212985-7	Debugging software development services
72212990-5	Spreadsheets and enhancement software development services
72212991-2	Spreadsheet software development services
72220000-3	Systems and technical consultancy services
72221000-0	Business analysis consultancy services
72222000-7	Information systems or technology strategic review and planning services
72222100-8	Information systems or technology strategic review services
72222200-9	Information systems or technology planning services
72222300-0	Information technology services
72223000-4	Information technology requirements review services
72224000-1	Project management consultancy services
72224100-2	System implementation planning services
72224200-3	System quality assurance planning services
72225000-8	System quality assurance assessment and review services
72226000-5	System software acceptance testing consultancy services
72227000-2	Software integration consultancy services
72228000-9	Hardware integration consultancy services
72230000-6	Custom software development services
72231000-3	Development of software for military applications
72232000-0	Development of transaction processing and custom software
72240000-9	Systems analysis and programming services

CPV Code	CPV Title

CPV Code	CPV Title
72241000-6	Critical design target specification services
72242000-3	Design-modelling services
72243000-0	Programming services
72244000-7	Prototyping services
72245000-4	Contract systems analysis and programming services
72246000-1	Systems consultancy services
72250000-2	System and support services
72251000-9	Disaster recovery services
72252000-6	Computer archiving services
72253000-3	Helpdesk and support services
72253100-4	Helpdesk services
72253200-5	Systems support services
72254000-0	Software testing
72254100-1	Systems testing services
72260000-5	Software-related services
72261000-2	Software support services
72262000-9	Software development services
72263000-6	Software implementation services
72264000-3	Software reproduction services
72265000-0	Software configuration services
72266000-7	Software consultancy services
72267000-4	Software maintenance and repair services
72267100-0	Maintenance of information technology software
72267200-1	Repair of information technology software
72268000-1	Software supply services
CPV Code	CPV Title

CPV Code	CPV Title
72300000-8	Data services
72310000-1	Data-processing services
72311000-8	Computer tabulation services
72311100-9	Data conversion services
72311200-0	Batch processing services
72311300-1	Computer time-sharing services
72312000-5	Data entry services
72312100-6	Data preparation services
72312200-7	Optical character recognition services
72313000-2	Data capture services
72314000-9	Data collection and collation services
72315000-6	Data network management and support services
72315100-7	Data network support services
72315200-8	Data network management services
72316000-3	Data analysis services
72317000-0	Data storage services
72318000-7	Data transmission services
72319000-4	Data supply services
72320000-4	Database services
72321000-1	Added-value database services
72322000-8	Data management services
72330000-2	Content or data standardization and classification services
72400000-4	Internet services
72410000-7	Provider services
72411000-4	Internet service providers ISP

CPV Code	CPV Title

CPV Code	CPV Title
72412000-1	Electronic mail service provider
72413000-8	World wide web (www) site design services
72414000-5	Web search engine providers
72415000-2	World wide web (www) site operation host services
72416000-9	Application service providers
72417000-6	Internet domain names
72420000-0	Internet development services
72421000-7	Internet or intranet client application development services
72422000-4	Internet or intranet server application development services
72500000-0	Computer-related services
72510000-3	Computer-related management services
72511000-0	Network management software services
72512000-7	Document management services
72513000-4	Office automation services
72514000-1	Computer facilities management services
72514100-2	Facilities management services involving computer operation
72514200-3	Facilities management services for computer systems development
72514300-4	Facilities management services for computer systems maintenance
72540000-2	Computer upgrade services
72541000-9	Computer expansion services
72541100-0	Memory expansion services
72590000-7	Computer-related professional services
72591000-4	Development of service level agreements
72600000-6	Computer support and consultancy services
72610000-9	Computer support services

CPV Code	CPV Title

CPV Code	CPV Title
72611000-6	Technical computer support services
72700000-7	Computer network services
72710000-0	Local area network services
72720000-3	Wide area network services
72800000-8	Computer audit and testing services
72810000-1	Computer audit services
72820000-4	Computer testing services
72900000-9	Computer back-up and catalogue conversion services
72910000-2	Computer back-up services
72920000-5	Computer catalogue conversion services
79121100-9	Software copyright consultancy services
79132100-9	Electronic signature certification services
79510000-2	Telephone-answering services
79511000-9	Telephone operator services
79512000-6	Call centre
79520000-5	Reprographic services
79521000-2	Photocopying services
79550000-4	Typing, word-processing and desktop publishing services
79551000-1	Typing services
79552000-8	Word-processing services
79553000-5	Desktop publishing services
80533000-9	Computer-user familiarisation and training services
80533100-0	Computer training services
80533200-1	Computer courses
90916000-1	Cleaning services of telephone equipment
CPV Code	CPV Title

