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PP	Restricted to other programme participants (including the Commission Services)	
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[1] The second version of this report has been compiled after governmental agencies of the 35 jurisdictions involved in the study were given the chance to review and respond to the original analysis of Version 1 (dated August 2015).

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ABSTRACT - This report presents the results of a comprehensive mapping exercise of the scope and quality of public procurement and linked information in 35 European jurisdictions: 28 European Union member states, 6 EU neighbouring countries and the European Commission. Part I analyses the public procurement information hosted in national platforms and made available online for the average user. This analysis enables the classification and comparison of countries along a series of dimensions, such as the amount of historical data on individual tenders, the scope of tender documentation publicly available, the fragmentation of procurement information sources, and the degree of machine-readability of tender announcements, among several others. Parts II and III of the report complement the information on procurement processes and outcomes with information on the two main actors involved in these processes: bidders and buyers. In this context, part II maps existing relevant data on private companies and part III follows with data on the governmental units acting as contracting authorities in each of our 35 jurisdiction. Discussing information linked to public procurement tendering data goes beyond the description of this deliverable in the Description of Work.

KEYWORDS: public procurement, data quality, national regulatory framework

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Contents

List of Tables

List of Figures

EXECUTIVE SUMMARY

The Horizon2020 project entitled DIGIWHIST "The Digital Whistleblower" has the aim of compiling, harmonizing and disseminating the largest comparative public procurement database to date. This compilation intends to comprise a total of 35 jurisdictions: 28 European Union member states, 6 EU neighbouring countries and the European Commission. Against this backdrop, the project's undertaking relies on the procurement information hosted in the national platforms of each respective jurisdiction. The present report provides a comprehensive assessment of the state of openness and quality of public procurement data across the covered countries as offered by official government data providers and prescribed by regulations. It does not assess the full sample of contract-level data provided by these platforms; that will be the task of deliverable 2.8 which will complement this report once contract-level data is fully collected. The findings of this report points at a series of analytical tools in order to detect strengths and weaknesses of each national system and the potential areas for future reform. In addition to procurement data, this report also maps the projected complementarities between procurement and two other steams of information: the profiles of private companies acting as bidders and the profiles of contracting authorities acting as buyers. Discussing information linked to public procurement tendering data goes beyond the description of this deliverable in the Description of Work reflecting our increased emphasis on contextualising government contracting data for making sense of it.

Part I presents the results of the mapping exercise regarding the status of public procurement data in each of our countries of interest. The publicity of procurement data is regulated by two main sets of tools. At the supranational level, the EU directives on public procurement set the principles for the publicity of tenders surpassing a series of monetary values for EU member states. At the national level, different legislative devices govern the bulk of tenders not covered by the EC Directives, which normally require some degree of mandatory reporting of tendering processes and results. Our analysis is predominantly concerned with the latter treating tendering regulated by the EC Directives as one among many national systems. We do not assess sub-national procurement systems in order to keep the analysis comparable across countries.

The first section of part I reports how each country fares along a series of categories within two main dimensions: data availability and data quality. Data availability refers to the depth and breadth of the data hosted in national portals, which is determined by: a) the national legal thresholds defining the mandatory publicity of tenders; b) the historical scope of the information; c) the extent to which individual tenders are followed throughout their cycles; d) the online availability of additional documentation for each tender and e) the extent to which fees are mandatory in order to access procurement data. Data quality, in turn, involves: f) the degree of fragmentation of procurement information sources; g) the diversity of announcement templates used in each national platform; h) the degree of machine-readability of the information; i) the degree of thematic structuring of tender announcements; j) the precision of the search engines in national platforms; k) the traceability of tender cycles by means of unique identifiers of contracts and announcements, and l) the existence of

unique identifiers for contracting authorities and bidding companies. The second section of part I offers a general quantitative assessment of the amount of relevant procurement aspects commonly found in each jurisdiction. In addition to identifying where each country is located within each dimension and presenting a quantitative overview of relevant procurement variables, the third section of part I presents a country-specific overview of the status of public procurement information and its management. This section is meant to pave the way for a deeper case-by-case analysis at a later stage.

The preliminary results of our mapping exercise indicate an exceedingly mixed picture: the functionalities and richness of national platforms do not follow any common standard. Yet, two trends seem to stand: newer EU accession countries tend to offer better quality and more accessible procurement information, and most of the cases covered have made special efforts to centralize, modernize and open their national procurement information in the recent years.

Parts II and III of this report provide an overview of the potential complementarities between tendering information and the profiles of the actors involved in procurement. This strategy responds to the ambition of linking public procurement data to other institutions at the country level. With this in mind, part II of this report summarises the availability of information regarding the companies that act as bidders, while part III summarises the background information available on the contracting authorities acting as buyers.

I.   PART I. PUBLIC PROCUREMENT INFORMATION

1. Comparative overview of 34 countries and the European Commission

A general overview of the quality and accessibility of online procurement information in 35 jurisdictions[2] presents a mixed picture.

At the supranational level, the EU Directives 2004/17/EC and 2004/18/EC[3] regulate the publicity and accessibility of public procurement information for tenders surpassing a series of monetary thresholds in EU member states. These thresholds vary according to the economic activity involved, and must be updated every two years[4]. Albeit with some exceptions, tender announcements falling within EU procurement regulation must be published in the Official Journal of the European Union (OJEU).

In contrast, the bulk of procurement taking place below these EU thresholds in each country is regulated diversely at the national level. This is particularly applicable to the case of publicity of tendering information, which sees more or less stringent requirements depending on the national landscape.

Beyond the legal requirements with regards to the publicity of government tenders, we conduct a general empirical assessment of the accessibility of procurement information in 34 countries and the European Commission. This will prepare the subsequent analysis in deliverable 2.8 on the scope and quality of the published data using a 'Big Data' approach. We look at a number of relevant dimensions in this report:

1. Data availability:

    1. Minimum application thresholds

    2. Historical data availability

    3. Coverage of the full tender cycle

    4. Availability of full tender documentation

    5. Fees for information services

2. Data quality:

    1. Fragmentation of procurement information sources

    2. Diversity of information templates

    3. Machine-readability of information

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[2] Our study covers 28 EU member states, 6 neighbouring countries and the European Commission. The list of jurisdictions can be found in Appendix A.
[3] Several modifications to EU regulations have come into force through a new set of directives (2014/23/EU, 2014/24/EU and 2014/25/EU) in April 2014, which must be transposed into national legislation by April 2016.
[4] Updated information on EU procurement thresholds can be found in: http://ec.europa.eu/growth/single-market/public-procurement/rules/current/index_en.htm

4. Predefined thematic structure of announcements

5. Search precision

6. Traceability of the tender cycle

7. Organisational identifiers

The review takes the viewpoint of the ordinary citizen without particular expertise or knowledge of the public procurement field, and without financial resources to buy access to the information, nor personal connections to key informants.

Other mapping tools for procurement information systems exist, such as OECD's Methodology for Assessing Procurement Systems (MAPS)[5] and OECD's bi-annual publication Government at a Glance[6]. In addition to proposing a different conceptual structure of the mapping exercise, our evaluation differs from these in that it takes the perspective of the principal users, instead of relying on governments' self-reported information[7]. Hence, whenever procurement information exists, but it is unavailable to the average user, our evaluation considers it unavailable as opposed to available as reported by government driven analyses.

Section 1 describes the main assessment categories of procurement information availability and quality, and the reasoning behind these categories. It provides an overview of general trends and patterns for the 35 jurisdictions analysed. It leaves the detailed discussion of each country to sections 2 and 3.

1.1. Data availability

The purpose of sub-section 1.1 is to describe the overall scope of procurement information available to the public for the tenders that lie below the EU thresholds and those which lie above (the latter is analysed as one of the 35 jurisdictions).

1.1.1. Minimum National Publication Thresholds

Although our mapping exercise is largely based on the empirical *de facto* information available in each jurisdiction, an essential starting point when it comes to capturing national differences in data availability is **the nature of the legal requirements making publicity mandatory** in each case.

To be precise, beyond the thresholds in the EU Directives defining the scope of procurement regulation at the supranational level, national legislation defines in each country a series of monetary

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[5]

http://www.oecd.org/fr/cad/efficacite/commonbenchmarkingandassessmentmethodologyforpublicprocurementsystemsversion4.htm

[6] http://www.oecd.org/gov/govataglance.htm

[7] This second version of the report takes into consideration a round of feedback from government agencies regarding our previous analysis (with publication date August 2015). The final decisions, however, were left to the expert assessment of the Digiwhist team.

values above which public procurement contracts are subject to specific national procurement regulation[8]. This regulation can entail different aspects of the tendering procedure, such as how tenders should be announced, awarded and specified.

In general, different thresholds exist for different types of goods and services, as well as for different types of contracting bodies. For simplicity and comparability, our analysis concentrates on a traditional contracting bodies (public sector, central government) and all three types of contracts: works, services and supplies/goods. Other thresholds may apply to the areas such as utilities or defence. The reference date for these figures is August 2015.

A more complete dataset and a range of further aspects of public procurement regulations' scope will be shortly available at http://europam.eu/ once deliverable 1.2 is approved. Therefore, the information in this section should only be taken as a general guideline for the mapping exercise rather than as a list of exhaustive, updated and precise figures[9].

Table 1: Public works national application thresholds, EUR

Up to 100,000	100,001 – 1,000,000	Above 1,000,001
Armenia (1,884)	Bulgaria (134,983)	Austria (5,186,000)
Belgium (30,000)	Czech Republic (366,582)	Finland (5,186,000)
Croatia (9,194)	Estonia (250,000)	Germany (5,186,000)
Cyprus (1,708)	Iceland (191,388)	Ireland (5,186,000)
Denmark (67,036)	Latvia (170,000)	Lithuania (5,186,000)
France (90,000)	Portugal (150,000)	Luxembourg (5,000,000)
Georgia (79,622)	Romania (865,000)	Malta (4,845,000)
Greece (60,000)	Slovakia (120,000)	Netherlands (5,186,000)
Hungary (48,387)	Switzerland (140,463)	Norway (4,357,737)
Italy (100,000)	United Kingdom (475,350)	Spain (4,845,000)
Poland (30,000)		
Serbia (24,848)		
Slovenia (40,000)		
Sweden (54,076)		

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[8] Contracts below national thresholds are still regulated in each country by standard accounting, fiduciary and other rules which are not the subject of this analysis. Our focus is solely on tailored procurement regulations.
[9] Moreover, information is missing for Armenia, Belgium, Czech Republic, Cyprus, Denmark, Finland, France, Georgia, Greece, Ireland, Italy, Malta, Netherlands, Norway, Romania, Serbia, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Table 2: Services national application thresholds, EUR

Up to 10,000	10,001 – 100,000	Above 100,001
Armenia (1,884)	Belgium (30,000)	Austria (134,000)
Croatia (9,194)	Bulgaria (33,746)	Czech Republic (124,455)
Cyprus (1,708)	Denmark (67,036)	Finland (134,000)
	Estonia (40,000)	Germany (134,000)
	France (90,000)	Iceland (101,846)
	Georgia (79,622)	Ireland (134,000)
	Greece (60,000)	Italy (134,000)
	Hungary (25,806)	Lithuania (134,000)
	Latvia (42,000)	Luxembourg (130,000)
	Poland (30,000)	Malta (120,000)
	Portugal (75,000)	Netherlands (134,000)
	Serbia (24,848)	Norway (111,737)
	Slovakia (30,000)	Romania (134,000)
	Slovenia (20,000)	Spain (130,000)
	Sweden (54,076)	Switzerland (140,463)
		United Kingdom (153,858)

Table 3: Supplies/goods national application thresholds, EUR

Up to 10,000	10,001 – 100,000	Above 100,001
Armenia (1,884)	Austria (34,000)	Czech Republic (124,455)
Croatia (9,194)	Belgium (30,000)	Finland (134,000)
Cyprus (1,708)	Bulgaria (33,746)	Germany (134,000)
	Denmark (67,036)	Ireland (134,000)
	Estonia (40,000)	Italy (134,000)
	France (90,000)	Lithuania (134,000)
	Georgia (79,622)	Luxembourg (130,000)
	Greece (60,000)	Malta (120,000)
	Hungary (25,806)	Netherlands (134,000)
	Iceland (78,606)	Norway (111,737)
	Latvia (42,000)	Romania (134,000)
	Poland (30,000)	Spain (130,000)
	Portugal (75,000)	United Kingdom (153,858)
	Serbia (24,848)	
	Slovakia (30,000)	
	Slovenia (20,000)	
	Sweden (54,076)	
	Switzerland (93,642)	

1.1.2. Historical data availability

The availability of online information on public procurement at the national level is only a recent development. It has been largely shaped by both domestic and international forces in demand of higher coordination, transparency, efficiency and competitiveness of the tendering process. Also, the particular advantages in terms of infrastructural capacity of national administrations have played an important role in determining the establishment of online procurement information systems. The variability of these factors in each of the 35 jurisdictions covered in this report is reflected in the scope of historical data available[10]. In this dimension we trace **the earliest year for which tender information is freely available online as of August 2015.** We refer in particular to information on the characteristics of individual tenders that has been issued by the contracting authorities in the country or jurisdiction rather than aggregate tender information. We do not consider the cases in which older data needs to be requested through a formal process or purchased, but only what at the moment of finalising this report (August 2015) is readily available and open to any citizen. In the cases where multiple sources exist, we refer to the source that contains the longest time-series.

Table 4: Historical data availability

2007 or earlier	2008-09	2010-11	2012-13	2014 or later
France (2006)	Croatia (2008)	Finland (2011)	Austria (2012)	Iceland (only
Belgium (2000)	Cyprus (2009)	Georgia (2010)	Luxembourg	current tenders)
Czech Rep (2006)	Italy (2009)	Netherlands	(2012)	Germany (2014)
Cyprus (2005)	Switzerland	(2010)	Armenia (2013)	
EC (1993)	(2008)	UK (2011)	Denmark (2012)	
Ireland (2006)	Lithuania (2008)		Greece (2013)	
Malta (1999)	Portugal (2008)		Serbia (2013)	
Bulgaria (2005)	Slovakia (2009)			
Estonia (1998)	Spain (2008)			
Hungary (2005)				
Latvia (2005)				
Norway (2003)				
Poland (2007)				
Slovenia (2007)				

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[10] The list of public procurement platforms that served as main sources for the assessment in each of the 35 jurisdictions is listed in Appendix A.

1.1.3. Coverage of the full tender cycle

Procurement processes entail many different stages which can span over long time periods. These stages normally include a call for expression of interest or pre-announcement; a formal call for tenders; announcements on modifications (if any); cancellations or clarifications of the calls (if any); announcements of the winning bidders; and less often the details of the contract signature, contract completion and ex-post assessments of companies' performance. In this dimension we pose the question **how far along the tendering process does the information in each jurisdiction go?** Here we do a comprehensive mapping of the stages that are reported on in each national case. In the cases for which multiple sources exist, we consider the most comprehensive one. An x marks the existence of information on a particular stage, and we assess the maximum functionality of the platform (that is, if the system foresees the report of information on a particular stage of the cycle we assess this as positive, even though in particular cases the information may be missing).

The efforts of online platforms in capturing and publishing information on all these different stages vary somewhat by country with most countries focusing on the pre-award and award phases of the tendering process.

Table 5: Coverage of the full tender cycle

Country	Pre-tender information (e.g. procurement plans)	Call for tenders	Modification or cancellation in call for tenders	Announcement of awarded contracts	Details on contract signature	Information on contract completion and supplier performance
Armenia	x	x	x	x	x	
Austria	x	x	x	x		
Belgium		x	x	x		
Bulgaria	x	x		x		x
Croatia		x	x			
Cyprus	x	x	x	x		
Czech Rep.	x	x	x	x		
Denmark	x	x	x	n.a.	n.a.	
EC	x	x	x	x		
Estonia	x	x	x	x	x	x
Finland	x	x	x			
France	x	x		x		
Georgia	x	x	x	x	x	x
Germany		x		x*	x*	
Greece	x	x	x	x		
Hungary	x	x	x	x		x
Iceland		x		x		
Ireland		x		x		
Italy		x	x	x		x
Latvia	x	x	x	x		
Lithuania	x	x	x	x		
Luxembourg	x*	x*		x*		

Malta		x		x		
Netherlands	x	x	x	x		
Norway	x	x	x	x	x	x
Poland	n.a.	x	x	x		
Portugal		x	x	x	x	x
Romania	x	x	x	x		
Serbia	x	x	x	x	x	x
Slovakia	x	x	x	x	x	
Slovenia	x	x	x	x		
Spain	x	x	x	x	x	
Sweden		x**				
Switzerland	x	x	x	x		
United Kingdom	x	x	x	x	x	

n.a.=Information not available

*=Only information above EU Directives thresholds.

**=The information is available for framework agreements only.

1.1.4. Availability of full tender documentation

Announcements found in central public procurement web portals typically provide brief and structured summaries of the complete tender information. The information on all administrative details of the process, as well as the full-blown technical specifications often require the access to ancillary documents. For example, a call for tenders to build a new highway will typically specify the length and geographical location of the highway, while the detailed maps of the location and other technicalities will be found in a separate document.

As the access to such full tender documentation is crucial for any bidding company or regular citizen wishing to scrutinize government contracting, its availability is essential for the well-functioning of public procurement systems.

In order to compare countries to the highest possible standard, we review: **which types of tendering documents are commonly linked to the public procurement announcements displayed in the national procurement site?** We list a series of the most common types of ancillary documents and review whether these exist in a fair share of cases.

Table 6: Availability of full tender documentation

Country	Administrative documentation	Technical specifications	Questions posed by interested bidders	Others (specify)
Armenia				
Austria	x	x	x	
Belgium	x	x		
Bulgaria	x	x		
Croatia	x	x		
Cyprus	x	x	x	
Czech Rep.				
Denmark				
EC	x	x		
Estonia	x	x	x	
Finland		x		
France				
Georgia	x	x	x	exemption documents
Germany	x	x		
Greece	x	x		
Hungary				
Iceland	x	x	x	
Ireland	x*	x*		
Italy				
Latvia				
Lithuania				
Luxembourg	x*	x*	x	
Malta	x	x		list of bids
Netherlands	x	x	x	
Norway	x	x		
Poland				
Portugal				
Romania				
Serbia	x	x	x	
Slovakia	x	x	x	
Slovenia	x	x	x	
Spain	x	x		
Sweden				
Switzerland	x*	x*		
United Kingdom	x/x*	x/x*		

*Documents become available after registration / expression of interest.

1.1.5. Fees for information access

The monetary costs of procurement information are another important aspect of data availability, as well as fair competition for interested bidders. On one hand, free information facilitates public scrutiny of tendering processes. On the other, it equalizes market entry conditions for more disadvantaged companies or individuals (e.g. small and medium enterprises). In order to benchmark countries in

terms of monetary barriers to the access of information we pose the question **what are the fees charged for accessing public procurement announcement data and full tender documentation?[11]**

Table 7: Fees for information access

Country	Simple search announcements	Advanced search announcements + notifications	Full tender documentation
Armenia	free of charge	free of charge	n.a.
Austria	fee is payable	fee is payable	fee is payable
Belgium	free of charge	free of charge	n.a
Bulgaria	free of charge	free of charge	fee is payable for certain tenders
Croatia	free of charge	fee is payable	free of charge
Cyprus	free of charge	free of charge	free of charge
Czech Rep.	free of charge	free of charge	fee is payable for certain tenders
Denmark	free of charge	free of charge	free of charge
EC	free of charge	free of charge	fee is payable for certain tenders
Estonia	free of charge	free of charge	free of charge
Finland	free of charge	free of charge	n.a
France	free of charge	free of charge	n.a
Georgia	free of charge	free of charge	free of charge
Germany	free of charge	free of charge	free of charge
Greece	free of charge	free of charge	free of charge
Hungary	free of charge	free of charge	fee is payable for certain tenders
Iceland	free of charge	n.a.	fee is payable
Ireland	free of charge	n.a.	n.a
Italy	free of charge	n.a.	**n.a**
Latvia	free of charge	free of charge	fee is payable for certain tenders
Lithuania	free of charge	free of charge	fee is payable for certain tenders
Luxembourg	free of charge	free of charge	free of charge
Malta	free of charge	free of charge	fee is payable for certain tenders
Netherlands	free of charge	free of charge	free of charge
Norway	free of charge	free of charge	free of charge
Poland	free of charge	free of charge	fee is payable for certain tenders
Portugal	free of charge	free of charge	free of charge
Romania	free of charge	free of charge	fee is payable for certain tenders

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[11] This is assessed taking June 2015 as reference date.

Serbia	free of charge	free of charge	free of charge
Slovakia	free of charge	free of charge	fee is payable for certain tenders
Slovenia	free of charge	free of charge	free of charge
Spain	free of charge	free of charge	free of charge
Sweden	fee is payable	fee is payable	fee is payable
Switzerland	free of charge	free of charge*	free of charge*
United Kingdom	free of charge	free of charge	fee is payable for certain cases

n.a.=Information not available.