CPV Code	CPV Title
90919100-3	Cleaning services of office equipment

Table 1.4 - Content & Media products (source: Guide to measuring information society. OECD 2011)

CPC ver.2	Description
32210	Educational textbooks, in print
32220	General reference books, in print
32230	Directories, in print
32291	Professional, technical and scholarly books, in print
32292	Children's books, in print
32299	Other books n.e.c., in print
32300	Newspapers and periodicals, daily, in print
32410	General interest newspapers and periodicals, other than daily, in print
32420	Business, professional or academic newspapers and periodicals, other than daily, in print
32490	Other newspapers and periodicals, other than daily, in print
32511	Maps and hydrographic or similar charts (including wall maps, topographical plans and maps for globes), printed, other than in book-form
32530	Printed or illustrated postcards; printed cards bearing personal greetings or messages, with or without envelopes or trimmings
32540	Printed pictures, designs and photographs
32620	Trade advertising material, commercial catalogues and the like
32630	Transfers (decalcomanias) and printed calendars
47691	Audio books on disk, tape or other physical media
47692	Text-based disks, tapes or other physical media

CPC ver.2	Description
83631	Sale of advertising space in print media (except on commission)
38950	Motion picture film, exposed and developed, whether or not incorporating sound track or consisting only of sound track
47620	Films and other video content on disks, tape or other physical media
83632	Sale of TV/radio advertising time (except on commission)
84611	Radio broadcast originals
84612	Television broadcast originals
84621	Radio channel programmes
84622	Television channel programmes
84631	Broadcasting services
84632	Home programme distribution services, basic programming package
84633	Home programme distribution services, discretionary programming package
84634	Home programme distribution services, pay-per-view
96121	Motion picture, videotape and television programme production services
96122	Radio programme production services
96123	Motion picture, videotape, television and radio programme originals
96131	Audiovisual editing services
96132	Transfers and duplication of masters services
96133	Colour correction and digital restoration services
96134	Visual effects services
96135	Animation services
96136	Captioning, titling and subtitling services
96137	Sound editing and design services
96139	Other post-production services

CPC ver.2	Description
96140	Motion picture, videotape and television programme distribution services
96150	Motion picture projection services
32520	Music, printed or in manuscript
47610	Musical audio disks, tapes or other physical media
96111	Sound recording services
96112	Live recording services
96113	Sound recording originals
38582	Software cartridges for video game consoles
47822	Computer game software, packaged
84391	On-line games
73312	Licensing services for the right to use databases
83633	Sale of Internet advertising space (except on commission)
84311	On-line books
84312	On-line newspapers and periodicals
84313	On-line directories and mailing lists
84321	Musical audio downloads
84322	Streamed audio content
84331	Films and other video downloads
84332	Streamed video content
84393	On-line adult content
84394	Web search portal content
84399	Other on-line content n.e.c.
47699	Other non-musical audio disks and tapes
73320	Licensing services for the right to use entertainment, literary or artistic originals

CPC ver.2	Description
83611	Full service advertising
83620	Purchase or sale of advertising space or time, on commission
83639	Sale of other advertising space or time (except on commission)
83812	Advertising and related photography services
83940	Original compilations of facts/information
84410	News agency services to newspapers and periodicals
84420	News agency services to audiovisual media
85991	Other information services
89110	Publishing, on a fee or contract basis
96330	Original works of authors, composers and other artists except performing artists, painters and sculptors

Table 1. 5–Content & Media definition of the study: selected CPV codes

CPV Code	CPV Title
22100000-1	Printed books, brochures and leaflets
22110000-4	Printed books
22111000-1	School books
22112000-8	Textbooks
22113000-5	Library books
22114000-2	Dictionaries, maps, music books and other books
22114100-3	Dictionaries
22114200-4	Atlases
22114300-5	Maps
22114310-8	Cadastral maps
22114311-5	Blueprints
22114400-6	Printed music

CPV Code	CPV Title
22114500-7	Encyclopaedias
22120000-7	Publications
22121000-4	Technical publications
22130000-0	Directories
22140000-3	Leaflets
22150000-6	Brochures
22160000-9	Booklets
22200000-2	Newspapers, journals, periodicals and magazines
22210000-5	Newspapers
22211000-2	Journals
22211100-3	Official journals
22212000-9	Periodicals
22212100-0	Serials
22213000-6	Magazines
22300000-3	Postcards, greeting cards and other printed matter
22310000-6	Postcards
22312000-0	Pictures
22313000-7	Transfers
22314000-4	Designs
22315000-1	Photographs
22320000-9	Greeting cards
22321000-6	Christmas cards
22460000-2	Trade-advertising material, commercial catalogues and manuals
22461000-9	Catalogues
22461100-0	List holders

CPV Code	CPV Title
22462000-6	Advertising material
22470000-5	Manuals
22471000-2	Computer manuals
22472000-9	Instruction manuals
22473000-6	Technical manuals
30199220-8	Plain postcards
30199730-6	Business cards
30199791-1	Wall planners
30199792-8	Calendars
32351310-4	Audio cassettes
32353000-2	Sound recordings
32353100-3	Records
32353200-4	Music cassettes
32354100-0	Radiology film
32354110-3	X-ray film
32354120-6	Blue diazo film
32354200-1	Cinematographic film
32354300-2	Photographic film
32354400-3	Instant-print film
32354500-4	Video films
32354600-5	Video cassettes
32354700-6	Video tapes
37532000-6	Video games
48911000-7	Computer game software package
48930000-6	Training and entertainment software package

CPV Code	CPV Title
48931000-3	Training software package
48932000-0	Entertainment software package
72212910-1	Computer game software development services, family titles and screen savers
72212911-8	Computer game software development services
72212930-7	Training and entertainment software development services
72212931-4	Training software development services
72212932-1	Entertainment software development services
79341000-6	Advertising services
79341100-7	Advertising consultancy services
79341200-8	Advertising management services
79341400-0	Advertising campaign services
79341500-1	Aeral advertising services
79342410-4	Electronic auction services
79570000-0	Mailing-list compilation and mailing services
79571000-7	Mailing services
79811000-2	Digital printing services
79961100-9	Advertising photography services
79962000-5	Photograph processing services
79963000-2	Photograph restoration, copying and retouching services
79970000-4	Publishing services
79971000-1	Bookbinding and finishing services
79971100-2	Book finishing services
79971200-3	Bookbinding services
79999100-4	Scanning services

CPV Code	CPV Title
80420000-4	E-learning services
92100000-2	Motion picture and video services
92110000-5	Motion picture and video tape production and related services
92111000-2	Motion picture and video production services
92111100-3	Training-film and video-tape production
92111200-4	Advertising, propaganda and information film and video-tape production
92111210-7	Advertising film production
92111220-0	Advertising video-tape production
92111230-3	Propaganda film production
92111240-6	Propaganda video-tape production
92111250-9	Information film production
92111260-2	Information video-tape production
92111300-5	Entertainment film and video-tape production
92111310-8	Entertainment film production
92111320-1	Entertainment video-tape production
92112000-9	Services in connection with motion-picture and video-tape production
92120000-8	Motion-picture or video-tape distribution services
92121000-5	Video-tape distribution services
92122000-2	Motion picture distribution services
92130000-1	Motion picture projection services
92140000-4	Video-tape projection services
92200000-3	Radio and television services
92210000-6	Radio services
92211000-3	Radio production services

CPV Code	CPV Title
92213000-7	Small scale radio systems services
92214000-4	Radio studio or equipment services
92215000-1	General Mobile Radio Services (GMRS)
92216000-8	Family Radio Services (FRS)
92217000-5	General Mobile Radio Services/Family Radio Services (GMRS/FRS)
92220000-9	Television services
92221000-6	Television production services
92222000-3	Closed circuit television services
92224000-7	Digital television
92225000-4	Interactive television
92225100-7	Film-on-demand television
92226000-1	Teleprogrammation
92230000-2	Radio and television cable services
92231000-9	International bilateral services and international private leased lines
92232000-6	Cable TV
92400000-5	News-agency services

Table 1. 6–ICT Plus definition of the study: selected CPV codes

CPV Code	CPV Title
31111000-7	Adapters
31158100-9	Battery chargers
31224400-6	Connection cables
31321700-9	Signalling cable
31330000-8	Coaxial cable