*After registration.

1.2.   Data quality

In our previous section we analysed the general country trends in terms of data availability. In this section, we assess the quality of online procurement information geared towards more and better public procurement accountability.

1.2.1. Fragmentation of procurement information sources

As previously mentioned, national governments have invested varying efforts in building public procurement information systems in recent years. In addition to the different capacities and efforts, the 35 polities covered in this report have different organizational structures along constitutional, territorial and socio-political lines. As a consequence of all this, countries show different degrees of centralization of public procurement information. This information normally displays some degree of fragmentation, in the sense that multiple sources can be found in the country where none fully contains all others. This fragmentation can be of a *temporal* nature whenever tenders occurring on certain dates are found in alternative websites; *spatial* whenever different subnational units publish through different channels; or *sectorial* whenever tenders of different industry sectors or value ranges appear in different portals. Also, while in some cases procurement information is open and public, in others it is mainly in the hands of private companies collecting it.

The main question being tackled in this classification is: **how many official national level public procurement portals exist in the country?**

In some cases, a centralized procurement web portal exists covering information on all regulated tenders, while no other (open) portal complements this information. In other cases, there are two or more sources of tender information that are non-overlapping and where one source is explicitly referred by the other as complementary. This normally occurs when the system has changed in the recent years and tenders prior to a certain date need to be searched within an alternative platform, which is clearly stated. A more fragmented scenario takes place when there are several sources containing the same information on at least a number of tenders, but it remains unclear what is the extent of the overlap between sources. Finally, in a minority of cases, the country does not count on any official, open and comprehensive web platform for procurement, but mostly commercial data providers.

In addition to the number of national sources, the EU directives establish that tenders above certain thresholds should be published at the supranational level through a specialized portal called TED (Tenders Electronic Daily). A scenario in which national platforms do not include tenders that are otherwise covered by TED is considered to add an extra layer of fragmentation.

Table 8: Fragmentation of procurement information sources

One centralized public platform	Several non-overlapping public platforms	Several overlapping public platforms	No public platform, mainly private ones
Armenia (a,b)	Malta (a, b)	Belgium (a, b)	Sweden (a, b)
Bulgaria (a,b)	Germany (b)	France (a, b)	Austria (a, b)
Croatia (a,b)	Spain (b)	Germany (a)	Luxemburg (b)
Cyprus (a,b)	Iceland (b)	Italy (a, b)	
Czech republic (a,b)			
Denmark (a,b)			
EC (a)			
Estonia (a,b)			
Finland (a,b)			
Georgia (a,b)			
Greece (a,b)			
Hungary (a,b)			
Ireland (a, b)			
Latvia (a,b)			
Lithuania (b)			
Luxemburg (a)			
Netherlands (a, b)			
Norway (a,b)			
Portugal (a,b)			
Romania (b)			
Serbia (a,b)			
Slovakia (a,b)			
Slovenia (a,b)			
Spain (a)			
Switzerland			
Sweden (f)			
UK (b)			

a=above EU thresholds
b=below EU thresholds
f=only framework agreements

18

1.2.2. Diversity of information templates

The information available online also varies according to how governments decide to classify, structure and publish public procurement data. When a relevant aspect along the tendering process cycle needs to be reported, authorities choose a certain pre-structured type of announcement matching the objective. In this sense, while in some countries there are only a few predefined announcement types (such as prior information notice, call for tenders notice or contract award notice), others have dozens of different announcements. These usually reflect different contract values, industry sectors, types of contracting entities, or legal regimes changing over time. Although more precise announcement types can facilitate the search of tendering information, a highly complex classification can create confusion for the user and complicate the follow-up of the tendering cycle, especially when contracting authorities incorrectly use the templates themselves.

In this section, we monitor the existence of three main announcement templates in each country: call for tenders, modification or cancellation of tenders and contract awards. Therefore, the main question addressed is: **how many announcement types exist in each country?** And subsequently consider a) announcement types in total and b) announcement types regarding only call for tenders, contract awards and contract modification/cancellation in 2009-2015.

It must be emphasized that this question only concerns the legally pre-defined template types rather than those which are used in practice[12].

Table 9: Diversity of information templates

Country	Total number of national announcement types	Number of national announcement types related to call for tenders, contract award and contract modification.
Armenia	16	10
Austria	25	12
Belgium	3	3
Bulgaria	24	22
Croatia	2	1
Cyprus	6	2
Czech Rep.	25	12
Denmark	3	0
EC	27	22
Estonia	16	14
Finland	16	2
France	8	6
Georgia	1	1
Germany	3	2

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[12] This is a crucial distinction as in some countries fewer announcement types may be used than legally defined due to the lack of relevance of some available types, or alternatively, in some countries more announcement types could be in actual use as contracting entities 'invent' their own variants of legally prescribed announcement types.

Greece	no standard	n.a.
Hungary	45	37
Iceland	no standard	n.a.
Ireland	2	2
Italy	no standard	n.a.
Latvia	6	6
Lithuania	21	20
Luxembourg	3	3
Malta	no standard	n.a.
Netherlands	4	3
Norway	6	2
Poland	9	9
Portugal	5	3
Romania	7	7
Serbia	20	15
Slovakia	29	16
Slovenia	7	7
Spain	11	7
Sweden	n.a.	n.a.
Switzerland	5	4
United Kingdom	1	1

1.2.3. Machine-readability of information

The electronic format in which data are stored online is critical for the possibilities of monitoring tendering and enhancing public accountability. The same applies to the different alternatives for downloading the information. While data richness and structure are important too, here the focus is on whether computer algorithms can readily process the information. In the era of 'Big Data', machine readability is critical for government data quality.

Some portals offer the possibility to download a full dataset in spreadsheet-compatible formats (e.g. xml), which represents a readily-available database for analysis. Others oblige the user to collect the data from different semi-structured text files generated electronically in the first place (e.g. formats like html, or pdfs which are typically very difficult to process automatically). Others, in turn, publish documents transferred from a paper-based system such as scanned documents.

Given these considerations, in this section we evaluate the **degree of machine-readability of the information available in each national portal**.

Table 10: Machine-readability of information

Fully machine-readable in structured formats (e.g. xml)	Fully machine-readable in semi-structured format (e. g. pdf, html)	Not fully machine-readable
Belgium (since 2011)	Austria	Armenia
EC (since March 2010)	Belgium (before 2010)	Finland
UK	Bulgaria	Iceland
Poland	Croatia	Malta
	Cyprus	
	Czech republic	
	Denmark	
	EC (before March 2010)	
	Estonia	
	France	
	Germany	
	Georgia	
	Greece	
	Hungary	
	Ireland	
	Italy	
	Latvia	
	Lithuania	
	Luxembourg	
	Netherlands	
	Norway	
	Portugal	
	Romania	
	Serbia	
	Slovenia	
	Slovakia	
	Spain	
	Switzerland	

1.2.4. Consistency of thematic structure across announcements

At the same time, the possibilities for a systematic or automated monitoring of public procurement depend not only on the degree of machine-readability of the information, but also on the existence of a pre-determined thematic structure of elements that must be included in **each** and **every** announcement[13]. This structure usually entails a number of section and subsection titles referring to the particular features of each tender.

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[13] Compare, for example, the structure of two calls for tenders in Malta a) http://contracts.gov.mt/en/Tenders/Documents/TendersDocuments/CT001_2015.pdf and b)

If most individual announcements follow the same thematic structure, the comparison across sectors, regions, industries, etc. becomes clearer and easier. Therefore, in this dimension we ask in particular: **how much of the information on each tender follows a predefined thematic structure that is similar for all announcements?** As there is no objective parameter for this dimension, the countries are compared against each other and classified in an approximate way.

Table 11: Consistency of thematic structure across announcements

Highly structured	Moderately structured	Poorly structured
Croatia	Austria	Armenia
Cyprus	Belgium	France (b)
Czech Republic	Denmark	Greece
EC	Germany	Iceland
Estonia	Italy	Ireland
France (a)		Luxemburg
Finland		Malta
Georgia		
Hungary		
Latvia		
Lithuania		
Netherlands		
Norway		
Portugal		
Romania		
Serbia		
Slovakia		
Slovenia		
Spain		
Switzerland		
UK		

a=Above EU thresholds
b=Below EU thresholds

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http://contracts.gov.mt/en/Tenders/Documents/TendersDocuments/CT_A_025_2014%20%28CT3195_2014%29.pdf; versus two call for tenders in the Netherlands: a) https://www.tenderned.nl/tenderned-web/aankondiging/detail/publicatie/akid/884cc96961744ca9ea096cf0bd86c52d/pageId/D909C/huidigemenu/aankondigingen/cid/35704/cvp/join and b) https://www.tenderned.nl/tenderned-web/aankondiging/detail/publicatie/akid/76ed47e5bcb08fe70fbd61b6e38735a9/pageId/D909A/huidigemenu/aankondigingen/cid/35842/cvp/join.

1.2.5. Search precision

The precision with which individual information is searchable is yet another crucial aspect of procurement accountability. By assessing the user-friendliness and functionality of the (advanced) search options in each source we ask: **how many filtering categories exist in each platform's search engine?** Whenever multiple sources are in place we focus on the source that offers the most possibilities.

Table 12: Search precision

15 or more	Between 8 and 14	7 or less
Austria (16)	Belgium (13)	Armenia (2)
Bulgaria (32)	Cyprus (13)	Croatia (4)
Czech Rep (25)	Denmark (12)	Finland (6)
EC (18)	France (11)	Iceland (0)
Estonia (17)	Georgia (9)	Ireland (6)
Hungary (17)	Germany (8)	Malta (0) (after 2014)
Italy (17)	Greece (12)	Malta (4) (until 2013)
Latvia (21)	Lithuania (14)	
Portugal (15)	Luxembourg (13)	
Romania (20)	Netherlands (10)	
Slovakia(16)	Poland (12)	
Spain (15)	Norway (11)	
Switzerland (16)	Serbia (13)	
	Slovenia (13)	
	UK (11)	

1.2.6. Traceability of the tender cycle

Most public procurement information portals release information in the format of individual announcements pertaining to one specific stage of the tendering cycle. For example, while a call for tenders defines the criteria for companies to bid, the contract award announcement discloses which companies fulfilled this criteria and actually submitted bids. In practise this means that full information on individual tenders needs to be traced through an announcement for each particular stage. Hence, the possibility of matching distinct bits of information from different announcements is indispensable for understanding public procurement tendering comprehensively. This requires the use of key identifying variables at the announcement level, such as unique contract IDs. In this sub-section, we ask the question: **in which ways announcements characterising the same tender can be linked?**

There are generally four ways in which such IDs can be used for linking announcements, each having a different degree of reliability: a) no IDs at all, which makes the matching nearly impossible; b) using unique IDs for announcements with mandatory referencing of earlier announcements belonging to the

same tender; c) using unique tender IDs but not necessarily unique announcement IDs, and d) using both unique tender and announcement IDs.

Table 13: Traceability of tender cycle

Both unique tender and announcement IDs	Unique tender IDs	Unique announcement IDs with mandatory referencing	No IDs and/or no referencing
Belgium	Finland	Armenia	Austria
Bulgaria	Georgia	Cyprus	Croatia
Czech republic	Iceland	EC	Denmark
Estonia	Italy	Germany	Romania
France	Luxembourg	Hungary (until 2012)	UK
Greece	Serbia	Norway	
Hungary (since 2013)	Spain	Poland	
Ireland		Slovenia	
Latvia		Slovakia	
Lithuania			
Malta			
Netherlands			
Portugal			
Switzerland			

1.2.7. Organisational identifiers

Public procurement is essentially a transaction between two types of entities: a contracting authority and a winning bidder. For most cases, this means public-to-private contracting. Without reliably identifying each of these organisations, the monitoring of the public procurement process becomes a very difficult task.

Unique IDs for contracting authorities (for example in the form of fiscal code or Treasury ID) and companies (usually in the form of fiscal code) are key when tracking organisational performance over time and exploring the networks of contractual relationships. By implication, we ask in this section **whether organisation IDs are mandatory in public procurement announcements**.

Table 14: Organisational identifiers

Both supplier and contracting entity IDs are published	Only contracting body IDs are published	Only supplier IDs are published	No organisation IDs are published
Bulgaria	Croatia	Spain	Armenia
Czech Republic**	Finland		Austria
Estonia	Iceland*		Belgium
Georgia	Netherlands		Cyprus
Ireland	Norway		Denmark
Italy	Poland (within the downloadable xml files)		EC
Latvia			France
Lithuania	Serbia		Germany
Portugal	Slovenia		Greece
Slovakia			Hungary
			Luxembourg
			Malta
			Romania
			Switzerland
			UK

* Only in certain cases.

**These IDs are however not always present in tender announcements containing lots.

1.3.   Total expected volumes of public procurement information

As a mode of summarizing the amount of public procurement information we expect from each of our 35 jurisdictions, we present comparative numbers on estimated general government expenditures on public procurement of works, goods and services as percentage of GDP, following the methodologies used by the OECD and the European Commission. These categories of expenditures are interpreted as expected volumes of public procurement spending and are defined as the sum of intermediate consumption (goods and services purchased by governments for their own use), gross fixed capital formation and social transfers in kind via market producers. The general government unit encompasses central, state and local governments[14]. The figures are taken from the respective national accounts and reproduced by both the OECD and the European Commission.

In order to obtain the most recent figures available and the highest country coverage, we present the numbers in two (non-comparable) subsets of our universe of countries. While some countries overlap in the two samples, we lack information on Croatia, Armenia, Georgia and Serbia altogether.

Figure 1 presents data on estimated total public procurement expenditure by general government in a subset of OECD members for the year 2013:

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[14] OECD (2015) "Government at a Glance", OECD (2015), OECD Publishing, Paris.
http://dx.doi.org/10.1787/gov_glance-2015-en

Figure 1: Estimated procurement expenditure on works, goods and services as % of GDP (including utilities).
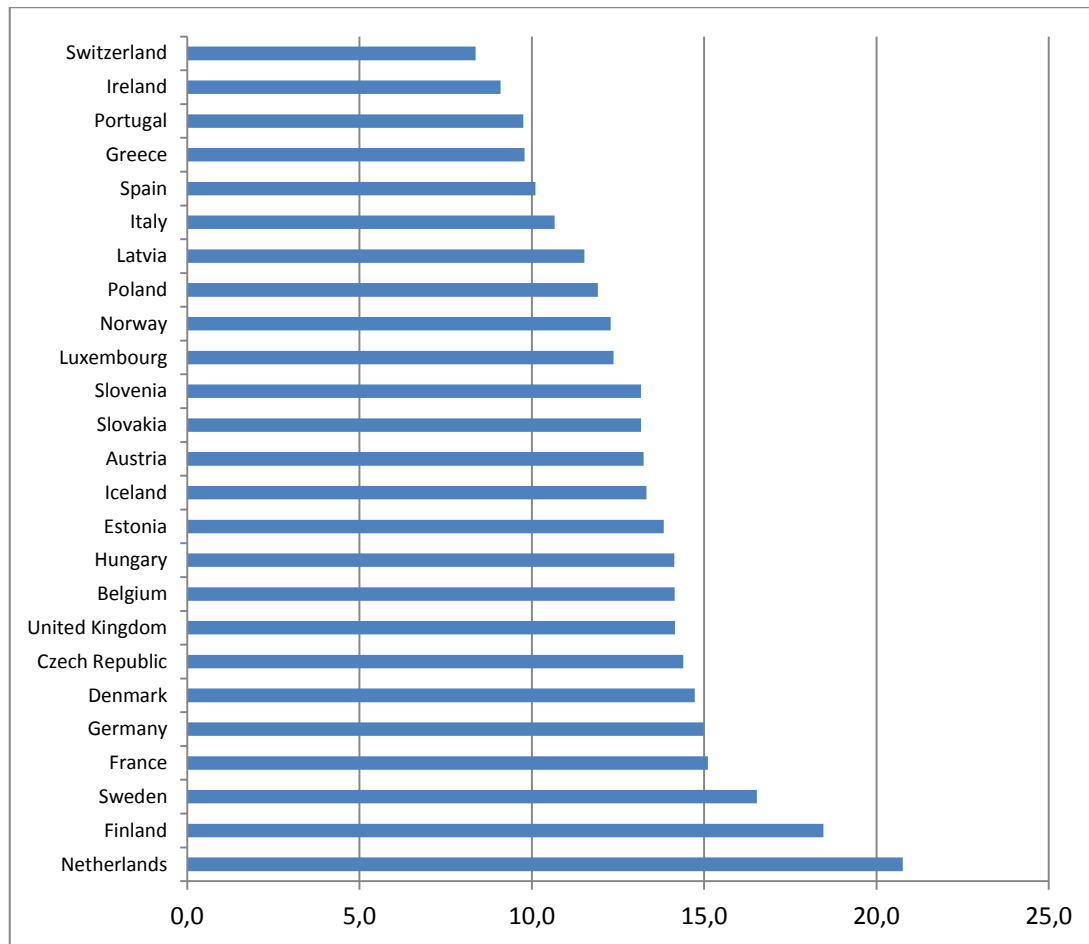
Reference year: 2013. Source: Government at a Glance 2015: http://dx.doi.org/10.1787/888933249013

Figure 2 presents data on estimated total public procurement expenditure by general government in a subset of EU members for the year 2012. These numbers, however, exclude spending on utilities, due to a lack of reliability of utilities data[15].

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[15] For more on this judgment see: "Public Procurement Indicators 2012", European Commission, DG Markt C4, Economic Analysis and e-Procurement.

Figure 2: Estimated procurement expenditure on works, goods and services as % of GDP (excluding utilities).
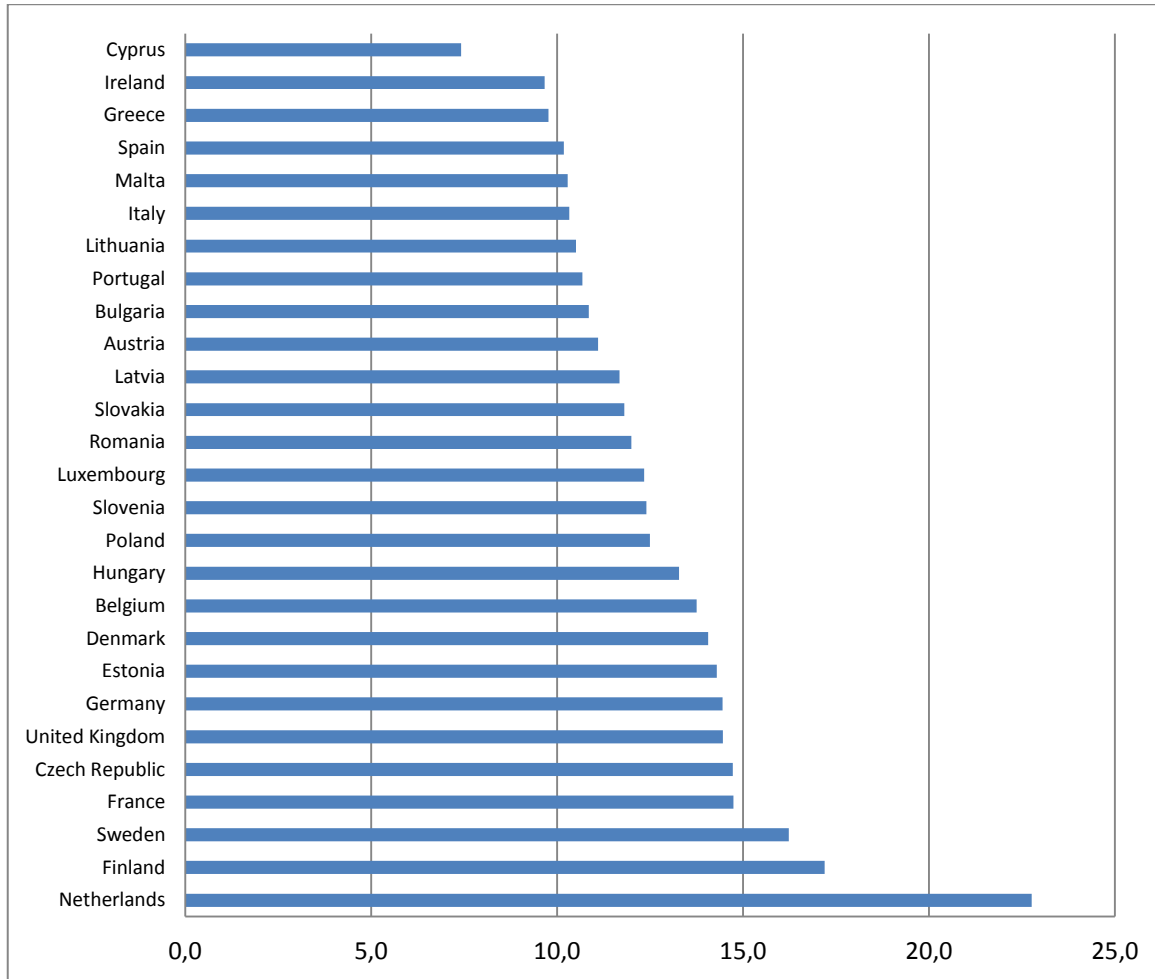
Reference year: 2012. Source: European Commission, PP Indicators 2012.

Figures 1 and 2 suggest a high degree of variation among our universe of countries, ranging from approximately 7 to 23 % of total GDP. These expected volumes represent an upper bound for the estimate of total procurement value relative to GDP for each country. Due to a likely underreporting bias and multiple other idiosyncratic factors, the effective volume of procurement expected to be hosted on national procurement platforms will fall below these upper bounds.

2. Overview of data content on the variable level

In order to have a meaningful picture of public procurement markets, publicly available tender notices are expected to contain the most relevant information regarding individual tendering processes.

Therefore, we mapped the existence of key variables in the announcements publicized by each country platform and reported an approximate quantitative measure of the coverage in each case.

Table 15 shows the overall availability of the core variables subdivided into variable groups, such as contract, buyer and bidder. These estimations are based on an assessment of a random sample of announcements[16] for each case -normally between 5 and 10-, and therefore only approximate. In addition, our assessment is based on the expected content of each announcement instead of the actual data, meaning that we compute as positive variables appearing in the templates, even though these may be left blank in a substantial number of cases. Hence, our estimations tend to overestimate the scope of the information. The actual availability of the information will vary country by country, and the final results will be revealed in deliverable 2.8 after the data collection stage is completed. The more detailed mapping of the variables per category can be found in Appendix A[17].

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[16] Because language barriers, in case of Georgia, the unstructured pdf announcement documents were not sampled, hence only the core, readily available information was mapped.
[17] The scope of the final database (based on the opencontracting scheme) used in DIGIWHIST is more detailed, Table 17 in Appendix A contains only a core subset of variables.

Table 15: Availability of public procurement information in published announcement documents

	Contract related items	Dates	Require ments	Documen tation	Funding	Buyer	Bidder	Bid	Price	Cancellati on/correct ion	Other
Austria	100%	80%	100%	100%	50%	64%	23%	20%	17%	100%	14%
Belgium	88%	80%	100%	25%	33%	64%	31%	40%	67%	67%	29%
Bulgaria	88%	70%	100%	75%	50%	64%	62%	20%	50%	67%	43%
Cyprus	81%	80%	100%	50%	33%	55%	15%	20%	33%	67%	14%
Croatia	56%	20%	0%	0%	0%	45%	0%	0%	0%	0%	0%
Czech Rep.	88%	80%	100%	50%	67%	45%	38%	40%	67%	67%	14%
Germany	88%	40%	100%	100%	50%	64%	23%	0%	17%	0%	14%
Denmark	63%	60%	0%	50%	17%	45%	0%	0%	33%	33%	14%
Estonia	81%	60%	100%	100%	50%	64%	46%	20%	33%	67%	14%
Spain	81%	80%	100%	50%	17%	55%	23%	20%	67%	100%	14%
Finland	56%	30%	0%	25%	0%	55%	0%	0%	0%	67%	0%
France	88%	50%	100%	0%	33%	45%	46%	40%	17%	67%	43%
Greece	75%	80%	100%	75%	67%	45%	15%	0%	33%	100%	14%
Hungary	94%	90%	100%	75%	33%	64%	62%	40%	100%	100%	86%
Ireland	31%	40%	0%	50%	0%	18%	15%	0%	0%	0%	0%
Italy	50%	40%	0%	0%	0%	18%	15%	0%	17%	67%	0%
Lithuania	88%	80%	100%	75%	50%	64%	54%	40%	67%	100%	29%
Luxem- bourg	81%	40%	100%	50%	33%	45%	31%	20%	33%	0%	29%
Latvia	63%	80%	100%	75%	50%	64%	54%	20%	67%	100%	29%
Malta	56%	50%	33%	100%	17%	45%	38%	20%	67%	67%	14%
Netherlan ds	100%	80%	100%	75%	33%	55%	38%	40%	33%	67%	29%
Poland	75%	40%	100%	25%	33%	45%	23%	40%	67%	33%	0%
Portugal	94%	70%	100%	75%	50%	55%	31%	20%	50%	67%	43%
Romania	75%	70%	100%	75%	50%	55%	38%	20%	33%	33%	14%
Sweden	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Slovenia	88%	70%	100%	0%	33%	64%	31%	40%	33%	100%	0%
Slovakia	100%	80%	100%	50%	67%	45%	38%	20%	33%	67%	0%
United Kingdom	38%	50%	0%	0%	0%	18%	23%	0%	33%	0%	0%
Norway	88%	70%	100%	100%	33%	64%	23%	20%	67%	67%	14%
Switzer- land	69%	70%	0%	25%	17%	36%	15%	0%	0%	100%	0%
Iceland	13%	20%	0%	100%	0%	27%	15%	20%	67%	67%	14%
Serbia	69%	50%	0%	50%	17%	55%	31%	20%	50%	67%	0%
Georgia[18]	31%	70%	0%	100%	0%	36%	54%	40%	83%	33%	0%
Armenia	31%	30%	100%	75%	0%	9%	0%	0%	0%	0%	29%
EC	88%	80%	100%	75%	50%	45%	46%	40%	67%	67%	43%

[18] Additional information is available in unstructured tender documentation notices.

3. A detailed view: country cases and status of access to procurement information in Europe

Armenia	
In September 2012, the Armenian government adopted several amendments to the decree on Procurement Process Management, aimed at increasing the level of transparency and reducing corruption risks. In 2012, the e-procurement and e-payment website was launched. All open procurement state purchases were expected to be done through the e-procurement system from January 2012 onwards, but the system has faced some technical difficulties according to a report from the Business Anti-Corruption Portal.	
Main source assessed	Procurement System of the Republic of Armenia: www.gnumner.am
Data availability	
Historical data availability	This platform contains tender information starting from December 2012.
Coverage of the full tender cycle	The Armenian web portal contains information that covers most of the tender cycle, except for information on contract finalization and bidder performance.
Availability of full tender documentation	Technical specifications and administrative documentation are not available for download on the website.
Fees for information services	The website is completely free to use.
Data quality	

Fragmentation of procurement information sources	Gnumner.am is the only available online database to consult calls for tenders published by the Armenian government.
Diversity of information templates	Armenia has a total of 16 different announcement types.
Machine readability of information	The information is not always machine readable. Most of the announcements are published in unstructured word documents.
Pre-defined thematic structure of announcements	Call for tenders are not published as structured documents and contracts also vary a lot in their format.
Search precision	The database is not very user friendly, and only allows the user to browse through pre-defined categories and their sub-categories.
Traceability of the tender cycle	Tender cycle is traceable as contract award notices have an explicit reference to the title and ID of the original call for tenders.
Organisation IDs	No IDs are provided.

Austria

Auftrag.at is part of the Wiener Zeitung group, the Austrian Official Federal Gazette. Auftrag.at is the provider of Internet services for public e-procurement in the pre-awarding phase. It is mandated to publish all public tenders in Austria, but also includes all European tenders. In addition, it offers services to contracting authorities and business operators, from e-notification to e-submission.

Main source assessed	e-tendering website: www.auftrag.at
Relevant links	Official Procurement Information Portal of the Austrian Chancellery: https://www.bka.gv.at/site/5100/default.aspx Federal Procurement Agency: http://www.bbg.gv.at/english/about-the-fpa/
Data availability	
Historical data availability	This platform contains tender information starting from 2012.
Coverage of the full tender cycle	Information regarding pre-tender information, call for tenders, modification or cancellation of tenders as well as the announcements of awarded contracts can be found in the website. Details on contract signature or information on contract finalization and bidder performance are not available.
Availability of full tender documentation	Documentation is available for download, but a subscription is required.
Fees for information services	The use of the website requires the payment of a monthly fee that ranges from 33 to 315€ a month.
Data quality	
Fragmentation of procurement information sources	Auftrag.at aggregates all Austrian tenders (local and federal above and below EU thresholds) and also includes all of the TED announcements.
Diversity of information templates	The website lists a total of 25 different announcement templates.

Machine readability of information	Information is machine readable and is mostly displayed in html format and downloadable as pdf.
Pre-defined thematic structure of announcements	Although the data does have a pre-defined structure, different templates for the same type of announcement can be found.
Search precision	The search function is only accessible with a subscription and offers 16 different options to filter the data. These options can also be combined with logical operators to make the search even more precise.
Traceability of the tender cycle	There are no unique IDs identifying the different announcements within a tender, but the website shows the announcements (including contract awards) linked to a specific tender notice.
Organisation IDs	No organisation IDs are provided.

Belgium

Belgium has a centralized and open procurement platform named e-Procurement. It is maintained by the Federal Public Service (SFP) Personnel et Organisation of the Federal Government. The Flemish authorities and the Brussels Capital region publish their tender notices directly on this platform, whereas Walloon region authorities forward here the notices published in their own procurement platform. As of the 1st of January 2011, the platform fully incorporates the Bulletin des Adjudications, the previous procurement newsletter.

The adoption of the e-tendering platform occurred progressively throughout the country. As of December 2011, the region Brussels commenced to accept electronic bids. As of January 2012 Flanders imposed the obligation to use e-tendering for all Flemish administrative units, whereas the Walloon region started to accept electronic bids through a parallel platform called IAM-PAM. As of January 2013 all federal Belgian organizations have accepted electronic bids for all tendering processes. The only exceptions are social

security institutions which can opt whether to accept electronic bids.

Flemish municipalities can choose autonomously whether to prohibit, allow, or make mandatory the use of online procurement. Similarly, Walloon municipalities choose autonomously whether to accept online bidding through the IAM tool. The German-speaking communities have not yet incorporated the use of online procurement in Belgium.

Main source assessed	e-notification website: https://enot.publicprocurement.be/enot-war/home.do
Relevant links	E-Procurement: https://enot.publicprocurement.be/enot-war/home.do

Procurement contracts until December 2010: http://www.ejustice.just.fgov.be/bul/bulf.htm

Public Procurement Federal Site: http://www.publicprocurement.be/

Walloon Region Procurement: http://marchespublics.cfwb.be/fr/recherches-d-avis/avis-de-marche/index.html |

Data availability	
Historical data availability	This platform contains tender information starting from January 2011.

Its preceding platform includes information since the year 2000. |
Coverage of the full tender cycle	The platform includes information on the tender cycle up until the announcement of the contract award.
Availability of full tender documentation	Tender documentation in this platform includes all administrative documents to be considered by the bidders as well as all technical specifications in relation to the call.
Fees for information services	The use of e-Procurement is free of charge. Moreover, users can create a special subscription to the platform in order to personalize tender searches and receive contract alerts without charges.

Data quality	
Fragmentation of procurement information sources	One centralized database exists at the moment. The information prior to 2010 is located in an alternative source.
Diversity of information templates	Notices are classified into three announcement types: call for tenders; announcement of modification, cancellation or additional information and contract award notice. The search engine, however, does not allow the user to filter these.
Machine readability of information	The information is fully machine readable both in xml and pdf format. For pre-2010 tenders the information is available in html format.
Pre-defined thematic structure of announcements	Each announcement follows a clear thematic structure, similar to that of Tenders Electronic Daily (TED).
Search precision	There are multiple search categories, although is it remarkable the absence of announcement type within the search options.
Traceability of the tender cycle	Each tender can be traced through an individual reference number, as well as publication number.
Organisation IDs	Contracting authorities do not have unique IDs.

Bulgaria

The Bulgarian Public Procurement Portal is operated by the Bulgarian Public Procurement Agency that is an independent body supporting the Minister of Economy, Energy and Tourism. This is a centralized information system containing information on all of the national tenders. The site includes tender information irrespective to applicable thresholds: below national threshold tenders are also frequently published. The structure of the stored

information is equivalent to the EU structure. Certain introductory stages of an electronic procurement system are already implemented, such as e-Publication, e-Notification and e-Sender, e-Documentation, Questions and clarifications.

Main source assessed	Website of the Public Procurement Agency: www.aop.bg
Relevant links	Open data platform of the government of Bulgaria: https://opendata.government.bg/

Data availability	
Historical data availability	This platform contains tender information starting from 2005.
Coverage of the full tender cycle	Except modification/cancellation and contract signature, the central website contains documents on all the other phases of the procurement process.
Availability of full tender documentation	Administrative documentation and technical specificities are available via linked websites.
Fees for information services	Both simple and advance search are freely available, but for certain tenders, the documentation is payable.

Data quality	
Fragmentation of procurement information sources	One centralized website contains both below and above EU-level procurement tender information.
Diversity of information templates	There are 18 different model announcement types.

Machine readability of information	The information is fully machine-readable in semi-structured html format.
Pre-defined thematic structure of announcements	The announcements are highly structured.
Search precision	Tenders and tender documents can be searched by many criteria.
Traceability of the tender cycle	Each tender can be traced through an individual reference number, as well as publication number.
Organisation IDs	Both suppliers and contracting entity IDs are available.

Croatia	
The Croatian Electronic Public Procurement Classifieds is a portal where contracting authorities publish notices in accordance with the Public Procurement Act of the Republic of Croatia (Official Gazette NN, 90/2011, 83/13, 143/13 and 13/14), which was harmonized with EU Directives 2004/17 EC and 2004/18 EC in the public procurement field. The website allows users to view the list of all published public procurement notices in the "List of Notices" section anonymously and for free, but requires payment for further functionalities, such as tender search or document downloads.	
Main source assessed	Electronic public procurement classifieds: https://eojn.nn.hr/Oglasnik/
Relevant links	Integrity Observer of the Partnership for Social Development: http://www.integrityobservers.eu/default.aspx?id=125
Data availability	

Historical data availability	This platform contains tender information starting from 2008.
Coverage of the full tender cycle	The Electronic Public Procurement Classifieds offers only information regarding call for tenders and their modifications. No information on contracts is by the website.
Availability of full tender documentation	Administrative and technical documentation are available for download to registered users.
Fees for information services	The website allows the possibility to browse the available call for tenders for free and anonymously, but requires payment for more advanced functionalities such as the advanced search capabilities. Prices range from 130 to 630€ depending on the type of subscription chosen.
Data quality	
Fragmentation of procurement information sources	https://eojn.nn.hr/Oglasnik/ is the centralized public procurement platform of Croatia all national and EU level tenders are published on this platform.
Diversity of information templates	The Croatian procurement website distinguishes only between active and past call for tenders.
Machine readability of information	Some basic information regarding tenders is displayed as html, some more specific information can be downloaded as pdf files.
Pre-defined thematic structure of announcements	Announcements are highly structured.
Search precision	The basic/free version of the website offers very limited search capabilities (only 6 fields).

Traceability of the tender cycle	The call for tenders have a unique ID number, but since there is no information provided on contract awards, it is not possible to track the full tender cycle with the information provided in the website.
Organisation IDs	ID of the contracting authority is provided.

Cyprus

In November 2009, Cyprus introduced its website for conducting public procurement competitions: the Cyprus eProcurement System (CyePS). The CyePS has won several awards, including the Innovation Award of 2010 by OEB for the development and implementation of the eProcurement System. This recognition complements the success of the eProcurement System to classify Cyprus, first in the area of e-Procurement amongst the Member States of the EU for 2 consecutive years, the eProcurement System of the Republic of Cyprus was also awarded the Good Practice Label in the framework of the 4th European eGovernment Awards 2009.

Main source assessed	e-procurement website: https://www.eprocurement.gov.cy/ceproc/home.do
Relevant links	Public Procurement Directorate of the Treasury of the Republic of Cyprus: www.treasury.gov.cy/treasury/publicpro/ppro.nsf/dmlindex_en/dmlindex_en?OpenDocument
Data availability	
Historical data availability	This platform contains tender information starting from 2009.
Coverage of the full tender cycle	Except for details regarding the contract signature and information on contract finalization, the Cypriot website provides relevant information on all phases of the tender cycle.

Availability of full tender documentation	Technical specifications and administrative documentation are available for download in the portal. Documents containing clarifications are also posted online.
Fees for information services	The use of the website is free.
Data quality	
Fragmentation of procurement information sources	https://www.eprocurement.gov.cy/ceproc/home.do is a centralized database that contains all EU as well as national call for tenders.
Diversity of information templates	There are 6 announcement types, including call for tenders, award and cancellation.
Machine readability of information	Information is displayed as html, but additional documents can be downloaded as pdf files.
Pre-defined thematic structure of announcements	Announcements are highly structured as they all follow a pre-defined template.
Search precision	https://www.eprocurement.gov.cy/ceproc/home.do offers an ample list of criteria to refine a search for specific tenders.
Traceability of the tender cycle	Call for tenders and contract award notices have unique ID numbers, but the first are referenced in the latter.
Organisation IDs	Organisation IDs are not published

Czech Republic

All published forms related to single procurement are well available within one centralized system called Vestnik with slightly more features and content than TED. The system has been created in 2006 after the implementation of the EU directive. In 2011 it went through a major restructuring, which included data migration to new service provider. Further data are available only in decentralized form on buyer profile, which are machine readable though - this includes data on bidders, tender documents, actual money paid etc.

Main source assessed	http://www.vestnikverejnychzakazek.cz

Data availability	
Historical data availability	This platform contains tender information starting from 2006.
Coverage of the full tender cycle	The cycle is covered until the announcement of the contract winner. For DPS and framework agreements further notices on sub-contracts are published.
Availability of full tender documentation	Documentation is not linked to the announcements.
Fees for information services	Searching announcements and receiving alerts is free.

Data quality	
Fragmentation of procurement information sources	There is one official centralized public procurement platform in the country.
Diversity of	There is a total 25 information templates in the country, 12 involving

information templates	call for tenders, contract award and contract modification.
Machine readability of information	The information is machine-readable in html format.
Pre-defined thematic structure of announcements	The announcements have a high level of thematic structuring.
Search precision	There are a total of 25 search categories.
Traceability of the tender cycle	The tender cycle is highly traceable through unique IDs both for announcements and contracts.
Organisation IDs	Both supplier and contracting entities have unique published IDs.
Other highlights	Until 2016 all forms have been corrected using revisions of original forms, which was more precise than corrigenda.

Denmark	
Udbud.dk gives an overview of the Danish authorities' procurement. It shows national tenders, EU procurement and government procurement plans. Since April 1, 2012, all entities must use this website to announce the purchase of goods and services covered by the Danish Act on Tender Procedures for Public Works.	
Main source assessed	Centralised public procurement website: www.udbud.dk
Relevant links	Website of the Danish Competition and Consumer Authority: http://www.kfst.dk

Data availability	
Historical data availability	This platform contains tender information starting from February 2012.
Coverage of the full tender cycle	The information available at udbud.dk does not allow to track the full tender cycle. Information regarding procurement plans, call for tenders and modification or cancellations are available in the website, but there is no information published regarding contract awards or contract finalization.
Availability of full tender documentation	The website does not contain administrative documentation, technical specifications or questions posed by interested bidders. However, the links to the websites containing them are often provided.
Fees for information services	The use of the website is free of charge.
Data quality	
Fragmentation of procurement information sources	Udbud.dk gives an overview of the Danish authorities' procurement including national procurement, EU procurement and government procurement plans. The website is described as "the Danish public procurement in one place".
Diversity of information templates	There are 3 different announcement types in the website (EU tenders, Danish tenders and procurement plans).
Machine readability of information	The information available is machine readable in html format.
Pre-defined thematic structure	There is one template used, containing the core set of information for each tender. However, the notices/documents containing more

of announcements	detailed information can vary significantly.
Search precision	Udbud.dk offers several tools to find public procurement announcements. It includes search options for free text or the possibility to get an overview of the announcement published by date or geographical location. The site offers a total of 12 search categories.
Traceability of the tender cycle	The tender cycle cannot be identified with the information provided in the website because there are no announcement ID numbers and no contract awards.
Organisation IDs	No organisation IDs are provided in the website.

European Union
The tender documents of public procurements subject to the European regulation are stored in the TED database, which is a supplement to the Official Journal of the EU, dedicated to European public procurement. Although only tenders published in the last 5 years are searchable, previous documents are also downloadable via an ftp access going back to 1993. Besides the official site, there are two other websites (ted.openspending.org and spendnetwork.org) re-publishing tender information in a structured format.

Main source assessed	http://ted.europa.eu/
Relevant links	Data (in .CSV format) is also officially available since last year from https://opendata.europa.eu/en/data/dataset/ted-csv https://www.spendnetwork.com/ http://ted.openspending.org/
Data availability	
Historical data	The main platform (http://ted.europa.eu/) contains tender

availability	information from the last 5 years. Prior tender announcements are available for download through an ftp until 1993.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive).
Availability of full tender documentation	Documentation is not required to be linked to the announcements, it depends on external platforms and national practices.
Fees for information services	Both simple and advance search are freely available, but for certain tenders, the documentation is payable.
Data quality	
Fragmentation of procurement information sources	One centralized website contains all EU level procurement tender information.
Diversity of information templates	There are 22 different model announcement types.
Machine readability of information	The information is fully machine-readable in structured xml format. Archived documents (more than 5 years old) are also available in xml format.
Pre-defined thematic structure of announcements	Each announcement follows a clear thematic structure.
Search precision	Tenders and tender documents can be searched by many (18) criteria.
Traceability of the	Unique document IDs are used with (often missing) mandatory referencing. Although the majority of announcements can be

tender cycle	connected by tender through referencing, in a significant portion of the cases, these connections cannot be set-up.
Organisation IDs	Neither suppliers nor contracting entity IDs are available. (Although submitting contracting entity IDs is a legal obligation, it is only scarcely available.)