CPV Code	CPV Title
31642000-8	Electronic detection apparatus
31642100-9	Detection apparatus for metal pipes
31642200-0	Detection apparatus for mines
31642300-1	Detection apparatus for plastics
31642400-2	Detection apparatus for non-metallic objects
31642500-3	Detection apparatus for timber
31682200-2	Instrument panels
31682210-5	Instrumentation and control equipment
31682220-8	Mixing panels
31682230-1	Graphic display panels
32500000-8	Telecommunications equipment and supplies
32520000-4	Telecommunications cable and equipment
32521000-1	Telecommunications cable
32550000-3	Telephone equipment
32551000-0	Telephone cables and associated equipment
32551100-1	Telephone connections
32551500-5	Telephone cables
32560000-6	Fibre-optic materials
32561000-3	Fibre-optic connections
32562000-0	Optical-fibre cables
32562100-1	Optical-fibre cables for information transmission
32562200-2	Optical telecommunication cables
32562300-3	Optical-fibre cables for data transmission
32570000-9	Communications equipment
32571000-6	Communications infrastructure

CPV Code	CPV Title
32572000-3	Communications cable
32572100-4	Communications cable with multiple electrical conductors
32572200-5	Communications cable with coaxial conductors
32572300-6	Communications cable for special applications
32580000-2	Data equipment
32581000-9	Data-communications equipment
32581100-0	Data-transmission cable
32581110-3	Data-transmission cable with multiple electrical conductors
32581120-6	Data-transmission cable with coaxial conductors
32581130-9	Data-transmission cable for special applications
33110000-4	Imaging equipment for medical, dental and veterinary use
33111000-1	X-ray devices
33111100-2	X-ray table
33111200-3	X-ray workstations
33111300-4	X-ray processing devices
33111400-5	X-ray fluoroscopy devices
33111500-6	Dental X-ray
33111600-7	Radiography devices
33111610-0	Magnetic resonance unit
33111620-3	Gamma cameras
33111640-9	Thermographs
33111650-2	Mammography devices
33111660-5	Bone densitometers
33111700-8	Angiography room
33111710-1	Angiography supplies

CPV Code	CPV Title
33111720-4	Angiography devices
33111721-1	Digital angiography devices
33111730-7	Angioplasty supplies
33111740-0	Angioplasty devices
33111800-9	Diagnostic X-ray system
33112000-8	Echo, ultrasound and doppler imaging equipment
33112100-9	Ultrasonic heart detector
33112200-0	Ultrasonic unit
33112300-1	Ultrasound scanners
33112310-4	Colour-flow doppler
33112320-7	Doppler equipment
33112330-0	Echoencephalographs
33112340-3	Echocardiographs
33113000-5	Magnetic resonance imaging equipment
33113100-6	Magnetic resonance scanners
33113110-9	Nuclear magnetic resonance scanners
33114000-2	Spectroscopy devices
33115000-9	Tomography devices
33115100-0	CT scanners
33115200-1	CAT scanners
33158500-7	Infrared medical devices
33195000-3	Patient-monitoring system
33195100-4	Monitors
33195110-7	Respiratory monitors
33195200-5	Central monitoring station

CPV Code	CPV Title
33197000-7	Medical computer equipment
34150000-3	Simulators
34151000-0	Driving simulators
34152000-7	Training simulators
34632000-6	Railways traffic-control equipment
34741400-7	Flight simulators
34923000-3	Road traffic-control equipment
34926000-4	Car park control equipment
34931400-6	Ship bridge simulators
34931500-7	Vessel traffic control equipment
34933000-6	Navigation equipment
34943000-9	Train-monitoring system
34944000-6	Points heating system
34961000-1	Baggage-handling system
34961100-2	Baggage-handling equipment
34962000-8	Air-traffic control equipment
34962100-9	Control tower equipment
34962200-0	Air-traffic control
34962210-3	Air-traffic control simulation
34962220-6	Air-traffic control systems
34962230-9	Air-traffic control training
34963000-5	Instrument Landing System (ILS)
34964000-2	Doppler VHF Omni direction Range (DVOR)
34965000-9	Distance Measuring Equipment (DME)
34966000-6	Radio Direction Finder and Non-Directional Beacon