Estonia		
The public procurement register was launched in 2008, while the possibility to accept e-tenders was added on 2nd February 2011. It is maintained by the Ministry of Finance, also offering overall assistance for tender participants (e.g. training). Tender documents, questions from interested parties and clarifications from contracting authorities are openly available online without registration since February 2014 (they were available after registration from 2009). Procurement document data is archived after five years, and stored for at least twenty-five years.		
Main source assessed	https://riigihanked.riik.ee	
Data availability		
Historical data availability	This platform contains tender information starting from 1998.	
Coverage of the full tender cycle	The full tender cycle is covered.	
Availability of full tender documentation	Administrative and technical documentation, and questions are also available on the central PP website.	
Fees for information	The use of the website is free of charge.	

services	

Data quality	

Fragmentation of procurement information sources	One centralized website contains both below and above EU-level procurement tender information.
Diversity of information templates	There are 16 different national announcement types.
Machine readability of information	The information is machine-readable in html format.
Pre-defined thematic structure of announcements	The announcements are highly structured.
Search precision	There are several (17) search categories.
Traceability of the tender cycle	Each tender can be traced through an individual reference number, as well as publication number.
Organisation IDs	Both suppliers and contracting entity IDs are available.

Finland

The platform HILMA is a public and open centralized database hosted and administered by the Ministry of Trade and Economics of Finland. Following the Finnish Act on Public Contracts of 2007 (348/2007), all contract notices above the national thresholds must be sent for publication to a body defined by the Ministry of Employment and Economics. The

electronic system HILMA was designed with this purpose. Prior to the 2007 reform, only the contracts above the EU thresholds were mandatorily published. After notices have been advertised in HILMA, contracting authorities have the freedom to publish their procurement announcements through other channels. In addition, Finland's Ministry of Finance is overall responsible for the general development and steering of procurement.

Main source assessed	HILMA: http://www.hankintailmoitukset.fi/fi/
Relevant links	Public Procurement Advisory Unit: http://www.hankinnat.fi

Data availability	
Historical data availability	This platform contains tender information starting from 2011.
Coverage of the full tender cycle	Only pre-information notices and calls for tenders are published, while no information exists on the authorities' decisions regarding the bidding process.
Availability of full tender documentation	For some invitation to tenders the technical specificities are attached.
Fees for information services	Browsing tender notices is free of charge. Additional fee-paying services allow users to follow-up notices and receive personalized alerts by email.

Data quality	
Fragmentation of procurement information sources	HILMA is the public procurement site that centralizes all invitations to tender in the country, as well as all EU tender notices.
Diversity of information	A total of 16 templates exist, of which only 4 refer to national tenders, and 12 refer to EU notices.

templates	
Machine readability of information	The information is machine-readable in html format.
Pre-defined thematic structure of announcements	Each announcement follows a clear thematic structure, with guiding subheading in all cases.
Search precision	Only 6 search categories exist, although these include the most helpful ones.
Traceability of the tender cycle	Contracts do not have an administrative identifier, only a publication source and date.
Organisation IDs	Contracting authorities have a unique ID, while bidders are identified by name and address only.
Other highlights	In addition to the HILMA electronic system, the independent Public Procurement Advisory Unit working jointly with the Ministry of Employment and the Economy and the Association of Finnish Local and Regional Authorities provides free advice to Finnish contracting authorities requiring advice on procurement matters.

France

The site Boamp.fr is France's online procurement announcements platform and the electronic version of the Official Gazette of Procurement (Boamp) that exists since 1957. It is hosted by the Department of Legal and Administrative Information (DILA), a subunit of the General Secretary of Government. Announcements in Boamp can be browsed without registration, although bidders are required to register (for free) in order to download procurement documents or react to announcements of interest. The site also offers free alerts with personalized criteria and a mobile version for smart phones. Publication in Boamp is mandatory for tenders above the national thresholds.

A complementary platform is Marchés-Publics, an inter-ministerial website used by contracting authorities in order to organize their tender announcements. Companies can also submit electronic tenders through Marchés-Publics.

Main source assessed	Official Bulletin of public procurement announcements: www.boamp.fr
Relevant links	e-procurement platform of the French Government: www.marches-publics.gouv.fr

Data availability	
Historical data availability	This platform contains tender information starting from 2006.
Coverage of the full tender cycle	The status of tenders is informed until the announcement of the contract winner.
Availability of full tender documentation	Administrative documents and technical requirements can be accessed after registration.
Fees for information services	The use of the website is free of charge.

Data quality	
Fragmentation of procurement information sources	Boamp is the official and mandatory publication platform, although tenders are also published in the complementary platform Marchés-publics. Multiple private providers offer similar services.
Diversity of information templates	Boamp has a total of 8 announcement types.

Machine readability of information	The information is fully machine-readable in html and pdf formats.
Pre-defined thematic structure of announcements	The thematic structuring of above EU threshold tenders is clear and uniform across announcements; while below threshold tenders display unstructured and heterogeneous thematic information for each announcement.
Search precision	Boamp has eleven different search criteria.
Traceability of the tender cycle	The tender cycle is highly traceable as both tenders and announcements have unique IDs.
Organisation IDs	Contracting authorities do not have unique IDs in the announcements.
Other highlights	Since April 2014 Boamp is taking part of an experimental project called Marchés Publics Simplifiés (MPS). MPS is a simplified tender procedure aimed at reducing administrative burden by requiring only a self-declaration from bidders that they fulfil the requirements. It only applies to lower amount tenders.

Georgia

The Georgian public procurement system has faced a significant development in the recent years: a fully electronic public procurement system was introduced in 2010, under the Competition and State Procurement Agency. Although the search interface contains some core information of the tenders, detailed description is only available in the often poorly structured (hence not machine-readable) tender documents.

Based on the data available at the Competition and Procurement Agency's online platform, Tender monitor (http://tendermonitor.ge/ka) – a website created by Transparency International – makes Georgian public procurement tenders more transparent, by making the data easily searchable by basic tender, supplier and buyer information. It also assesses

corruption risks of the tenders based on bidder number, low price competition etc.

Main source assessed	http://www.procurement.gov.ge/
Relevant links	Public procurement and spending monitoring website: http://tendermonitor.ge/ka

Data availability	
Historical data availability	This platform contains tender information starting from November 2010.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive). However, pre-tender information is only available via a different platform (ePlan module).
Availability of full tender documentation	Administrative and technical documentation, and exemption documents are readily available.
Fees for information services	The use of e-procurement portal is free of charge.

Data quality	
Fragmentation of procurement information sources	One centralized website contains both below and above EU-level procurement tender information.
Diversity of information templates	There is one template used, containing the core set of information for each tender. However, the notices/documents containing more detailed information are not structured, hence very diverse.
Machine readability of	A core set of information is machine readable in html format, but the

information	many of the documents are scanned pdf files.
Pre-defined thematic structure of announcements	The announcements are poorly structured. Although the core tender information is available in a highly structured form, the announcements are only poorly structured.
Search precision	There are many (13) search categories.
Traceability of the tender cycle	Each tender can be traced through an individual reference number.
Organisation IDs	Both suppliers and contracting entity IDs are available.

Germany
Germany does not have a unified set of public procurement regulations for tenders that fall below the EU thresholds. As a result, the publication and monitoring is decentralised at the federal state level and different local procurement portals exist. Bund.de is the main access point to the electronic information and administrative services of the German public administration and contains tenders from the federal, state and local governments as well as of vacancies in the public administration.

Main source assessed	e-government service and government information portal: www.bund.de
Relevant links	e-procurement platform: www.evergabe-online.de Public procurement information portal: http://bmwi.de/DE/Themen/Wirtschaft/oeffentliche-auftraege-und-vergabe.html
Data availability	

Historical data availability	This platform contains tender information starting from 2014.
Coverage of the full tender cycle	The German public procurement website contains active call for tenders at the national and EU level as well as some previously awarded tenders. However, the information regarding contracts is often minimal for national level tenders.
Availability of full tender documentation	Bund.de sometimes contains pdf documents with the full tender documentation. Sometimes links are provided to access this information.
Fees for information services	The use of the website is free.
Data quality	
Fragmentation of procurement information sources	Germany has several procurement platforms. Bund.de and e-vergabe.de contain all tenders published by the federal government and a number of *Länder* (states) and municipalities. These two platforms also contain all EU level tenders. Since there is no unified legal framework regulating the publication of tenders underneath the EU thresholds, some tenders are only published in the procurement portals of the respective *Länder* or in other private platforms.
Diversity of information templates	Bund.de contains 3 types of announcement: call for tenders, awarded tenders and tenders awarded through e-procurement.
Machine readability of information	The information is machine-readable in html format. More detailed information regarding the tenders can also be downloaded as pdf documents.
Pre-defined thematic structure of announcements	Some basic information regarding the call for tenders is always displayed in a systematic and organized manner. However, the more detailed information of the announcements can differ greatly, especially across national level tenders.

Search precision	The website allows search for announcements through the use of a total of 8 filters including location, type of contract, type of procedure and type of announcement.
Traceability of the tender cycle	Awarded contracts refer to the announcement number/ID.
Organisation IDs	The website does not provide organisation IDs for the contracting authority or the supplier.

Greece
The National Electronic Public Procurement System (Εθνικό Σύστημα Ηλεκτρονικών Δημοσιών Συμβάσεων – Ε.Σ.Η.ΔΗ.Σ) is a centralized e-procurement system containing information on all of the national tenders - over 60.000 Euros. The system was established in 2013 and all public institutions and bodies are imposed to the obligation to use the e-procurement system for all their tendering processes – end of December 2015 is the final deadline. In particular, the system has functions relating to the preparation and the publication of a tender, the submission from potential contractors/suppliers, the evaluation and the contract award. Three different types of tenders are being published at Ε.Σ.Η.ΔΗ.Σ: work execution tenders, tenders for providing services and supply of goods.

Greece has established also the Central Electronic Registry of Public Contracts (Κεντρικό Ηλεκτρονικό Μητρώο Δημοσιών Συμβάσεων –ΚΗΜΔΗΣ). The Registry is hosted on the portal of the national system of electronic public contracts (Ε.Σ.Η.ΔΗ.Σ) and are both managed by the General Secretariat of Commerce within the Ministry of Economy, Infrastructure, Shipping and Tourism. Since March 2013, transactions regarding public tenders, public contracts and payments over a value of 1000 Euros by any ministry or public agency must be registered and processed through ΚΗΜΗΔΣ. ΚΗΜΗΔΣ is not an e-procurement system. |

Main source assessed	The National Electronic Public Procurement System (Εθνικό Σύστημα Ηλεκτρονικών Δημοσιών Συμβάσεων – Ε.Σ.Η.ΔΗ.Σ) E-procurement: http://www.eprocurement.gov.gr/

Relevant links	Procurement contracts and abstract of tenders (before and after 2013): https://diavgeia.gov.gr/
	Procurement contracts and contract completion notices: http://www.ggde.gr/
Data availability	
Historical data availability	The central PP website contains tender notices from 2013 onwards. Before 2013 public procurement tenders were available at ΔΙΑΥΓΕΙΑ website (Transparency).
Coverage of the full tender cycle	The platform includes information on the tender cycle until the announcement of contract award – in some cases the announcement/decision of contract awards is not available. Awarding public contracts are available at ΔΙΑΥΓΕΙΑ website and at the website of the Ministry of Economy, Infrastructure, Shipping and Tourism as well as at ΚΗΜΔΗΣ. Contract finalizations and assessments can be found at the website of the Ministry, but only a small number of them.
Availability of full tender documentation	Administrative documentation, technical specificities, studies according to the tenders, budget supplies, financial offers and procurement specifications are available.
Fees for information services	The use of the platform is free of charge. Users can create an account for better personalized information.
Data quality	
Fragmentation of procurement information sources	There is one centralized electronic database that started to function in 2013. Prior to 2013 information was located in ΔΙΑΥΓΕΙΑ website (Transparency). This website is still functional and it contains abstract of tenders and acts of awarding public contracts.
Diversity of information	No standard template is used.

templates	
Machine readability of information	There is a fully machine-readable in semi-structured PDF and docx format. A subset of tender information can be exported in an excel format as well.
Pre-defined thematic structure of announcements	There is not a clear thematic structure. Public institutions and bodies are using different types of structures and practices.
Search precision	There are many search categories such as the tender's status, the date of publication, CPV code, submission date, tender's ID, announcement's ID etc. In practice many of these categories do not work. The possibility of searching the tender according to the announcement type does not exist.
Traceability of the tender cycle	Every tender can be traced through an individual number (Αριθμός Διακήρυξης), as well as through an announcement number (Αριθ./Α/Α Συστήματος).
Organisation IDs	Suppliers and contract entity IDs are not available.
Other highlights	The e-procurement PP system is a new one in Greece and public institutions and bodies are not fully familiarized with its functioning. As a result the practices adopted by the authorities and the data available in each tender document differ significantly.

Hungary

The Hungarian public procurement portal is operated by the Hungarian Public Procurement Authority. The portal is a centralised repository of both below and above EU level procurement tender documents. Besides the official public procurement portal, there are two other repositories of tender data. Both kozpenzkereso.eu and kozbeszerzes.ceu.hu contains analysable tender level data, based on the tender documents available at the

official site. The former also reports corruption risk indicators	
Main source assessed	Website of the Pubic Procurement Authority: http://kozbeszerzes.hu
Relevant links	Tender tracking website: www.kozpenzkereso.eu
Data availability	
Historical data availability	This platform contains tender information starting from 2005.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive), and documents on tender fulfilment are also available.
Availability of full tender documentation	Documentation is not linked to the announcements.
Fees for information services	Simple and advanced notice search is free of charge, but fee is payable for tender documentation in certain documentation.
Data quality	
Fragmentation of procurement information sources	One centralized website contains both below and above EU-level procurement tender information.
Diversity of information templates	There are 22 different national announcement types.
Machine readability of	The information is machine-readable in html format.

information	
Pre-defined thematic structure of announcements	The documents are highly structured.
Search precision	There are several (21) search categories.
Traceability of the tender cycle	Unique document IDs are used, but referencing was mandatory only until 2012.
Organisation IDs	Neither the suppliers' nor the contracting entity IDs are available.

Iceland
The main site containing all purchases of the central government in Iceland is maintained by Ríkiskaup – the State Trading Center – which is part of the Ministry of Finance. This central website only contains the most recent tenders, and - unlike in other countries - the calls for tender (with direct links to the payable tender documentation) and contract award notices contain a relatively limited set of information only. Historical data is not available, hence not searchable at this central website. In principle, all contracting authorities are solely responsible for their own public procurement tendering. Therefore, there are multiple local or specialised websites for tenders other than the central purchases beyond the central government's site.

Main source assessed	Central public procurement website: http://www.rikiskaup.is/
Relevant links	Other auction sites: http://www.reginn.is/frettir/utbod/nidurstodur-utboda/ http://www.vegagerdin.is/framkvaemdir/utbod/http:/ http://utbod.lv.is/is/

| | http://fastrik.is/framkvaemdir/index.html |
| | http://fsr.is/Utbod |

Data availability	
Historical data availability	No historical data is available.
Coverage of the full tender cycle	Only call for tender and contract award notices are available.
Availability of full tender documentation	Administrative and technical information is available (for a fee).
Fees for information services	Simple notice search is free, but a fee is payable for accessing documentation.

Data quality	
Fragmentation of procurement information sources	There is one central website, however there are many other specialized portals as well.
Diversity of information templates	No standard template is used.
Machine readability of information	The information is not machine readable.
Pre-defined thematic structure	There are no pre-defined announcements.

of announcements	
Search precision	There is no search engine, as historical data is not available.
Traceability of the tender cycle	A unique tender ID is used.
Organisation IDs	Buyer ID is used in certain cases.

Ireland	
The website eTenders is Ireland's open and centralized procurement portal. It is managed by the Office of Government Procurement (OGP), a special unit created in 2014 under the Department for Public Expenditure and Reform in order to homogenize procurement processes across the country and implement the procurement reform agenda. The OGP makes the strategic decisions regarding the website, but its maintenance is outsourced to a private company. ETenders publishes all tenders above EU thresholds as well as many lower amount tenders, although it is projected that it will publish all notices in the near future. The website was first launched in 2001 by the Ministry of Finance.	
Main source assessed	eTenders: https://irl.eu-supply.com/ctm/supplier/publictenders
Data availability	
Historical data availability	This platform contains tender information starting from 2006.
Coverage of the full tender cycle	The status of the tendering process is followed until the contract is awarded.
Availability of full tender	The website does not provide additional tender documents, these only become available after expression of interest or after the contract was awarded.

documentation	
Fees for information services	The use of the website is free of charge.
Data quality	
Fragmentation of procurement information sources	eTenders is the only official procurement platform in Ireland.
Diversity of information templates	At the moment only two template types are included: call for tenders and awards.
Machine readability of information	The information is fully machine-readable in html format.
Pre-defined thematic structure of announcements	Very few thematic categories exist for each announcement.
Search precision	A total of 6 search category options exist in the website.
Traceability of the tender cycle	Tenders are highly traceable along the cycle, as there are unique identifiers for both contracts and announcements.
Organisation IDs	Both contracting authorities and companies have a specific number assigned.

Italy

Italy's autonomous Anticorruption Authority (ANAC) hosts and manages the Transparency Portal, which includes a comprehensive database of procurement announcements. ANAC was founded in 2014, after absorbing the duties of the preceding Commission for the Integrity and Transparency of Public Administrations (CiVIT) and the Authority for Procurement Oversight (AVCP). ANAC inherited from the latter the centralized publication and monitoring of procurement contracts. ANAC only publishes tenders that are communicated to the agency by contracting authorities. Although this reporting is mandatory, it does not take place in all cases.

In addition, the Ministry of Infrastructure hosts an alternative database of procurement announcements, with information that partially overlaps with that of ANAC. This alternative platform offers, in turn, links to all regional websites advertising procurement announcements.

Main source assessed	ANAC's Transparency Portal: http://portaletrasparenza.avcp.it/microstrategy/html/index.htm
Relevant links	Infrastructure Ministry, Public Procurement: https://www.serviziocontrattipubblici.it/ricerca/cerca_appalti.aspx

Data availability	
Historical data availability	This platform contains tender information starting from 2009.
Coverage of the full tender cycle	Tenders are followed until the award of the contract, and some basic information on completion is also published (date and amount).
Availability of full tender documentation	No additional documentation on the tender is offered on this website.
Fees for information services	No fees are charged to access the information.

Data quality	
Fragmentation of	At least four different official sources of procurement announcement

procurement information sources	information exist in the country: ANAC's Transparency Portal, the Ministry of Infrastructure procurement portal, several regional websites and the Official Gazette of Italy, which dedicates a special section to procurement announcements. All of these contain partially-overlapping information.
Diversity of information templates	The information displayed in ANAC's website does not follow different templates for different announcement types. Each item contains all the information that exists up to date on each individual tender.
Machine readability of information	The information is machine-readable in html format.
Pre-defined thematic structure of announcements	Tender information is organized along a moderate number of thematic categories, although most of these are not clear subheadings but rather administrative acronyms of difficult interpretation. No glossary of terms is offered for the user.
Search precision	ANAC's website offers 17 search categories. However, certain search parameters are obligatory in order to see any results. These parameters (tender title, name or fiscal code of the contracting authority, winning bidder and contract unique identifier) are not guided by any drop-down menu and require certain administrative knowledge of the system.
Traceability of the tender cycle	The tender cycle is followed until the award of the contract. In a large number of cases, however, the information on contract winners is missing.
Organisation IDs	Both contracting authority and bidders are listed with their respective fiscal codes.

Latvia

The Latvian public procurement portal (www.iub.gov.lv) is maintained by the Procurement Monitoring Bureau (Iepirkumu Uzraudzibas Birojs), under the Latvian Finance Ministry as a direct public administration institution. The central site contains both national and European level public procurement tender announcements. Although it is a decentralized public procurement system, there is an increasing trend to centralize tendering processes. The Latvian portal contains the complaint documents on tendering processes as well.

Main source assessed	www.iub.gov.lv
Data availability	
Historical data availability	This platform contains tender information starting from 2005.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive).
Availability of full tender documentation	Tender documentation is not directly linked to the announcements.
Fees for information services	Simple and advanced notice search is free of charge. Documentation is payable in certain cases.
Data quality	
Fragmentation of procurement information sources	One centralized website contains both below and above EU-level procurement tender information.
Diversity of information templates	There are 6 different national announcement types.

Machine readability of information	The information is machine-readable in html format.
Pre-defined thematic structure of announcements	Announcements are highly structured.
Search precision	There are several (21) search categories.
Traceability of the tender cycle	Both unique tender IDs and document IDs are used. However, document IDs are embedded in the announcement's url.
Organisation IDs	Both suppliers and contracting entity IDs are available.

Lithuania	
The Lithuanian Central Public Procurement Portal was launched in 2008, and it is maintained by the Public Procurement Office of the Ministry of Economics. Since the launch of this new public procurement portal, it is possible to organize and implement all procedures online. Although it is not fully mandatory, most of the procurement tenders are implemented in an electronic environment. The portal publishes not only the tender related announcements, but also the detailed documentation (the latter is mandatory since 2009 September).	
Main source assessed	http://cvpp.lt/
Relevant links	Website of the Public Procurement Office: http://www.vpt.lt
Data availability	
Historical data	This platform contains tender information starting from September

availability	2008.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive).
Availability of full tender documentation	Documentation is not directly linked to the announcements.
Fees for information services	Simple and advanced notice search is free of charge. Documentation is payable in certain cases.
Data quality	
Fragmentation of procurement information sources	One centralized website contains both below and above EU-level procurement tender information.
Diversity of information templates	There are 21 different national announcement types.
Machine readability of information	The information is machine-readable in html format.
Pre-defined thematic structure of announcements	The announcements are highly structured.
Search precision	There are many (14) search categories.
Traceability of the tender cycle	Both unique tender IDs and document IDs are used. However, only tender IDs are searchable, and highlighted only in the url name, but not at the announcement's unique html pages.

Organisation IDs	Both suppliers and contracting entity IDs are available.

Luxembourg

Luxembourg's official procurement portal is the PMP (Portail des Marchés Publics), managed by the Department of Public Works of the Ministry of Sustainable Development and Infrastructure (MDDI). The website is hosted by the Center for Information Technology of the State (CTIE). It allows users to browse tenders, personalize searches and submit their online bids free of charge. Since 2009 all contracting authorities are obliged to publish their announcements in the PMP website.

Main source assessed	https://pmp.b2g.etat.lu/?page=entreprise.EntrepriseHome

Data availability	
Historical data availability	This platform contains tender information starting from 2012.
Coverage of the full tender cycle	Tenders are followed until the contract is awarded by the contracting authority.
Availability of full tender documentation	Administrative documents and technical specificities become available after registration in the website.
Fees for information services	The use of the website is free of charge.
Data quality	
Fragmentation of procurement	PMP is the only official centralized procurement notices platform in the country.

information sources	
Diversity of information templates	The announcements follow three different templates: pre-information notices, call for tenders and tender awards.
Machine readability of information	The information is machine-readable in pdf and word formats.
Pre-defined thematic structure of announcements	Announcements that are sent to the national press have very scarce information, are highly unstructured and have few thematic sub-divisions.
Search precision	The PMP website has 13 advanced search categories.
Traceability of the tender cycle	Each tender has a unique ID, while announcements have no identification number.
Organisation IDs	No IDs are used for either contracting authorities or winning bidders.

Malta

The site contracts.gov.mt is the most comprehensive procurement information platform in Malta. It is managed by the Department of Contracts of the Ministry of Finance (MFIN) and publishes information regarding traditional (paper-based) tendering processes administered by the Department of Contracts on behalf of other contracting authorities. However, in January 2013 Malta started a transition towards the platform eTenders, which is meant to be the national centralized electronic bidding website for all contracting authorities to manage their announcements. As of January 2016 all tenders above 5000 EUR are mandatorily channelled through ETenders. ETenders displays the latest calls for tenders and serves as an online bidding platform for companies.

The website contracts.gov.mt offers a list of awarded contracts per year since 1999 in pdf format.

Main source assessed	http://contracts.gov.mt/en/Tenders/Pages/Tenders.aspx
Relevant links	e-tendering platform: https://www.etenders.gov.mt

Data availability	
Historical data availability	The platform contracts.gov.mt contains tender information starting from 1999. The newer eTenders platform contains information since 2012.
Coverage of the full tender cycle	The cycle is covered until contracts are awarded in both platforms.
Availability of full tender documentation	Administrative documents and technical requirements can be accessed from the main website. On eTenders, these documents only become available after interested bidders register on the platform.
Fees for information services	The information available in the Department of Contracts' website is free of charge.

Data quality	
Fragmentation of procurement information sources	Three main sources exist in Malta, one for paper-based procurement (divided in two different platforms, pre and post 2014) and a third one for electronic-based tenders.
Diversity of information templates	There are no multiple announcement templates, only comprehensive information for each tender. eTenders has the option to browse by 8 different status types, corresponding to the stages of the tendering cycle.

Machine readability of information	Most of the information is machine-readable in html formats, while some files are scanned documents and therefore non-machine readable. All the information in the complementary eTenders website is fully machine-readable.
Pre-defined thematic structure of announcements	The announcements are rather unstructured and require multiple links for different pieces of information. In eTenders the information is highly structured.
Search precision	The portal contracts.gov.mt does not offer any search possibilities. The newer platform eTenders has 10 search filters.
Traceability of the tender cycle	Both adverts and contracts have unique IDs.
Organisation IDs	No organization IDs are used.

Netherlands

The Dutch government has set up the public and open website TenderNed in 2010. Its main purpose was to centralize all procurement information in one place and to facilitate and automatize the procurement process. It was envisioned as a goal to increase market competition and to reduce administrative inefficiency, as well as to improve the safety of the online bidding process. The site includes information on both large-scale tenders above the EU thresholds and smaller projects, and companies can channel their electronic bids through the platform when applicable. After the Procurement Act of 2012 came into force, the publicity of tenders through the portal has been mandatory. An executive decree establishes that the website is to be maintained by PIANOo, the specialized procurement body of the Ministry of Economic Affairs, Agriculture and Innovation. TenderNed's publication module has three main obligations: a) to publish tender announcements; b) to provide statistical reporting to the EU Commission and c) to report on procurement affairs to the Dutch national parliament.

An alternative website on tender information in the Netherlands is the Aanbestedingskalendar (ABK) set up in 2004. In contrast to TenderNed, it only contains open information on calls for tenders and has a commercial structure by which several fee

paying services are offered to both interested bidders and buyers. All announcements published in ABK are also published in TenderNed.

Main source assessed	TenderNed: www.tenderned.nl
Relevant links	ABK: www.aanbestedingskalender.nl

Data availability	
Historical data availability	This platform contains tender information starting from 2010.
Coverage of the full tender cycle	The system allows for the follow-up of the tendering process, from the pre-announcement of tenders until the resolution of the bids. No ex-post information on project implementation is published on the website.
Availability of full tender documentation	The Dutch site does not publish any documents regarding the specific contract or agreement between the contracting authority and the bidder.
Fees for information services	Fees are not required for using the TenderNed platform.

Data quality	
Fragmentation of procurement information sources	Only one centralized database on tenders exists in the country, covering all public and semi-public contracting authorities at the national and subnational levels.
Diversity of information templates	The organization of information templates is forthright: there are four types of announcements: pre-information; call for tenders; notice of cancellation, rectification or interruption and notice of tender awarded.
Machine readability of information	All information is machine-readable in formats html and pdf. Additional documents may also have extensions .doc .xlsx or .zip
Pre-defined thematic structure	The thematic information on each tender is highly structured both for small and large tenders and uniform across all different type of

of announcements	notices (call for tenders, award notices, modification notices, etc.). Each tender notice contains information on a set of categories that follows the EU standards set by the TED database.
Search precision	The search engine of the Dutch platform allows for multiple filtering options, including the contracting authority, type of procedure, whether the amount of the tender is above or below EU thresholds, the language of the notice, among others.
Traceability of the tender cycle	The tender cycle can be followed up from pre-information announcements (when available) until the authority announces the winning bid.
Organisation IDs	Each contracting authority has a single ID number.
Other highlights	The use of TenderNed is free both for contracting authorities and companies. In 2012 TenderNed competitors held a complaint vis-à-vis the EU Commission stating that the site received unlawful financing from the Dutch government, as providers of similar services were not funded. In December 2014 the Commission released a decision stating that TenderNed is an extension of the Dutch Procurement Act of 2012 and acts as the special administrative body enforcing procurement legislation. It concluded that following appropriate definitions laid out by TFEU art. 107, the funding of TenderNed does not involve state Aid[i]. [i] EU Commission decision SA.34646: http://ec.europa.eu/competition/state_aid/cases/255396/255396_1614207_95_2.pdf

Norway

In late 2004, the Norwegian government initiated a procurement process for renewal of the existing tender notification services. Until July 1st 2005, public procurement notices in Norway were published in a paper-based daily gazette, but the country's internal drive towards electronic service delivery in the public sector combined with the EU's 2004

procurement directive, pushed the country to introduce doffin.no, the Norwegian public procurement platform, which started functioning in December 2005.

Main source assessed	Database for public procurement: www.doffin.no
Relevant links	Website of the Agency for Public Management and eGovernment (Difi): https://www.difi.no/ Website of the Ministry of Trade, Industry and Fisheries (NFD): https://www.regjeringen.no/en/dep/nfd/id709/
Data availability	
Historical data availability	This platform contains tender information starting from 2003.
Coverage of the full tender cycle	All phases of the tender cycle are covered by the information contained in the website.
Availability of full tender documentation	Administrative documentation and technical specifications can be downloaded from the website.
Fees for information services	The use of the website and all its functionalities is free.
Data quality	
Fragmentation of procurement information sources	Doffin.no is the database for notices of public procurement that are subject to the European Union regulations and also includes national tenders.
Diversity of information templates	There are a total of 6 different announcement types (notice, award, intention, PIN, buyer profile and market survey).

Machine readability of information	All information is machine readable and presented in html format with the possibility of downloading additional pdf documents.
Pre-defined thematic structure of announcements	Announcements are highly structured.
Search precision	Doffin.no makes it easy to find announcements and contract awards through the 11 different filters available to the user.
Traceability of the tender cycle	The tender cycle is traceable since contract award notices mention the corresponding ID of the call for tender.
Organisation IDs	ID of the contracting entity is provided

Poland

In Poland, the public procurement notices are published at the Public Procurement Office's portal. The site only contains the national procurement tenders, European level tenders are only available at the TED portal - hence all tenders above 30000 EUR and below the adequate European threshold are available at the site. Although electronic tendering is also available, it is not widely used yet.

Main source assessed	http://bzp0.portal.uzp.gov.pl
Relevant links	Website of the Public Procurement Office: http://www.uzp.gov.pl Bulk download of public procurement data: ftp://ftp.uzp.gov.pl/bzp/xml
Data availability	

Historical data availability	This platform contains tender information starting from August 2007.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive). However, there are no pre-tender information published.
Availability of full tender documentation	Tender documentation is not available.
Fees for information services	Simple and advanced notice search is free of charge. Documentation is payable in certain cases.
Data quality	
Fragmentation of procurement information sources	One centralized website contains below EU-level procurement tender information.
Diversity of information templates	There are 9 different national announcement types.
Machine readability of information	The information is machine-readable in xml format.
Pre-defined thematic structure of announcements	The announcements are highly structured.
Search precision	There are many (12) search categories.
Traceability of the	There are unique announcement IDs with mandatory referencing.

tender cycle	
Organisation IDs	The downloadable xml files contain the contracting authority's ID.

Portugal
The Portuguese Public Procurement Portal publishes information on all contracts concluded under the Public Contracts Code. It also gives access to the information system that assesses and monitors public works procurement in Portugal: the Observatório das Obras Públicas (Public Works Observatory). The portal fulfils several functions: it centralizes the most important data on public contracts that have been concluded; advertises the launch of calls for tenders and other procurement procedures, the conclusion of contracts, and any sanctions imposed; disseminates technical contents and relevant legislation and serves as a tool for citizens to monitor public spending. The portal was launched on July 30 2008 and is now managed by the Instituto dos Mercados Públicos, do Imobiliário e da Construção, IMPIC (Institute of Public Procurement, Real Estate and Construction, IMPIC)).

Main source assessed	Public contracts online: www.base.gov.pt
Relevant links	Website of the Institute of Public Markets, Real Estate and Construction (IMPI): www.impic.pt Licensed e-tendering platforms: www.acingov.pt, http://www.anogov.com, https://www.compraspublicas.com/, http://www.saphety.com/saphetygov Data portal of the Portuguese government: http://www.dados.gov.pt
Data availability	
Historical data availability	This platform contains tender information starting from 2008.
Coverage of the	Base.gov.pt covers most of the tender cycle, including information

full tender cycle	starting with the call for tenders, modification or cancellations, contract award announcements and some details on contract signature and contract performance.
Availability of full tender documentation	The website does not contain the administrative and technical specificities for the tender, but the physical or electronic location of these documents is usually provided.
Fees for information services	The use of the website is free of charge.
Data quality	
Fragmentation of procurement information sources	Base.gov.pt serves as a centralized public website for all national and EU tenders.
Diversity of information templates	The Portuguese procurement website distinguishes between 5 main types of announcements: tender notice, contract award notices, sanctions, orders and deliberations and price increment notices.
Machine readability of information	All the information provided is machine readable in either html or pdf format. Some basic information regarding the contract award notices and the call for tenders can also be downloaded as xls.
Pre-defined thematic structure of announcements	Announcements are highly structured as they all follow a pre-defined template.
Search precision	The search function in base.gov.pt is particularly user friendly and allows very refined searches. There is a large amount of filters available to delimitate the search of contract awards (15) and active call for tenders (8).
Traceability of the	Traceability of the tender cycle is somewhat complicated: Contract award notices do not reference the ID number of the corresponding

tender cycle	call for tenders. When searching for call for tenders, however, those that have been awarded will provide links to the associated contracts.
Organisation IDs	Both IDs for supplier and contracting entities are provided.

Romania	
The website (e-licitatie.ro) of the Electronic System of Public Procurement is operated by the National Authority for Regulating and Monitoring Public Procurement. It is an electronic system operator regulated under public law. While the e-procurement website's pilot version was launched in 2002, it is working with extended functionality since 2006. Tender notices are available since January 2007. Structured (csv), historical information is available in bulk download.	
Main source assessed	Electronic public purchasing system: http://www.e-licitatie.ro
Relevant links	Public procurement data download portal: http://data.gov.ro/da_DK/dataset/achizitii-publice-2007-2015-contracte
Data availability	
Historical data availability	This platform contains tender information starting from January 2007.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive).
Availability of full tender documentation	Documents are not linked to the announcements.

Fees for information services	Simple and advanced notice search is free of charge. Fee is payable for the documentation in certain cases.
Data quality	
Fragmentation of procurement information sources	One centralized website contains both below and above EU-level procurement tender information.
Diversity of information templates	There are 7 different model announcement types.
Machine readability of information	The information is machine-readable in html format.
Pre-defined thematic structure of announcements	The announcements are highly structured.
Search precision	The announcements can be searched by several (20) criteria.
Traceability of the tender cycle	There are no referencing between announcements, but they do have an ID. Tender specific IDs are not in use either.
Organisation IDs	No organisation IDs are used.

Serbia

The Public Procurement Office (PPO) is set up as an independent governmental agency with the mission of helping to establish sound procurement procedures and practices

ensuring that public funds are spent in an efficient and transparent way. This agency is also responsible for the maintenance of the Public Procurement Portal for the purpose of improving general information provision to procuring entities and bidders and for the collection of statistical and other data on the procedures conducted, contracts concluded and on the efficiency of the public procurement system as a whole.

Main source assessed	http://portal.ujn.gov.rs/Pretraga.aspx?tab=1
Relevant links	Website for the search of older notices published under the old law: http://stariportal.ujn.gov.rs/search.aspx
Data availability	
Historical data availability	This platform contains tender information starting from 2013. Older tenders are published in a different website and date back to 2009.
Coverage of the full tender cycle	The website offers information regarding all phases of the tender cycle.
Availability of full tender documentation	All tender documentation is available on the site.
Fees for information services	The website is free of charges.
Data quality	
Fragmentation of procurement information sources	Tenders after 2013 can be found in one platform. For tenders between 2009 and 2013, a separate website is available.
Diversity of information	There are a total of 20 different announcement types.

templates	
Machine readability of information	The information is machine readable in a semi-structured format (html, pdf).
Pre-defined thematic structure of announcements	The information provided in the website is well structured.
Search precision	The Serbian procurement website offers 13 different fields to refine one's search.
Traceability of the tender cycle	The procurement process can be traced thanks to the unique ID number assigned to each tender.
Organisation IDs	Only contracting authority ID´s are published.

Slovakia	
All published forms related to single procurement are well available within one centralized system with slightly more features and content than TED. Associated documents are published in different part of the same system. Also there is third system containing the entire contract with winners and sums of money paid. The main server - UVO has data since 2009, the others started running in 2011 and 2012.	
Main source assessed	http://www2.uvo.gov.sk/domov
Relevant links	Contracts registry (not only procurement contracts), with paid sums: https://www.crz.gov.sk Documents registry including individual bids and other documents: http://crdvo.uvo.gov.sk (historical, newly merged with uvo.gov.sk)

Data availability	
Historical data availability	This platform contains tender information starting from 2009. Earlier tenders are also available, but only in poorly structured html format.
Coverage of the full tender cycle	The cycle is followed until the details of the contract signature. Also some notices on contract fulfilment are newly available.
Availability of full tender documentation	Administrative documentation and technical specificities are published in the website.
Fees for information services	Information is free for searching announcements and receiving alerts, although fees are payable in some cases to access the full tender documentation.
Data quality	
Fragmentation of procurement information sources	There are several overlapping public procurement platforms in Slovakia.
Diversity of information templates	There is a total of 29 information templates, 16 of which related to calls for tenders, contract award and contract modification announcement types.
Machine readability of information	The information is machine-readable in html, and poorly structured xml formats.
Pre-defined thematic structure of announcements	The announcements are highly structured around thematic headings.
Search precision	There is a total of 15 search categories in the Slovakian platform.

Traceability of the tender cycle	Only announcements have unique IDs, but are well linked together
Organisation IDs	Both supplier and contracting entities have unique IDs.

Slovenia	
The Slovenian central public procurement portal is maintained by the Ministry of Public Administration. It makes available all tender announcements above the national thresholds, and European level tenders are also available. Besides all of the tender related announcements, the portal also published the detailed tender documentations. Considering the e-procurement status, the portal only provides e-notification services, while e-submission is expected to be in service in the new portal E-JN.	
Main source assessed	Public procurement portal: www.enarocanje.si
Relevant links	New procurement portal (E-JN): http://ejn.gov.si/ Register or regulations of local communities: http://www.rpls.si/ Data related to awarded contracts (2013 onwards): www.ejn.gov.si/statist
Data availability	
Historical data availability	This platform contains tender information starting from June 2007.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive).
Availability of full tender	Administrative, technical documentation and questions posed are available.

documentation	
Fees for information services	The use of the website is free of charge.
Data quality	
Fragmentation of procurement information sources	One centralized website contains both below and above EU-level procurement tender information.
Diversity of information templates	There are 7 different national announcement types (plus the standard EU announcement types).
Machine readability of information	The information is machine-readable in html format.
Pre-defined thematic structure of announcements	The announcements are highly structured.
Search precision	There are many (13) search categories.
Traceability of the tender cycle	There are unique announcement IDs with mandatory referencing.
Organisation IDs	Contracting authorities have a specific number assigned.

Spain

Contrataciondelestado.es is the main point of access to information on public sector procurement activities, providing information on calls for tenders and results of all the agencies that compose it.

It also offers multiple services that facilitate electronic trading, acting as a point of communication between government agencies and companies that want to hire them.

The website is under the responsibility of the Directorate General of State Property and the Ministry of Finance and Public Administration, which have delegated its management to the General Office for the Coordination of Electronic Procurement.

Main source assessed	Official public procurement platform: www.contrataciondelestado.es
Relevant links	Public procurement portal of the Ministry of Finance and Public Administration: http://www.minhap.gob.es/es-ES/Servicios/Contratacion/Paginas/default.aspx
Data availability	
Historical data availability	This platform contains tender information starting from 2008.
Coverage of the full tender cycle	With the exception of contract finalization and bidder performance, the website provides data on the full tender cycle.
Availability of full tender documentation	The technical specifications and the administrative documents required are available for download on the website.
Fees for information services	All the functionalities of the website are free of charge.
Data quality	
Fragmentation of procurement information	Contrataciondelestado.es is a centralized website that contains all national and EU-level tenders from public entities both national and local. However, not all autonomous regions have signed

sources	agreements to use the platform, but the Ministry of Finance is working to include all of them in the near future.
Diversity of information templates	There are a total of 11 announcement types including procurement plans, call for tenders, provisional contract award, definitive contract award, contract modification announcement and cancellation, among others.
Machine readability of information	All information provided is machine readable (either as html or pdf).
Pre-defined thematic structure of announcements	All announcements are highly structured and follow a template.
Search precision	The Spanish procurement portal offers a wide array of filters to find the desired announcement. There are a total of 15 filters including types of procedure, type of announcement, estimated value of contract, date of publication and name of the contracting authority.
Traceability of the tender cycle	The whole procurement process is traceable thanks to the unique tender ID that links all stages of the tender cycle.
Organisation IDs	Only ID of supplier is provided.