CPV Code	CPV Title
34966100-7	Radio Direction Finder (RDF)
34966200-8	Non-Directional Beacon (NDB)
34967000-3	Airport Communication System (COM)
34968100-1	Airport Surveillance System (SUR)
34970000-7	Traffic-monitoring equipment
34971000-4	Speed camera equipment
34972000-1	Traffic-flow measuring system
34996000-5	Control, safety or signalling equipment for roads
34996200-7	Control, safety or signalling equipment for inland waterways
34996300-8	Control, safety or signalling equipment for parking facilities
34997000-2	Control, safety or signalling equipment for airports
34997100-3	Flight recorders
34997200-4	Airport lighting
34997210-7	Runway lights
34998000-9	Control, safety or signalling equipment for port installations
34999100-7	Signal generators
34999200-8	Aerial signal splitters
35740000-3	Battle simulators
38120000-2	Meteorological instruments
38121000-9	Anemometers
38122000-6	Barometers
38123000-3	Precipitation or evaporation recorders
38124000-0	Radiosonde apparatus
38125000-7	Rainfall recorders
38126000-4	Surface observing apparatus

CPV Code	CPV Title
38126100-5	Precipitation or evaporation surface observing apparatus
38126200-6	Solar radiation surface observing apparatus
38126300-7	Temperature or humidity surface observing apparatus
38126400-8	Wind surface observing apparatus
38127000-1	Weather stations
38128000-8	Meteorology instrument accessories
38290000-4	Surveying, hydrographic, oceanographic and hydrological instruments and appliances
38291000-1	Telemetry apparatus
38292000-8	Hydrographic instruments
38293000-5	Seismic equipment
38294000-2	Theodolites
38295000-9	Topography equipment
38296000-6	Surveying instruments
38580000-4	Non-medical equipment based on the use of radiations
38581000-1	Baggage-scanning equipment
38582000-8	X-ray inspection equipment
38800000-3	Industrial process control equipment and remote-control equipment
38810000-6	Industrial process control equipment
38820000-9	Remote-control equipment
38821000-6	Radio remote-control apparatus
38822000-3	Remote-control siren devices
42961000-0	Command and control system
42961100-1	Access control system
42961200-2	Scada or equivalent system

CPV Code	CPV Title
42961300-3	Vehicle location system
42961400-4	Dispatch system
42962300-0	Graphics workstations
42965100-9	Warehouse management system
42965110-2	Depot system
42967000-2	Controller unit
42967100-3	Digital remote-control unit
42997300-4	Industrial robots
43135100-9	Subsea control systems
44212250-6	Masts
44212260-9	Radio or television masts
44212261-6	Radio masts
44212322-2	Telephone booths
44521120-5	Electronic security lock
45232300-5	Construction and ancillary works for telephone and communication lines
45232310-8	Construction work for telephone lines
45232311-5	Roadside emergency telephone lines
45232320-1	Cable broadcasting lines
45314000-1	Installation of telecommunications equipment
45314200-3	Installation of telephone lines
45314300-4	Installation of cable infrastructure
45314310-7	Installation of cable laying
45314320-0	Installation of computer cabling
45316210-0	Installation of traffic monitoring equipment

CPV Code	CPV Title

CPV Code	CPV Title
45316220-3	Installation of airport signalling equipment
45316230-6	Installation of port signalling equipment
50111000-6	Fleet management, repair and maintenance services
50111100-7	Vehicle-fleet management services
50111110-0	Vehicle-fleet-support services
51112200-2	Installation services of electricity control equipment
51200000-4	Installation services of equipment for measuring, checking, testing and navigating
51210000-7	Installation services of measuring equipment
51211000-4	Installation services of time-measuring equipment
51212000-1	Installation services of time register equipment
51213000-8	Installation services of time recorder equipment
51214000-5	Installation services of parking meter equipment
51215000-2	Installation services of meteorological equipment
51216000-9	Installation services of geological equipment
51220000-0	Installation services of checking equipment
51221000-7	Installation services of automatic airport check-in devices
51230000-3	Installation services of testing equipment
51611110-2	Installation services of airport real-time departures and arrival display screens or boards
51611120-5	Installation services of railway real-time departures and arrival display screens or boards
63711100-7	Train monitoring services
63712700-0	Traffic control services
63712710-3	Traffic monitoring services
63731100-3	Airport slot coordination services

CPV Code	CPV Title
63732000-9	Air-traffic control services
65500000-8	Meter reading service
66151100-4	Electronic marketplace retailing services
71351600-9	Weather-forecasting services
71351610-2	Meteorology services
71351611-9	Climatology services
71351612-6	Hydrometeorology services
71351920-2	Oceanography and hydrology services
71351921-2	Estuarine oceanography services
71351922-2	Physical oceanography services
71351923-2	Bathymetric surveys services
71351924-2	Underwater exploration services
71352000-0	Subsurface surveying services
71352100-1	Seismic services
71352110-4	Seismographic surveying services
71352120-7	Seismic data acquisition services
71352130-0	Seismic data collection services
71352140-3	Seismic processing services
71352300-3	Magnetometric surveying services
71353000-7	Surface surveying services
71353100-8	Hydrographic surveying services
71353200-9	Dimensional surveying services
71354000-4	Map-making services
71354100-5	Digital mapping services
71354200-6	Aerial mapping services