Switzerland

The site SIMAP is the official procurement platform of Switzerland. It centralizes tender information for the federal government, as well as all 26 cantons and communes. Public authorities can manage their online procurement processes through this platform, and bidders can access and submit tender documents after registering without any charge. SIMAP interacts automatically with the Swiss Commerce Gazette (SHAB), the European procurement platform (TED) and all cantonal gazettes with procurement announcements. The website exists since March 2009.

Main source assessed	https://www.simap.ch
Relevant links	Swiss Commerce Gazette (SHAB): https://www.shab.ch
Data availability	
Historical data availability	This platform contains tender information starting from 2008.
Coverage of the full tender cycle	The tender cycle is followed until contracts are awarded.
Availability of full tender documentation	Extra documents become available after registration, including technical requirements and administrative forms.
Fees for information services	The use of the website is free of charge.
Data quality	
Fragmentation of procurement information sources	SIMAP is the only centralized official procurement source in Switzerland, although part of this information is reproduced in other regional and national sources as well.
Diversity of information templates	A total of five different templates exist (call for tenders, rectification, contract award, selection of participants and cancellation).
Machine readability of information	The information is readable in html format.
Pre-defined	All announcements follow a clear thematic structure for all the

thematic structure of announcements	information in place.
Search precision	SIMAP offers a total of 16 search categories.
Traceability of the tender cycle	Each tender is highly traceable, as both announcements and contracts have unique IDs.
Organisation IDs	No organizational IDs are used.

United Kingdom	
The central repository of public tenders in the UK is Contracts Finder, a portal maintained by the Crown Commercial Service of the Cabinet Office. The new website allowing for an API download option launched only on the 26th February 2015, hence earlier contract can be only found at the archived old public procurement site in a structured, downloadable format (csv or xml). Although the central site contains every contract within the UK, there are regional public procurement sites as well. Furthermore, Scotland, Wales and Northern Ireland have their own public procurement portals as well.	
Main source assessed	https://www.gov.uk/contracts-finder
Relevant links	Archived public procurement tenders: http://data.gov.uk/data/contracts-finder-archive/ Regional public procurement sites: http://www.publiccontractsscotland.gov.uk/ http://www.sell2wales.gov.uk/ https://e-sourcingni.bravosolution.co.uk

Data availability	
Historical data availability	This platform contains tender information starting from January 2011.
Coverage of the full tender cycle	The tender cycle is covered until award announcements (inclusive), but information on modification/cancellation is not available explicitly.
Availability of full tender documentation	Administrative documentation and technical specificities are available either directly from the PP site or via linked websites.
Fees for information services	Simple and advanced search is free of charge, but there a fee is payable for documentation in certain cases.
Data quality	
Fragmentation of procurement information sources	One centralized website contains below EU-level procurement tender information.
Diversity of information templates	One standard, structured notice type is used in all stages of the tender process.
Machine readability of information	The information is machine-readable in xml format.
Pre-defined thematic structure of announcements	The announcements are highly structured. However, they only contain a very limited set of information.
Search precision	There are many (11) search categories.

Traceability of the tender cycle	Only notices have unique IDs, but there is no referencing. However, contract award documents contain all information.
Organisation IDs	No organizational IDs are used.

II. PART II - COMPANY INFORMATION

One of the core objectives of DIGIWHIST is to provide a wide range of tools to improve government accountability in public procurement throughout Europe. In order to achieve this, we aim to collect information that complements public procurement tendering data and incorporates the analysis of procurement actors as well. Additional information on the players of tendering can be very powerful when contextualizing raw facts, as well as providing opportunities for more thorough research on the causes and consequences of public procurement quality.

With this in mind, we first aim to collect complementary information on the registered companies that bid in public procurement. This information will help answer questions related to the competitive stance and the overall functioning of different markets. Whenever possible, DIGIWHIST will link data on companies not only to the winners of tenders, but also to losing bidders.

Public registries allow for building a database which covers four main categories of company data: registry information, financial data, ownership information, and information on directors and managers. Table 16 briefly summarizes the variables belonging to these categories.

Table 16: Type of company data included[19]

Variable Categories	Variables included
Registry data	Company name; Company number (e.g. European VAT number, national statistical number); Company address; Date of incorporation; Legal form; Company Status; Main sector; Size category (small/medium/large); Number of employees; Main production site locations etc.
Financial data	Total revenues/turnover; Operating revenue; Financial revenue; Other revenues; Material costs; Personnel expenses; Total depreciation; R&D expenses; Financial Expenses; Financial P&L; Corporate income tax; Profit after tax; EBITDA; ROA; Capital expenditures; Net total investment; Net Cash; Total tangible assets; Total intangible assets; Total assets; Total liabilities; Total short and long term debt
Ownership information	Number of shareholders; Shareholder related information: Name, Salutation; Type (individual, legal entity etc.); Address; Operating revenue; Total assets; Number of employees; Company taking liability; Direct %; Total %; Also a manager; Starting and closing date; Information source
Directors/managers	Number of directors (current and previous); Name of directors; Unique identifiers; In Worldcompliance database; Position;

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[19] This is an initial list of variables that can change depending on the actual scope of data available. Hence the purpose of this list is to indicate the scope of company data will be in use.

	Appointment and Resignation date; Gender; Date of birth; Nationality; Country; Also a shareholder

Such company data is provided by a number of public bodies across Europe with some allowing free access others only provide information for a fee. In addition, in some cases data is available in a directly downloadable and machine-readable format in other cases data is not downloadable directly or it is in a non-machine readable. These problems are similar to public procurement data limitations discussed above, however, in this domain a great deal of prior work has been done. On the one hand, an open data initiative, Opencorporates[20], has already collected most of the freely and publicly available data amenable for machine processing across Europe. On the other hand, a range of commercial providers have collected the publicly accessible, but hard and/or expensive to process data. By implication, the data screened and later utilized by DIGIWHIST will come from these two sources.

Opencorporates provides primarily registry information for approximately 20 countries. An important advantage of using open data is that it makes data updates sustainable in time, and it can be freely republished. However, even registry information on certain countries is still not available from this source, and the scope of the freely accessible company data typically lacks financial and ownership information. Therefore, DIGIWHIST will also use company data acquired through private data providers (e.g. European Business Register, BvD, Bisnode). Although re-publishing of this data is restricted, indicators derived from the use of public procurement and company data can be published, making public procurement markets more transparent.

Similarly to the data quality issues in case of public procurement data, data availability can vary from country to country. A significant part of information on the initially estimated 26 million companies (estimated based on Eurostat data for the 35 investigated jurisdictions) will not be available – especially financial and ownership data.[21] However, company data quality is expected to get better due to the new EU anti-money laundering law at the EU level (especially ownership information).

Matching of company data to public procurement tenders can be done either by using unique company identifiers where available (e.g. tax code), or by probabilistic matching using company names and addresses.

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[20] Opencorporates (opencorporates.com) collects, processes and provides openly available company information via an API service. However, in many countries, the publicly available information on companies is very limited, and it will not change in the near future, hence DIGIWHIST has to use data from commercial providers as well.
[21] DIGIWHIST will not cover companies participating on the EU public procurement markets but based outside of the investigated 25 jurisdictions. However, there are only a handful of such cases.

Table 17: Primary source of information[22]

Country / Jurisd.	Registry of contracting authorities in procurement sites	Financial data	Ownership information	Directors/managers
Armenia	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Austria	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Belgium	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Bulgaria	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Croatia	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Cyprus	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Czech Rep.	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Denmark	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Estonia	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Finland	Opencorporates	Commercial provider	Commercial provider	Commercial provider
France	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Georgia	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Germany	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Greece	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Hungary	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Iceland	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Ireland	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Italy	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Latvia	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Lithuania	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Luxembourg	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Malta	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Netherlands	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Norway	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Poland	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Portugal	Commercial provider	Commercial provider	Commercial provider	Commercial provider

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[22] Note: this is only plan based on initial inquiries. Some countries – e.g. France and Germany are not available at Opencorporates yet.

Romania	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Serbia	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Slovakia	Commercial provider	Commercial provider	Commercial provider	Commercial provider
Slovenia	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Spain	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Sweden	Opencorporates	Commercial provider	Commercial provider	Commercial provider
Switzerland	Commercial provider	Commercial provider	Commercial provider	Commercial provider
United Kingdom	Opencorporates	Opencorporates	Commercial provider	Commercial provider

III. PART III - PUBLIC SECTOR INFORMATION

1. Overview

As part of our strategy to improve government accountability in public procurement we also map the information available on each of the contracting authorities responsible for issuing tenders in each jurisdiction. The notion of contracting authority follows the definition of Directve 2004/18/EC for tenders falling within EU legislation, and national legislation for tenders not covered by the EU procurement Directives.

For our empirical task, we take into account all contracting authorities listed or recognized as such by each of our cases. These are normally defined as all public authorities or bodies governed by public law conducting public procurement processes. Contracting authorities may also be formed by associations of two or more of these entities[23]. For our purpose, we map data on three sets of items regarding contracting authorities:

- **Comprehensive registries of contracting authorities for each jurisdiction.** These organizational units generally include central administration bodies (such as ministries, departments and depending units); autonomous agencies; regions, provinces or municipalities; state-owned enterprises and publicly-funded organizations. This list is not comprehensive as it greatly depends on how the state is organized in each particular case. As much as possible, we map information on the hierarchical relations of contracting authorities, resulting in a comprehensive organogram of the state in each case.

- **Top public officials**. In order to increase accountability and bring forth precision, we also assess the availability of names of the top public officials in charge of each respective contracting authority. In addition to the managers of contracting authorities, we include members of the national, regional and municipal legislative bodies as much as possible. For each official we also see whether there is a record of the exact date of appointment / coming into office and dismissal.

- **Financial information on contracting authorities**. In addition, we map the extent of budgetary and financial data on each contracting authority. Examples of this are overall annual spending, investments, personnel costs, debt and revenues.

2. Main information sources

Contracting authorities

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[23] For more, see http://www.sigmaweb.org/publications/Public_Procurement_Contracting_Authority_2011.pdf

In order to map sources of information on comprehensive registries of contracting authorities in each jurisdiction, a first necessary step is to evaluate whether national procurement sites provide these lists themselves. We are able to locate lists of contracting authorities for almost half of all national procurement websites. Regardless of whether these lists are available or not, a second complementary strategy is to browse for state organizational maps (organograms) informative of the names and hierarchical order of state units at all jurisdictional levels. Detailed and systematic information on the state structure is present for most cases, although there is a remarkable lack of historical information. For a substantial amount of countries we find this information in official government sites and public administration services portals. For seven jurisdictions there are different open data initiatives able to provide such information. The project Publicbodies.org[24] from the Open Knowledge Foundation Labs offers full lists of state organizations and supplementary details for the European Union, Germany, Greece, Switzerland and the United Kingdom. Also, the Alavateli initiative to facilitate the request of public information[25] collects data on state units in seven European countries. Moreover, two large research initiatives provide very comprehensive and historical information on Ireland ("Mapping the Irish State Database"[26]) and Norway ("NDS Polsys – Data on the Political System"[27]). For the countries that do not provide official state organograms nor are covered by research initiatives it is possible to extract partial information on the state structure from the Political Data Yearbook Interactive recently launched by the European Consortium of Political Science[28]. In addition, a number of past and ongoing research projects have carefully mapped state structures, in some cases for long time periods. The COBRA-CRIPO project (2007-2011) funded by EU COST action IS0601[29] has mapped organizations in 13 countries in our sample for the year 2010. In October 2014, scholars within the SOG-PRO research project funded by the Open Research Area for the Social Sciences have started to collect comprehensive data on the United Kingdom, the Netherlands, France and Germany for a 30-year period[30]. The resulting information from these projects is not openly available, but we have sought collaboration from the scholars involved in order to gather insights on the state of the field and the availability of sources.

As a minimal strategy to collect information on contracting authorities at the central level and the utilities sector, it is possible to obtain partial lists from the annexes of the relevant EU Directives themselves[31].

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[24] http://publicbodies.org/
[25] http://alaveteli.org/deployments/
[26] http://www.isad.ie/units
[27] http://www.nsd.uib.no/polsys/en/civilservice/administrationdatabase.html
[28] http://www.politicaldatayearbook.com/
[29] http://soc.kuleuven.be/io/cost/survey/#02
[30] http://www.uni-potsdam.de/ls-verwaltung/forschung/sog-pro.html
[31] Directive 2004/18/EC: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1437395383581&uri=CELEX:32004L0018;
Directive 2004/17/EC: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1437395383581&uri=CELEX:32004L0017;
2008 amendments: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32008D0963;

Finally, in order to have a clear understanding of the organization of subnational entities (regional, provincial, municipal and county levels) we resort to Eurostat's NUTS classification codes[32], or alternatively, the European Election Database containing equivalent information[33].

Public officials

For information on public officials in charge of contracting authorities we resort to a number of different sources. A first comprehensive and systematic source for most of the countries in our sample is the Political Data Yearbook Interactive previously mentioned. From this source we are able to extract the full list of cabinet members of all EU countries plus Switzerland, Norway and Iceland (31 out of 35 in our sample) since as early as 2005. These data also contain cabinet members' respective dates of appointment and dismissal. For the top officials in units nested under ministries (e.g. secretaries, undersecretaries, departments, etc.) the information is more scattered and of less historical depth. Individual government sites are a first relevant source of information for complete lists of authorities in the central administration. The websites Rulers.org as well as CIA World Leaders also provide relevant data on public officials at the central and subnational levels. In some cases Wikipedia also has comprehensive lists of lower-level authorities in chronologic order, which can result very resourceful for our purpose.

For the particular case of Norway, the previously mentioned NDS database also offers names of lower-level unit leaders in the central administration. For the case of the European Commission there is a comprehensive search engine for all agency leaders with their appointment dates.

In order to find historical data on central administration appointments, a more costly but thorough approach is to browse appointment statements within the Official Gazette of each country, a strategy that will be considered in cases where centralized databases do not exist or lack the necessary quality.

For autonomous agencies, a first source is the list of Independent Regulatory Agency (IRAs) governors collected and published by Hanretty and Koop (2013), as well as other informative databases collected and made openly available by researchers[34].

For subnational authorities, three partial but of high territorial and historical coverage sources are Citymayors.com, Wikipedia and Rulers.org. In addition, individual websites of municipal and regional associations in each country usually publish data on mayors and city councillors, often along with their dates of entry and exit from office.

2014 amendments, public sector: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0024&from=EN; 2014 amendments, utilities: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1437394652607&uri=CELEX:32014L0025.

[32] http://ec.europa.eu/eurostat/web/nuts/overview

[33] http://www.nsd.uib.no/european_election_database/

[34] A new edition of Regulatory Policy Outlook by the OECD is expected for mid-2015. This report will contain data on independent agencies in OECD countries which will be monitored for the present project.

In order to collect information on members of national parliaments we resort to the national websites of each country. These sites contain comprehensive information in all 35 cases, and many times also historical information on the chamber(s) composition.

Budget information

The final item to be assessed in terms of public sector data is budget information on each contracting authority. The availability of budget information varies greatly by country and jurisdictional level. In addition, budget reports published in national and subnational websites are organized in different manners. For contracting authorities at the central administrative level, one particular question in the Open Budget Survey last published for the year 2012[35] suggests that most countries in our sample have budget information disaggregated at the organizational unit level. For each country assessed, the International Budget Partnership in charge of the Open Budget Survey provides the references used for answering each of the survey questions. This way we are able to locate the main sources for budgeting data disaggregated at the department/ministry level for the relevant countries. We find such information for about half of the countries, although in most cases the precise location of the data had to be updated. For the countries that are not included in the Open Budget Survey sample we conduct a search in the official government sites providing budget information, as well as a number of alternative sources. The Global Open Data Survey is also a solid guideline to map government data worldwide. Its evidence suggests, however, that for government spending in particular there is a severe lack of online availability of information for most European countries[36].

In order to find subnational budget information, we search in the following sources: official websites from treasury and finance ministries with reports or links to regional and municipal accounts; regional or municipal government websites; associations of regions, municipalities and counties or communes; statistical offices and yearbooks and NGOs (for a complete list of sources see Appendix B). Other general sources of spending information both at the national and subnational levels are civil society or international organizations' initiatives to encourage public accountability on spending decisions, such as OpenSpending.org and Offenerhaushalt.de from the Open Knowledge Foundation, or the Open Budgets portal from the BOOST initiative of the World Bank, which offers information on Armenia and Poland.

Whenever additional contextual data are needed on socio-economic indicators for regions and municipalities, these can be obtained for OECD countries (24 out of 35 in our sample) in the OECD Regional and Metropolitan database[37].

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[35] http://survey.internationalbudget.org/. Question 1 asks: "Does the Executive's Budget Proposal or any supporting budget documentation present expenditures for the budget year that are classified by administrative unit (that is, by ministry, department, or agency)?" A new wave of the survey with information for 2014 is expected for August 2015.

[36] http://index.okfn.org/place/

[37] http://www.oecd.org/gov/regional-policy/regionalstatisticsandindicators.htm

3. Data availability

Below, a visual overview of the availability of open data sources for each specific category in place by jurisdiction:

Table 18: Overview of public sector data availability

Country / Jurisd.	Contracting authorities		Public officials				Budget information	
	Registry of contracting authorities in procurement sites	Alternative sources for contracting authorities	Central Admin	Autonomous bodies	Subnat. authorities	MPs	Central Admin	Subnat. Admin
Armenia								
Austria								
Belgium								
Bulgaria								
Croatia								
Cyprus								
Czech Rep.								
Denmark								
EC					N/A			N/A
Estonia								
Finland								
France								
Georgia								
Germany								
Greece								
Hungary								
Iceland								
Ireland								
Italy								
Latvia								
Lithuania								
Luxembourg								
Malta								
Netherlands								
Norway								
Poland								
Portugal								
Romania								
Serbia								
Slovakia								
Slovenia								

Country								
Spain								
Sweden								
Switzerland								
United Kingdom								

Blank=Unavailable
Light Blue=Partial
Dark Blue=Comprehensive
N/A=Not Applicable

APPENDIX A: PUBLIC PROCUREMENT

The main sources assessed for our mapping on procurement data quality and availability are the following:

Table 19: Main sources assessed for public procurement data quality and availability mapping

Austria	https://www.auftrag.at/Default.aspx
Armenia	http://gnumner.am/en/home.html
Belgium	https://enot.publicprocurement.be/enot-war/preSearchNotice.do
Bulgaria	http://rop3-app1.aop.bg:7778/portal/page?_pageid=93,1&_dad=portal&_schema=PORTAL
Croatia	https://eojn.nn.hr/
Cyprus	https://www.eprocurement.gov.cy/ceproc/prepareAdvancedSearch.do
Czech Rep.	http://www.vestnikverejnychzakazek.cz
Denmark	https://www.udbud.dk/
EC	http://ted.europa.eu/
Estonia	https://riigihanked.riik.ee/lr1/web/guest/index
Finland	http://www.hankintailmoitukset.fi/fi/
France	http://www.boamp.fr/
Georgia	https://tenders.procurement.gov.ge/public/?lang=en
Germany	http://www.bund.de/Content/DE/Home/homepage_node.html
Greece	http://www.eprocurement.gov.gr/webcenter/faces/oracle/webcenter/page/scopedMD/sd0cb90ef_26cf_4703_99d5_1561ceff660f/Page119.jspx?_afrLoop=1065434288387958#%40%3F_afrLoop%3D1065434288387958%26_adf.ctrl-state%3Dg07cxbsyw_4
Hungary	http://www.kozbeszerzes.hu/adatbazis/keres/hirdetmeny/
Iceland	http://www.rikiskaup.is/
Ireland	https://irl.eu-supply.com/ctm/supplier/publictenders
Italy	http://portaletrasparenza.avcp.it/microstrategy/html/index.htm
Latvia	http://www.iub.gov.lv/iubsearch/
Lithuania	http://cvpp.lt/index.php?option=com_vpt&Itemid=87
Luxembourg	https://pmp.b2g.etat.lu/index.php5?page=entreprise.EntrepriseAdvancedSearch&AllCons&EnCours
Malta	http://contracts.gov.mt/en/Tenders/Pages/Tenders.aspx
Netherlands	https://www.tenderned.nl/tenderned-web/aankondiging/overzicht/aankondigingenplatform
Norway	https://www.doffin.no/en
Poland	http://bzp0.portal.uzp.gov.pl/index.php?ogloszenie=browser
Portugal	http://www.base.gov.pt/Base/pt/Homepage