CPV Code	CPV Title
71354300-7	Cadastral surveying services
71354400-8	Hydrographic services
71354500-9	Marine survey services
71355000-1	Surveying services
71355100-2	Photogrammetry services
71355200-3	Ordnance surveying
79711000-1	Alarm-monitoring services
79714000-2	Surveillance services
79714100-3	Tracing system services
79714110-6	Absconder-tracing services
79716000-6	Identification badge release services
79940000-5	Collection agency services
79941000-2	Toll-collection services
79991000-7	Stock-control services
85150000-5	Medical imaging services
90731400-4	Air pollution monitoring or measurement services
90731500-5	Toxic gas detection services
90731700-7	Carbon dioxide monitoring services
90731800-8	Airborne particle monitoring
90731900-9	Ozone depletion monitoring services
90732500-2	Soil pollution mapping
90742300-3	Noise pollution monitoring services

CPV Code	CPV Title

Table 1.7–ICT keywords used to identify below EU thresholds contracts in five countries

EN [A to E]	EN [E to L]	EN [M to S]	EN [S to W]
adobe	endpoint security	magnetic	scanner
broadband / broad band	firewall	malware	server
camera	GIS services	marketing material	software
Cisco	hardware	microprocessor	System Interface
Communication Network	helpdesk	microsoft	telecom
computer	hotspot	Monitor Console	time record
Content Creation	ibm	motorola	transmission
content management system	ICT services	multimedia	video
cyber	ICT Support Services	network security	virtual
Data Backup	Information Management Solution	networking device	VMware
data cabling	Information Management System	networking equipment	web
Data Centre	Information System	news content	wireless
data warehouse	Interactive Whiteboards	oracle	workstation
database	intranet	Password Management	
digital	LAN Infrastructure	Point of Sale System	
display	laptop	Publicity Services	
document management system	laser	radar	
ECDL	Linux	remote control	
encoded archival	local area network	satellit*	

Annex 2 – List of R&D keywords

Table 2.1 – List of keywords used to select R&D procurement contracts

EN [A to D]	EN [D to I]	EN [I to P]	EN [P to X]
accelerator	degraded	image	protection
acquisition	delivery	immune histochemical	prototype
aerospace	demonstra*	implication	pulse
afm	density	improve	qualitative
aggression	design	indicator	r&d
anaerobic	detection	information	r&i
analy*	determination	innovat*	r&td
antenna	develop*	integrat*	radiocarbon
archaeological	diffractometer	intelligent	reactivity
assay	digital	interface	reactor
assess*	dna	inventory	remote management
assistance	drop tower	investigat*	research
automatisation	dummy	ion	retroviral
balancing	dynamic	islamist	review
bathymetric	economic	laboratory	satellite
behaviour	effect	labv	scanning
biological	electrochemistry	laser	scenarios
biorepository	electromagnetic	manufactur*	scien*
biphenyls	electronic	maritime	sector
calculator	empirical	material	simulation
calibration	epitaxy	measur*	site

EN [A to D]	EN [D to I]	EN [I to P]	EN [P to X]
camera	establish*	medicine	soldier
causes	estimat*	metrology	space
centre	evaluat*	military	spatial
chamber	exomars	mission	special
chemi*	experiment*	model*	spectrometer
clinical	fiber	monitoring	storage
cognitive	fluid	monochromator	strateg*
collection	fluorochrome	nano	stud*
comparison	forecast*	new	support*
compilation	free	nuclear	survey
complex	frequency	observatory	synchrotron
composite	future	optical	synthesised
compressor	genetic	perform*	systematic
computer	genome	phd	tandem-x
consideration	genotyping	pilot	technolog*
content	health	planning	telescope*
countermeasure	high	precision	test*
cre	historic	processing	therapeutic*
cryogenic	hybridisation	production	treatment
damage	hydrodynamic	programmatic	understand*
data	hydrogen	proof	upgrad*
database	ict	prospect	x-ray
defin*	identif*		

EN [A to D]	EN [D to I]	EN [I to P]	EN [P to X]

Annex 3 –The full country data sets

Full raw data sets concerning each country's public procurement expenditure are attached to this report in Excel format.

European Commission

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