Romania	http://www.e-licitatie.ro/Public/Common/Content.aspx?f=PublicHomePage
Serbia	http://portal.ujn.gov.rs/Pretraga.aspx?tab=1
Slovakia	http://www.uvo.gov.sk/evestnik
Slovenia	http://www.ulinfotok.si/index.php/javna-narocila
Spain	https://contrataciondelestado.es/wps/portal/!ut/p/b1/vZNdb8IgFIZ_y36A4QAF6mVtaz9saVdKtb1p3HTG1o9duC3668cWE7MlczdzcHXIA8-bA6AG1QPMuRCCAAE0Q81u_rpezQ_r_W6--agb3lp-5rrjkEDAtAOk1GWVFmOAgBigNgD8MBz4uh_8lAIJRWD71AXIGZqienQ-5Ar1S4gpaj4RRl2riqucqygAiMKxl2jMDMHPwJWcMtxvl0gtd6g2qGidyr93oiEFWxUmTcwYgIwwgIVKNAOrVd3xOTr1p6I73ZO0UyfpaQplJcteFFL3WB1iWXoa404T2TWp9M1C90jkwssXVaFHjvuybGP4LoQk40CKSV4wZZtusFsLs8nQBjKiCZE2xWDdXGiL2DXCwooUN1WMbyS8vKgkMXdIWZj5iuCAk_9uqfhzYYya1Wb_YP7o1EXbZpMcB_2Tg-3LfHPu3gHnRDMR/dl4/d5/L2dBISEvZ0FBIS9nQSEh/
Sweden	https://www.avropa.se/Upphandlingar/
Switzerland	https://www.simap.ch/shabforms/COMMON/application/applicationGrid.jsp?template=1&view=1&page=/MULTILANGUAGE/simap/content/start.jsp&language=EN
United Kingdom	https://www.contractsfinder.service.gov.uk/Search

Table 20: Data availability in published tender documents across countries

	Variable names	Austria	Belgium	Bulgaria	Cyprus	Croatia	Czech Rep.	Germany	Denmark	Estonia	Spain	Finland	France	Greece	Hungary	Ireland	Italy	Lithuania	Luxembourg	Latvia	Malta*	Netherlands	Poland	Portugal	Romania	Sweden	Slovenia	Slovakia	United Kingdom	Norway	Switzerland	Iceland	Serbia	Georgia	Armenia	EC
Contract related items	Title	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X			X	X
	Procedure type	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	X	X
	Negotiated procedure reason	X	N/A				X	X	X						X				X			X		X	N/A	N/A	X									X
	Description	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	
	Type (service/goods/construction)	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X		X	X		X	X		X	X		X		X	X
	Size (above/below EU threshold)	X		X	X	X	X	X	X	X	X		X		X						X		X	X	X	N/A	X	X	X							X
	Location of performance	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X		X	X	X	X	X	X		X		X
	Variants accepted	X	X	X		X				X	X	X	X		X			X	X			X	X	X	X		X	X		X	X					X
	Deposits	X	X	X	X			X				X		X	X			X				X	X	X	X	X	X			X	X					X
	Electronic auction used	X	X	X	X	X	X	X			X	X		X	X			X	X			X	X	X	X		X	X		X			X	X		X
	Framework agreement	X	X	X	X		X	X			X	X		X	X			X	X			X	X	X	X	X	X	X		X			X			X
	Award criteria	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	X	X
	Main object/CPV code	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		
	Announcement ID	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X			X		X
	Contract ID	X	X	X	X		X			X	X	X	X	X		X	X	X	X	X	X	X						X					X	X	X	X
	Is it a DPS (Dynamic Purchasing System)	X	X	X			X	X					X		X			X	X				X	X	X	N/A	X	X					X			X
Dates	Call for tender publication date	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
	Bid deadline date	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Documentation deadline date	X	X	X	X		X			X	X	X	X	X	X			X	X	X	X	X		X	X		X			X	X	X			X	X
	Contract award notice publication date	X	X	X	X		X			X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X				X
	Date of last update								X																								X	X		
	Estimated starting date	X	X		X		X	X	X		X			X	X			X		X		X			X	X		X	X	X	X	X		X	X	X
	Estimated completion date	X	X	X	X		X	X	X	X				X	X			X	X	X		X		X	X		X	X	X	X	X	X		X	X	X
	Award decision date	X	X	X	X		X			X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X		X			X		X	X
	Completion date			X											X																					
	Cancellation date	X	X	N/A	X		X		X			X		X	X			X		X		X					X	X			X			X		X

107

Table 20: Data availability in published tender documents across countries (part II)

		Austria	Belgium	Bulgaria	Cyprus	Croatia	Czech Rep.	Germany	Denmark	Estonia	Spain	Finland	France	Greece	Hungary	Ireland	Italy	Lithuania	Luxembourg	Latvia	Malta*	Netherlands	Poland	Portugal	Romania	Sweden	Slovenia	Slovakia	United Kingdom	Norway	Switzerland	Iceland	Serbia	Georgia	Armenia	EC
Require-ments	Personal requirements	X	X	X	X		X	X		X	X		X	X	X			X	X	X		X	X	X	X		X	X		X					X	X
	Economic requirements	X	X	X	X		X	X		X	X		X	X	X			X	X	X		X	X	X	X		X	X		X					X	X
	Technical requirement	X	X	X	X		X	X		X	X		X	X	X			X	X	X	X	X	X	X	X		X	X		X					X	X
Documenta-tion	Is the documentation payable	X		X			X	X		X				X	X			X		X	X	X			X	X			X		X		X		X	X	X
	Documentation price	X		X			X	X		X				X	X			X			X	X			X	X			X		X				X	X	X
	Documentation location	X	X	X	X			X	X	X	X	X			X	X		X	X	X	X	X	X	X	X				X	X	X	X	X		X	X
	Documentation is directly linked	X			X			X	X	X	X			X			X			X		X	X						X		X	X	X			
Funding	Covered by GPA (Government Procurement Agreement)	X	X	X			X	X	X	X	X			X	X				X	X	X		X	X N/A			X		X		X				X		X
	Name of funding source					X							X											X	X			X			X					
	Funded by the EU	X	X	X	X		X	X		X			X	X	X			X	X	X	X	X	X	X	X		X	X		X						X
	Funding programme	X		X	X		X	X		X				X	X			X		X			X		X	X										X
	Amount contributed from each source																																			
	Percentage contributed from each source																																			
Buyer information	Awarded by a group of buyers																																			
	Purchased by a central purchasing authority					X										X					X			N/A		N/A										
	Buyer name	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
	Purchased for other authority	X	X	X	X			X	X	X		X	X		X			X		X	X	X			X		X			X	X	X				X
	Main activity of the buyer	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X	X		X				X		X
	Type of the buyer	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X		X				X	X	X
	Public buyer	X	X	X	X	X		X	X	X	X	X			X	X		X	X	X			X	X		X		X					X			
	Subsidized buyer																																			
	Sectoral buyer																																			
	Buyer's ID	X	X	X			X	X		X	X	X				X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X		
	Buyer's address	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X

108

Table 20: Data availability in published tender documents across countries (part III)

Category	Variable names	Austria	Belgium	Bulgaria	Cyprus	Croatia	Czech Rep.	Germany	Denmark	Estonia	Spain	Finland	France	Greece	Hungary	Ireland	Italy	Lithuania	Luxembourg	Latvia	Malta*	Netherlands	Poland	Portugal	Romania	Sweden	Slovenia	Slovakia	United Kingdom	Norway	Switzerland	Iceland	Serbia	Georgia	Armenia	EC
Bidder/Winner information	Winner's name	X	X	X	X		X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X
	Winner's address	X	X	X	X		X	X		X	X		X	X	X			X	X	X		X	X	X	X		X	X	X	X	X		X	X		X
	Winner's ID			X						X	X					X	X	X			X			X			X	X						X	X	
	Other bidder's name			X											X							X											X	X		
	Other bidder's address														X																			X		
	Other bidder's ID			X																														X		
	Information on bidder limitation	X		X			X	X		X			X		X			X	X	X		X	X		X		N/A									X
	Estimated number of winners in case of a framework agreement			X									X		X			X		X					X											X
	Consortium																					X					N/A									N/A
	Is the tender subcontracted?		X	X			X			X			X		X			X	X	X		X		X	X		X	X	X				X			X
	Subcontractor's name		N/A																			X	N/A													
	Subcontractor's share	X	N/A				X			X			X		X			X		X		X					X	X								X
	Bidder related documents																					X														
Bids	Number of bids received	X	X	X	X		X			X	X		X		X			X	X	X	X	X	X	X	X		X	N/A	X				X	X	X	X
	Number of valid bids received												X															X								
	Number of bids received electronically		X							X					X			X				X					X						X	X		X
	Bid disqualification																						X													
	Reason for bid disqualification																																			
Prices	Estimated contract value	X	X	X	X		X	X	X	X	X				X	X		X	X	X		X	X	X	X		X	X	X	X			X	X	X	X
	Final contract value		X	X	X		X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X				X		X
	Bid values														X							X											X	X		
	Total amount paid at contract completion			X											X												X								N/A	
	Highest bid value		X							X			X		X			X		X		X											X	X	X	X
	Lowest bid value		X							X			X		X			X		X		X											X	X	X	X

Table 20: Data availability in published tender documents across countries (part IV)

Category	Variable names	Austria	Belgium	Bulgaria	Cyprus	Croatia	Czech Rep.	Germany	Denmark	Estonia	Spain	Finland	France	Greece	Hungary	Ireland	Italy	Lithuania	Luxembourg	Latvia	Malta*	Netherlands	Poland	Portugal	Romania	Sweden	Slovenia	Slovakia	United Kingdom	Norway	Switzerland	Iceland	Serbia	Georgia	Armenia	EC
Cancellation/ correction	Is the tender cancelled	X	X	X			X			X	X	X	X	X	X		X	X		X	X	X	N/A	X			X	X		X	X	X	X	X		X
	Cancellation reason	X		N/A	X		X		X		X			X	X			X			X		N/A		N/A		X	X			X	X				
	Any correction issued	X	X	X	X					X	X	X	X	X	X		X	X		X	X	X	X	X	X		X			X	X		X	N/A		X
Other information	Administrator														X												N/A									X
	Supervisor																										N/A									
	Specifications Creator														X												N/A									
	Court proceedings			X									X		X									X												
	Court interventions			X											X				X					X												
	Appeal body	X	X	X	X		X	X	X	X	X		X	X	X			X	X	X	X	X		X	X					X		X			X	X
	Mediation body name		X											X	X			X		X		X													X	X

X= information is available;

N/A=information availability could not be confirmed

Blank=information is not available

APPENDIX B: PUBLIC SECTOR

This appendix provides a preliminary list of sources containing the public sector information outlined in Part III of the report.

Austria	
· Contracting authorities	
Registry of contracting authorities in procurement sites	List of contracting authorities established by the Court of Auditors of Austria: http://www.rechnungshof.gv.at/fileadmin/downloads/_jahre/2015/beratung/Pruefobjekte/Rechtstraeger_Pruefungsobligo_Stand_01_01_15.pdf
Alternative sources for contracting authorities / state units	Reference date: July 2015 Federal units classified by authority type: https://www.help.gv.at/Portal.Node/hlpd/public/content/146/Seite.1460000.html List of partially-funded entities: https://www.bmf.gv.at/budget/das-budget/Ausgliederungen_und_Beteiligungen_des_Bundes_%28April_2014%29.pdf?4jwmog Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/austria/administrative_divisions.html
· Public Officials	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)[38].
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Nationalrat: http://www.parlament.gv.at/WWER/NR/ Bundesrat: http://www.parlament.gv.at/WWER/BR/
· Public Budgets	
Central administration	For reference year 2014 https://service.bmf.gv.at/BUDGET/Budgets/2014_2015/bfg2014/teilhefte/_start_teilhefte.htm
Subnational administration	Links to regional budget data (Länder): https://www.bmf.gv.at/budget/finanzbeziehungen-zu-laendern-und-gemeinden/rechnungsabschluesse-und-voranschlaege-der-laender.html Burgenland: http://www.burgenland.at/land-politik-verwaltung/land/statistik-burgenland/wirtschaft/oeffentliche-finanzen-steuern/ Kärntner: http://www.ktn.gv.at/143505_DE-Organisation-Budget Niederösterreich: http://www.noe.gv.at/Land-Zukunft/Budget-des-Landes-NOe.html Oberösterreich: http://www.land-oberoesterreich.gv.at/12162.htm Salzburg: http://www.salzburg.gv.at/themen/se/salzburg/landesbudgets.htm Steiermarkt: http://www.verwaltung.steiermark.at/cms/ziel/88813983/DE/ http://www.verwaltung.steiermark.at/cms/ziel/74837870/DE/ Tirol: https://www.tirol.gv.at/statistik-budget/landesbudget/ Vorarlberg: http://www.vorarlberg.at/vorarlberg/finanzen_abgaben/finanzen/landesbudget/start.htm Wien: http://www.wien.gv.at/finanzen/budget/ Financial information for municipalities (Gemeinde):

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[38] Hanretty, C., & Koop, C. (2013). Shall the law set them free? The formal and actual independence of regulatory agencies. *Regulation & Governance*, *7*(2), 195-214.

	http://gemeindebund.at//gemeindefinanzen http://gemeindebund.at/images/uploads/downloads/2014/Publikationen/Gemeindefinanzbericht/Entwurf_Gemeindefinanzbericht_2014.pdf

Belgium

· Contracting authorities	
Registry of contracting authorities in procurement sites	https://enot.publicprocurement.be/enot-war/organisationTree.do?popupInvocation=true&multiple=true&holderId=organisationIds&holderHiddenId=undefined
Alternative sources for contracting authorities / state units	Ministries: Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/belgium/administrative_divisions.html
· Public Officials	
Central administration	Reference date July 2015: http://www.belgium.be/fr/binaries/composition_organes_strategiques_gouvernement_federal_tcm116-40482.pdf For Ministries (historical) Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	http://www.citymayors.com/mayors/belgian-mayors.html https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_Belgium Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Representatives: http://www.lachambre.be/kvvcr/showpage.cfm?section=/depute&language=fr&cfm=/site/wwwcfm/depute/cvlist.cfm Senat: http://www.senate.be/www/?MIval=/index_senate&MENUID=11200&LANG=fr
· Public Budgets	
Central administration	Federal budget website: http://www.budgetfederal.be/FR/Pages/budgetOnline.aspx
Subnational administration	Budget overview for regions: http://www.budgetfederal.be/FR/figures/Pages/databank.aspx

Bulgaria

· Contracting authorities	
Registry of contracting authorities in procurement sites	http://rop3-app1.aop.bg:7778/portal/page?_pageid=173,1082254&_dad=portal&_schema=PORTAL
Alternative sources for contracting authorities / state units	Ministries: Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Subnational units (NUTS 1-3 levels) http://www.nsd.uib.no/european_election_database/country/bulgaria/administrative_divisions.html
· Public Officials	
Central administration	Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Rulers.org

	Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	Mayors in Bulgaria, reference June 2015: http://projects-namrb.org/index.php/en/local-government/contacts-and-web-sites-of-municipalities Mayors in Bulgaria (4 cities), historical: https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Mayors_of_places_in_Bulgaria Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://parliament.bg/en/MP
· Public Budgets	
Central administration	http://www.minfin.bg/
Subnational administration	

Croatia	
· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	Central administration bodies (Eng): https://vlada.gov.hr/ministries-and-government-bodies/16139 Central administration bodies (Croatian): https://gov.hr/ministarstva-i-drzavna-tijela/58#ministarstva FOIA portals: http://imamopravoznati.org/body/list/all Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/croatia/administrative_divisions.html
· Public Officials	
Central administration	Reference date July 2015: https://vlada.gov.hr/members-of-the-government/14969 (Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	For municipalities, reference date July 2015: http://hrvzz.hr/adresar/ Historical: https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Mayors_of_places_in_Croatia Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Representatives: http://www.sabor.hr/Default.aspx?sec=4608
· Public Budgets	
Central administration	http://www.mfin.hr/hr/drzavni-proracun-2015-godina
Subnational administration	http://www.mfin.hr/hr/lokalni-proracuni

Cyprus	
· Contracting authorities	
Registry of contracting	

authorities in procurement sites	
Alternative sources for contracting authorities / state units	Ministries: Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Subnational units (NUTS 1-3 levels) http://www.nsd.uib.no/european_election_database/country/cyprus/administrative_divisions.html List of municipalities: http://www.ucm.org.cy/Account_List.aspx
· Public Officials	
Central administration	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	Reference date July 2015: http://www.ucm.org.cy/Account_List.aspx Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	House of Representatives: http://www.parliament.cy/easyconsole.cfm/id/186
· Public Budgets	
Central administration	
Subnational administration	

Czech Republic

· Contracting authorities	
Registry of contracting authorities in procurement sites	http://www.vestnikverejnychzakazek.cz/en/Searching/ShowPublicPublisherProfiles?statusId=0&test=False&size=20&orderBy=CoCoCode-asc
Alternative sources for contracting authorities / state units	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/czech_republic/administrative_divisions.html From FOIA portals: http://www.infoprovsechny.cz/body/list/all
· Public Officials	
Central administration	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	http://www.citymayors.com/mayors/czech-mayors.html https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Chamber of Deputies: http://www.psp.cz/en/sqw/snem.sqw?P1=A&P2=%c1 Senate: http://www.senat.cz/senatori/index.php?ke_dni=16.6.2015&O=10&lng=en&par_2=2
· Public Budgets	
Central administration	http://www.psp.cz/sqw/text/orig2.sqw?idd=74846 http://monitor.statnipokladna.cz/en/2014/statni-rozpocet/kapitola/329#tabId
Subnational administration	http://monitor.statnipokladna.cz/en/2014/zdrojova-data/csv

Denmark

· Contracting authorities	

Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	**(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/** **Subnational units (NUTS 1-3 levels):** **http://www.nsd.uib.no/european_election_database/country/denmark/administrative_divisions.html**
· Public Officials	
Central administration	**(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/** **Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**
Autonomous bodies	**Hanretty and Koop (2013)**
Subnational authorities	**https://en.wikipedia.org/wiki/Lists_of_mayors_by_country** **Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**
Members of Parliament	**http://www.thedanishparliament.dk/Members.aspx**
· Public Budgets	
Central administration	**2015 Budget: http://www.fm.dk/publikationer/2015/finanslov-2015** **2014 Budget: http://www.fm.dk/publikationer/2014/finanslov-for-finansaaret-2014**
Subnational administration	

European Commission	
· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	**http://publicbodies.org/** **http://europa.eu/whoiswho/public/index.cfm?lang=en**
· Public Officials	
Central administration	http://europa.eu/whoiswho/public/index.cfm?lang=en
Autonomous bodies	**http://europa.eu/whoiswho/public/index.cfm?lang=en**
Subnational authorities	**Not applicable**
Members of Parliament	**Reference date July 2015: http://www.europarl.europa.eu/meps/en/full-list.html;jsessionid=32F28B511DA9A08A14CB4F487CB2F6F0.node2**) **Historical:** **https://en.wikipedia.org/wiki/List_of_members_of_the_European_Parliament,_2009%E2%80%931 4**
· Public Budgets	
Central administration	**http://community.openspending.org/research/eu/** **http://europa.eu/about-eu/basic-information/money/expenditure/index_en.htm**
Subnational administration	**Not applicable**

115

Estonia

· Contracting authorities	
Registry of contracting authorities in procurement sites	https://riigihanked.riik.ee/register/HankedOtsing.tableColumnComponent.linkColumn.sdirect?container=contrib%3ASimpleTableColumnPage&sp=AHankedOtsing%2Cresult.tableview&sp=Shankija
Alternative sources for contracting authorities / state units	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/estonia/administrative_divisions.html
· Public Officials	
Central administration	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.riigikogu.ee/en/parliament-of-estonia/composition/members-riigikogu/
· Public Budgets	
Central administration	For reference year 2015: http://www.fin.ee/riigieelarve-2015 http://www.fin.ee/doc.php?111126
Subnational administration	http://www.fin.ee/local-government-finances http://riigiraha.fin.ee/geoqlik/proxy/QvAJAXZfc/opendoc.htm?document=Riigiraha.qvw&host=local&anonymous=true/

Finland

· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/finland/administrative_divisions.html
· Public Officials	
Central administration	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Mayors_of_places_in_Finland Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	https://www.eduskunta.fi/SV/kansanedustajat/nykyiset_kansanedustajat/Sidor/default.aspx
· Public Budgets	

Central administration	
Subnational administration	Openspending.org

France

· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/france/administrative_divisions.html
· Public Officials	
Central administration	Current: http://www.gouvernement.fr/composition-du-gouvernement (Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	http://www.citymayors.com/mayors/french-mayors.html https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_France Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	National Assembly: http://www.assemblee-nationale.fr/qui/xml/liste_alpha.asp?legislature=14 Senate: http://www.senat.fr/senateurs/senatl.html
· Public Budgets	
Central administration	http://www.assemblee-nationale.fr/
Subnational administration	http://www.insee.fr/fr/themes/theme.asp?theme=8&sous_theme=3&nivgeo=99&type=2&produit=OK

Georgia

· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	List of municipalities: http://nala.ge/munic/
· Public Officials	
Central administration	Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.parliament.ge/en/parlamentarebi/deputatebis-sia

·	Public Budgets
Central administration	http://mof.ge/en/4575
Subnational administration	http://mof.ge/en/4575

Germany

·	Contracting authorities
Registry of contracting authorities in procurement sites	http://www.bund.de/Content/DE/Behoerden/Suche/Formular.html?nn=4641496&resultsPerPage=100
Alternative sources for contracting authorities / state units	http://publicbodies.org/ Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/germany/administrative_divisions.html

·	Public Officials
Central administration	Current: http://www.protokoll-inland.de/PI/DE/RangTitulierung/AmtlicheReihenfolgen/Bundesminister/bundesminister_node.html Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_Germany http://www.citymayors.com/mayors/german-mayors.html Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Bundestag: https://www.bundestag.de/htdocs_e/bundestag/members18/complete Bundesrat: http://www.bundesrat.de/DE/bundesrat/mitglieder/mitglieder-node.html

·	Public Budgets
Central administration	Federal budgets 2012-2015: http://www.bundeshaushalt-info.de/startseite/# Federal Budgets from 2006 onwards: http://www.bundesfinanzministerium.de/Web/DE/Themen/Oeffentliche_Finanzen/Bundeshaushalt/Haushalts_und_Finanzplaene_ab_2006/haushalts_finanzplaene_2006.html
Subnational administration	Länder: http://www.bundesfinanzministerium.de/Web/DE/Themen/Oeffentliche_Finanzen/Foederale_Finanzbeziehungen/Laenderhaushalte/laenderhaushalte.html Communes: http://www.bundesfinanzministerium.de/Web/DE/Themen/Oeffentliche_Finanzen/Foederale_Finanzbeziehungen/Kommunalfinanzen/kommunalfinanzen.html offenerhaushalt.de Openspending.org

Greece

·	Contracting authorities
Registry of contracting authorities in procurement sites	
Alternative	http://publicbodies.org/

sources for contracting authorities / state units	Subnational units (NUTS 1-3 levels): http://www.nsd.uib.no/european_election_database/country/greece/administrative_divisions.html
· Public Officials	
Central administration	(Historical) Political Data Yearbook Interactive http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.hellenicparliament.gr/en/Vouleftes/Diatelesantes-Vouleftes-Apo-Ti-Metapolitefsi-Os-Simera/
· Public Budgets	
Central administration	http://www.publicspending.gr/
Subnational administration	

Hungary

· Contracting authorities	
Registry of contracting authorities in procurement sites	http://kozbeszerzes.hu/adatbazis/keres/ajanlatkero/
Alternative sources for contracting authorities / state units	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Nuts (1-3): http://www.nsd.uib.no/european_election_database/country/hungary/administrative_divisions.html From FOIA portals: http://kimittud.atlatszo.hu/
· Public Officials	
Central administration	Political Data Yearbook Interactive (historical): http://www.politicaldatayearbook.com/ Treasury: http://www.allamkincstar.gov.hu/hu/ext/torzskonyv Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Treasury: http://www.allamkincstar.gov.hu/hu/ext/torzskonyv
Subnational authorities	Treasury: http://www.allamkincstar.gov.hu/hu/ext/torzskonyv https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_Hungary Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.parlament.hu/en/web/house-of-the-national-assembly/list-of-mps
· Public Budgets	
Central administration	Treasury data for the central administration: http://www.allamkincstar.gov.hu/hu/ext/k11/2/76962
Subnational administration	Treasury data for the subnational administration: http://www.allamkincstar.gov.hu/hu/ext/k11/2/76964

Iceland

· Contracting authorities	
Registry of contracting authorities in procurement sites	

Alternative sources for contracting authorities / state units	Political Data Yearbook Interactive (historical): http://www.politicaldatayearbook.com/ List of municipalities: https://en.wikipedia.org/wiki/Category:Municipalities_of_Iceland
· Public Officials	
Central administration	Political Data Yearbook Interactive (historical): http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	http://www.samband.is/sveitarfelogin/ https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Mayors_of_places_in_Iceland Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.althingi.is/altext/cv/en/
· Public Budgets	
Central administration	
Subnational administration	

Ireland	
· Contracting authorities	
Registry of contracting authorities in procurement sites	https://irl.eu-supply.com/ctm/Company/Search/Index/1
Alternative sources for contracting authorities / state units	Current: http://www.gov.ie/sites/ Historical: http://www.isad.ie/units http://www.nsd.uib.no/european_election_database/country/ireland/administrative_divisions.html https://en.wikipedia.org/wiki/List_of_cities,_boroughs_and_towns_in_the_Republic_of_Ireland
· Public Officials	
Central administration	Current: http://www.taoiseach.gov.ie/eng/Taoiseach_and_Government/List_of_Ministers_Ministers_of_State/ Historical, Political Data Yearbook Interactive (historical): http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	Council members (current): http://www.donegalcoco.ie/yourcouncil/yourcouncillors/ Historical: https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Mayors_of_places_in_the_Republic_of_Ireland Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.oireachtas.ie/members-hist/default.asp
· Public Budgets	
Central administration	Public Expenditure Databank: http://databank.per.gov.ie/Expenditure.aspx http://www.per.gov.ie/the-comprehensive-expenditure-report-2015-2017-2/ http://budget.gov.ie/Budgets/2015/2015.aspx
Subnational administration	http://www.environ.ie/en/

Italy

· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	http://www.indicepa.gov.it/ricerca/risultati-alfabeto.php?lettera=A SIOPE codes for Italian entities: http://www.rgs.mef.gov.it/VERSIONE-I/e-GOVERNME1/SIOPE/Codici-deg/ http://www.nsd.uib.no/european_election_database/country/italy/administrative_divisions.html From FOIA portals: https://chiedi.dirittodisapere.it/body/list/all
· **Public Officials**	
Central administration	Historical, Political Data Yearbook Interactive (historical): http://www.politicaldatayearbook.com/ http://www.indicepa.gov.it/documentale/n-opendata.php Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	http://www.citymayors.com/mayors/italian-mayors.html https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Representatives: http://www.camera.it/leg17/28 Senate: http://www.senato.it/leg/17/BGT/Schede/Attsen/Sena.html
· **Public Budgets**	
Central administration	http://www.rgs.mef.gov.it/
Subnational administration	http://www.mef.gov.it/ministero/commissioni/copaff/

Latvia	
· **Contracting authorities**	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	Historical, Political Data Yearbook Interactive (historical): http://www.politicaldatayearbook.com/ http://www.nsd.uib.no/european_election_database/country/latvia/administrative_divisions.html List of municipalities: http://www.lps.lv/Pasvaldibas/
· **Public Officials**	
Central administration	Historical, Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	Current: http://www.lps.lv/system/file/?file=/images/objects/documents/document_3232&document_id=3232 Historical: https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://titania.saeima.lv/personal/deputati/saeima12_depweb_public.nsf/deputies?OpenView&lang=EN&count=1000
· **Public Budgets**	
Central administration	

Subnational administration	

Lithuania	
· **Contracting authorities**	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	Historical, Political Data Yearbook Interactive (historical): http://www.politicaldatayearbook.com/ http://www.nsd.uib.no/european_election_database/country/lithuania/administrative_divisions.html
· **Public Officials**	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www3.lrs.lt/pls/inter/w5_show?p_r=8801&p_k=2 http://www3.lrs.lt/docs3/kad5/w5_istorija.show5-p_r=786&p_k=2.html http://www3.lrs.lt/docs3/kad6/w6_istorija.show6-p_r=6113&p_k=2.html
· **Public Budgets**	
Central administration	http://www.finmin.lt/web/finmin//auktualus_duomenys/biudzeto_pajamos/nacionalinis_biudzetas
Subnational administration	http://www.finmin.lt/web/finmin//auktualus_duomenys/biudzeto_pajamos/savivaldybiu_biudzetai

Luxembourg	
· **Contracting authorities**	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	https://www.gouvernement.lu/3313489/20131204- Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/
· **Public Officials**	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	http://www.syvicol.lu/annuaire-des-communes/ https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.chd.lu/wps/wcm/connect/5df72f0048f397ce985dd8ce12dff599/2015+05+11+Adresses+D%C3%83%C2%A9put%C3%83%C2%A9s.pdf?MOD=AJPERES
· **Public Budgets**	
Central	http://www.budget.public.lu/#!/ausgaben

administration	
Subnational administration	

Malta	
· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	https://www.gov.mt/en/Government/Government%20Gazette/tendersnew/Pages/Tenders-and-Contracts.aspx https://www.gov.mt/en/Government/Government%20of%20Malta/Ministries%20and%20Entities/Pages/Ministries-and-Entities.aspx
· Public Officials	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	Local councilors: https://www.gov.mt/en/Government/Local%20Councils/Pages/Local%20Councils.aspx https://en.wikipedia.org/wiki/List_of_mayors_of_places_in_Malta Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	https://en.wikipedia.org/wiki/List_of_members_of_the_parliament_of_Malta,_2008%E2%80%9313
· Public Budgets	
Central administration	
Subnational administration	

Netherlands	
· Contracting authorities	
Registry of contracting authorities in procurement sites	https://www.tenderned.nl/tenderned-web/aanbestedendedienst/selecteren/aanbestedendedienstlist/cp2/4d790b24e293ae0c3a8a82f55568935a9/van/171667209043be71b52b2a9623cdfbec/islv/a/code/S910/cid/75237
Alternative sources for contracting authorities / state units	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ http://www.nsd.uib.no/european_election_database/country/netherlands/administrative_divisions.html
· Public Officials	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country

authorities	https://en.wikipedia.org/wiki/Category:Mayors_by_city_in_the_Netherlands Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Representatives: http://www.houseofrepresentatives.nl/members_of_parliament/members_of_parliament Senate: http://www.eerstekamer.nl/alle_leden
· **Public Budgets**	
Central administration	http://opendata.rijksbegroting.nl/#dataset_1
Subnational administration	https://www.vng.nl/files/vng/20150402-houdbaarheidstest-gemeentefinancien-2015.xlsx

Norway	
· **Contracting authorities**	
Registry of contracting authorities in procurement sites	https://www.doffin.no/en/authority
Alternative sources for contracting authorities / state units	http://www.nsd.uib.no/polsys/en/civilservice/administrationdatabase.html Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ http://www.nsd.uib.no/european_election_database/country/norway/administrative_divisions.html
· **Public Officials**	
Central administration	http://www.nsd.uib.no/polsys/en/government/ Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	https://www.stortinget.no/en/In-English/Members-of-the-Storting/Members1/
· **Public Budgets**	
Central administration	http://www.statsbudsjettet.no/Revidert-budsjett-2015/Dokumenter/
Subnational administration	http://www.statsbudsjettet.no/Revidert-budsjett-2015/Dokumenter/

Poland	
· **Contracting authorities**	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ http://www.nsd.uib.no/european_election_database/country/poland/administrative_divisions.html
· **Public Officials**	

Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_Poland Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Representatives: http://www.sejm.gov.pl/Sejm7.nsf/poslowie.xsp?type=A Historical: http://www.sejm.gov.pl/Sejm7.nsf/page/archiwum Senate: http://www.senat.gov.pl/en/senators/lista-senatorow/ Historical: http://www.senat.gov.pl/en/archives/
· Public Budgets	
Central administration	http://www.mf.gov.pl/pl/ministerstwo-finansow/dzialalnosc/finanse-publiczne/budzet-panstwa/ustawy-budzetowe
Subnational administration	http://stat.gov.pl/en/regional-statistics/ http://www.mf.gov.pl/pl/ministerstwo-finansow/dzialalnosc/finanse-publiczne/budzety-jednostek-samorzadu-terytorialnego/informacje-i-zestawienia

Portugal	
· Contracting authorities	
Registry of contracting authorities in procurement sites	http://www.base.gov.pt/Base/en/SearchResults?type=entidades&query=texto%3D
Alternative sources for contracting authorities / state units	http://www.dgo.pt/execucaoorcamental/Paginas/Sintese-da-Execucao-Orcamental-Mensal.aspx?Ano=2015&Mes=Maio Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Municipalities: http://www.anmp.pt/munp/mun/mun101l1.php?cod=20140110
· Public Officials	
Central administration	Current: http://www.portugal.gov.pt/pt/o-governo/ministros.aspx Historical: Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	Current: http://www.anmp.pt/munp/mun/mun101l1.php?cod=20140110 https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.parlamento.pt/DeputadoGP/Paginas/Deputados.aspx
· Public Budgets	
Central administration	http://www.dgo.pt/politicaorcamental/OrcamentodeEstado/Forms/AllItems.aspx
Subnational administration	http://www.portalautarquico.pt/pt-PT/financas-locais/dados-financeiros/contas-de-gerencia/

Romania	
· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	**Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/** **Subnational units:** **http://www.nsd.uib.no/european_election_database/country/romania/administrative_divisions.html** **From FOIA portals: http://nuvasuparati.info/body**
· Public Officials	
Central administration	**Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/** **Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**
Autonomous bodies	
Subnational authorities	**Communes: http://www.acor.ro/filiale-judetene** **Municipalities: http://www.amr.ro/membri.municipii.amr?l=en** **Historical: https://en.wikipedia.org/wiki/Lists_of_mayors_by_country** **https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_Romania** **Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**
Members of Parliament	**Representatives: http://www.cdep.ro/pls/parlam/structura2015.de?par=AA&idl=2** **Senate: http://www.senat.ro/FisaSenatori.aspx**
· Public Budgets	
Central administration	**http://www.mfinante.ro/**
Subnational administration	**http://www.dpfbl.mdrap.ro/sit_ven_si_chelt_uat.html**

Serbia	
· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	**From FOIA portals: http://daznamosvi.rs/body**
· Public Officials	
Central administration	**Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**
Autonomous bodies	
Subnational authorities	**https://en.wikipedia.org/wiki/Lists_of_mayors_by_country** **https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_Serbia** **Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**
Members of Parliament	**Current: http://www.parlament.gov.rs/national-assembly/composition/members-of-parliament/current-legislature.487.html** **Historical: http://www.parlament.gov.rs/national-assembly/composition/members-of-**

	parliament/legislature-archive/31-may-2012-legislature.2192.html
· **Public Budgets**	
Central administration	http://www.parlament.gov.rs/ http://www.srbija.gov.rs
Subnational administration	

Slovakia	
· **Contracting authorities**	
Registry of contracting authorities in procurement sites	http://www.uvo.gov.sk/profily?p_p_id=profilObstaravatela_WAR_uvoprofil&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_profilObstaravatela_WAR_uvoprofil_resetCur=false&cur=1
Alternative sources for contracting authorities / state units	**Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/** **Subnational units:** http://www.nsd.uib.no/european_election_database/country/slovakia/administrative_divisions.html
· **Public Officials**	
Central administration	**Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/** **Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**
Autonomous bodies	
Subnational authorities	**Mayors of towns (mesta), reference March 2013:** http://www.zmos.sk/clenske-mesta-.phtml?id3=26558&module_action__58222__id_art=11419#m_58222 **Smaller municipalities (obec) In March 2013:** http://www.zmos.sk/clenske-obce-zmos-a-m.phtml?id3=26558&module_action__58222__id_art=11268#m_58222 http://www.zmos.sk/clenske-obce-zmos-n-z.phtml?id3=26558&module_action__58222__id_art=11269#m_58222 **Historical: https://en.wikipedia.org/wiki/Lists_of_mayors_by_country** **Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**
Members of Parliament	http://www.nrsr.sk/web/default.aspx?SectionId=60
· **Public Budgets**	
Central administration	http://www.mfsr.sk/Default.aspx?CatID=7973
Subnational administration	https://openspending.org/datasets?territories=SK

Slovenia	
· **Contracting authorities**	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	**Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/** http://www.vlada.si/o_vladi/ministrstva/ http://www.nsd.uib.no/european_election_database/country/slovenia/administrative_divisions.html **Rulers.org** **Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/**

· Public Officials	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/
Autonomous bodies	
Subnational authorities	http://skupnostobcin.si/obcine/ https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	National Assembly: http://www.dz-rs.si/wps/portal/en/Home/ODrzavnemZboru/KdoJeKdo/PoslankeInPoslanci/PoAbecedi National Council: http://www.ds-rs.si/?q=kdo-smo/drzavni-svetniki
· Budget information	
Central administration	http://www.mf.gov.si
Subnational administration	

Spain

· Contracting authorities	
Registry of contracting authorities in procurement sites	https://contrataciondelestado.es/
Alternative sources for contracting authorities / state units	Map of the state: http://administracion.gob.es/pagFront/espanaAdmon/directorioOrganigramas/gobiernoEstado/gobiernoEstado.htm http://www.igae.pap.meh.es/sitios/igae/es-ES/invente/Paginas/inicio.aspx From FOIA portals: http://tuderechoasaber.es/es/body/list/all
· Public Officials	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	http://www.citymayors.com/mayors/spanish-mayors.html https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_Spain Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	Representatives: http://www.congreso.es/ Senate: http://www.senado.es/
· Public Budgets	
Central administration	http://www.sgpg.pap.meh.es/ http://www.igae.pap.meh.es
Subnational administration	http://servicioswebbis.meh.es/apps/entidadeslocales/BDatosPL.aspx

Sweden

· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/

sources for contracting authorities / state units	http://www.regeringen.se/myndigheter-med-flera/ http://www.government.se/government-agencies/ http://www.nsd.uib.no/european_election_database/country/sweden/administrative_divisions.html
· Public Officials	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	Hanretty and Koop (2013)
Subnational authorities	Communes: http://skl.se/tjanster/kommunerlandsting/adressuppgifterkommuner.1246.html City councils and regions: http://skl.se/tjanster/kommunerlandsting/adressuppgifterlandstingregioner.1247.html https://en.wikipedia.org/wiki/Lists_of_mayors_by_country Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://www.riksdagen.se/en/Members-and-parties/Members/In-alphabetical-order/
· Public Budgets	
Central administration	http://www.esv.se/Verktyg--stod/Publikationer/2015/tidsserier-statens-budget-m.m.-2014/ http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/Public-finances/National-budget-outcome/Time-series-of-the-Central-Government-Budget/
Subnational administration	http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/Public-finances/Local-Government-finances/Annual-accounts-for-municipalities-and-county-councils/

Switzerland	
· Contracting authorities	
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ http://publicbodies.org/ https://www.admin.ch/gov/de/start.html http://www.nsd.uib.no/european_election_database/country/switzerland/administrative_divisions.html
· Public Officials	
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	
Subnational authorities	https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://en.wikipedia.org/wiki/Category:Lists_of_mayors_of_places_in_Switzerland Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	National Council: http://www.parlament.ch/E/ORGANE-MITGLIEDER/NATIONALRAT/MITGLIEDER-NR-A-Z/Pages/default.aspx Council of States: http://www.parlament.ch/E/ORGANE-MITGLIEDER/STAENDERAT/MIGLIEDER-SR-A-Z/Pages/default.aspx Historical for both councils: http://www.parlament.ch/e/suche/Pages/ratsmitglieder.aspx
· Public Budgets	
Central administration	In French under administrative units: http://www.efv.admin.ch/f/dokumentation/finanzberichterstattung/budget.php
Subnational administration	http://www.bfs.admin.ch/bfs/portal/de/index/infothek/lexikon/lex/0.html

United Kingdom

·	Contracting authorities
Registry of contracting authorities in procurement sites	
Alternative sources for contracting authorities / state units	http://publicbodies.org/ https://www.gov.uk/government/organisations Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ http://www.nsd.uib.no/european_election_database/country/uk/administrative_divisions.html From FOIA portals: https://www.whatdotheyknow.com/body/list/all

·	Public Officials
Central administration	Political Data Yearbook Interactive: http://www.politicaldatayearbook.com/ http://reference.data.gov.uk/gov-structure/organogram/?dept=ofwat https://www.gov.uk/government/publications/government-ministers-and-responsibilities Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Autonomous bodies	http://reference.data.gov.uk/gov-structure/organogram/?dept=ofwat
Subnational authorities	http://www.citymayors.com/mayors/british-mayors.html https://en.wikipedia.org/wiki/Lists_of_mayors_by_country https://github.com/CountCulture/openlylocal http://openlylocal.com/councils Wales councils: http://www.wlga.gov.uk/authorities Scottish councils: http://www.cosla.gov.uk/councils/leaders Northern Ireland councils: http://www.nilga.org/getattachment/c6bd06aa-3f21-4c2e-9946-582f648bddef/Full-Member-listing.aspx Rulers.org Cia World Leaders: https://www.cia.gov/library/publications/world-leaders-1/
Members of Parliament	http://en.wikipedia.org/wiki/List_of_United_Kingdom_MPs National Assembly of Wales: http://www.assembly.wales/en/memhome/Pages/memhome.aspx Scottish Parliament: http://www.scottish.parliament.uk/msps/current-msps.aspx Northern Ireland Assembly: http://aims.niassembly.gov.uk/mlas/search.aspx

·	Public Budgets
Central administration	https://www.gov.uk/government/collections/public-expenditure-statistical-analyses-pesa http://www.ukpublicspending.co.uk/
Subnational administration	https://www.gov.uk/government/collections/local-authority-capital-expenditure-receipts-and-financing openspending.org