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Enabling procurement data value chains for economic development, demand management, competitive markets and vendor intelligence



## Deliverable D1.4

### Data gathering, extraction, pre-processing and normalisation components v2

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## Executive summary

This report describes deliverable D1.4, the updated version of data gathering, extraction, pre-processing and normalisation components. It explains the TBFY consortium's approach, which is to use open data on tenders, contracts and companies through OpenOpps' and OpenCorporates' APIs.

It will provide a brief description of these APIs and the Open Source code snippets for accessing the APIs, which will be made available on Github.

It will describe the data provided by OpenOpps and OpenCorporates, explain how we decided on our chosen approach, and an explanation of our approach to extraction and ingestion. It will also explain what the next steps will be and the further data that will be made accessible in the future.

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## 1 Introduction

This report describes deliverable D1.4, the second version of data gathering, extraction, pre-processing and normalisation components. It explains the TBFY consortium's approach, which is to use open data on tenders, contracts and companies through OpenOpps' and OpenCorporates' APIs.

## 2 Confirming our approach

In D1.2 we outlined how OpenOpps would take over the data management of the project and that both OpenOpps and Open Corporates would focus on the delivery of open APIs to support the business cases and products that were being built by the consortium partners. We have, to a significant degree, delivered on this promise and most of the data identified by the consortium at the outset of the project has been gathered and normalised.

OpenCorporates has provided access to over 140m company records through their API, as well as their online reconciliation service which matches company names to canonical records. The data remains open to all those who publish it openly, on a share-alike [open database license \(ODBL\)](#).

OpenOpps has provided normalised data from hundreds of European data sources through an API. TBFY partners have access to over 2.5m tender and contract documents dating back to 2010 in a common standard, the [Open Contracting Data Standard \(OCDS\)](#). OpenOpps data is available under the same ODBL license.

JSI have focussed on the data from Slovenia, combining data on spending and procurement with the national entity register. The data is yet to be made available in either the OpenOpps API or the OpenCorporates API. There remains some licensing issues over the corporate data.

The alpha version of the OpenOpps API has been made available to all partners, giving them access to over 400 sources of data around the EU, including TED and most of the accessible national level portals such as Doffin.no (see appendix).

Upgrades to the OpenOpps API, which allows for much greater speed and flexibility in querying the data, is currently in test as well as the creation of a staging API which allows for users to test new developments and upgrades that have been made.

Both APIs and the underlying data accessed through them, have been fully maintained, during the project. Each document is mapped to and we provide an audit trail for each record gathered, as well as validation, so that each record meets minimum requirements before publication.

Both OpenOpps and OpenCorporates have maintained the API and the scrapers that feed data into the database for the duration of the project, so that partners can rely on a consistent, well-structured and reliable feed of data.

## 3 Description of the Data

### 3.1 Tender and Contracting Data

OpenOpps is the largest open source of public tenders and contracts in the world. OpenOpps provides the core TED data as well as thousands of daily opportunities from local and national portals around the EU. Included in this data is details on buyers, suppliers (for contracts), titles, descriptions, values and categories.

The full details of the data fields available in OCDS are available here, but additional data fields can be added should the information be required for TBFY:

<http://standard.open-contracting.org/latest/en/schema/reference/>

OpenOpps has increased the volume of data that it gathers from Europe significantly, and now has 561 data sources in Europe, an increase of 159 new sources (40%) for the continent. A full list of data sources is provided as an appendix.

OpenOpps sources by continent	Count of sources
Global	1
Africa	11
Asia	39
Europe	561
North America	10
Oceania	2
South America	8
<b>Grand Total</b>	<b>632</b>

### 3.2 Company Data

OpenCorporates has the largest open database of core company data (i.e. existence and basic attributes) in the world. The data will be used in TheyBuyForYou as the reference dataset for legal entities. Legal entities mentioned in procurement data will be linked back to the OpenCorporates record for that entity.

OpenCorporates already has data from the following European jurisdictions:

Country data for OpenCorporates.			
Albania	Germany	Liechtenstein	Slovakia
Belarus	Gibraltar	Luxembourg	Slovenia
Belgium	Greece	Malta	Spain

Bulgaria	Guernsey	Moldova	Sweden
Croatia	Iceland	Montenegro	Switzerland
Cyprus	Ireland	Netherlands	Ukraine
Denmark	Isle of Man	Norway	UK
Finland	Jersey	Poland	
France	Latvia	Romania	

A full list of OpenCorporates' registers can be found here: <https://opencorporates.com/registers>

### 3.3 Slovenian Data

JSI have gathered five primary data sources: the Slovenian business register, public spending data, a budget users database and a standard classification schema for both spending and procurement data.

#### 3.3.1 Slovenian Business Register:

The description of the register's data is available on this URL:

[https://www.ajpes.si/Doc/AJPES/Za\\_razvijalce/Struktura\\_podatkov\\_PRS\\_042016.doc](https://www.ajpes.si/Doc/AJPES/Za_razvijalce/Struktura_podatkov_PRS_042016.doc)

The data structure is described in this document:

[https://www.ajpes.si/Doc/Registri/PRS/The\\_table\\_structure\\_of\\_the\\_Slovenian\\_Business\\_Register.doc](https://www.ajpes.si/Doc/Registri/PRS/The_table_structure_of_the_Slovenian_Business_Register.doc)

The data are distributed in MDB format (MS Access). JSI have developed scripts for converting this data into a normalised set of CSVs ready for import into PostgreSQL, which is available on Github: <https://github.com/zejn/mdb2csv>.

Database is available via Access to Public Information Act, which could be time consuming procedure, but when the data are gathered, they could be simply imported with the described applications.

#### 3.3.2 The Slovenian spending data

The data is available to download at the following URL: <http://erar.si/cdn/podatki/>

Description of the data is available here: [https://sintef.sharepoint.com/teams/work-2368/Shared%20Documents/Work/Deliverables/D3.2%20Common%20spending%20templates%20framework%20v1/Description\\_of\\_Erar\\_dataset.pdf](https://sintef.sharepoint.com/teams/work-2368/Shared%20Documents/Work/Deliverables/D3.2%20Common%20spending%20templates%20framework%20v1/Description_of_Erar_dataset.pdf)

#### 3.3.3 The Standard Classification of Activities

The classification database is available from this URL:

<https://www.stat.si/Klasje/Klasje/Tabela/5531>

#### 3.3.4 The Public Procurement Database

The public procurement database description of fields is uploaded to project's Sharepoint:

[https://sintef.sharepoint.com/:x:/r/teams/work-2368/layouts/15/Doc.aspx?sourcedoc=%7B3FD6703F-8321-4110-A6A1-0A3391653628%7D&file=Procurement\\_MJU\\_column\\_names.xlsx&action=default&mobileredirect=true](https://sintef.sharepoint.com/:x:/r/teams/work-2368/layouts/15/Doc.aspx?sourcedoc=%7B3FD6703F-8321-4110-A6A1-0A3391653628%7D&file=Procurement_MJU_column_names.xlsx&action=default&mobileredirect=true)

#### 3.3.5 The Registry of Budget Users

The registry of budget users is available in Excel format from this URL:

<https://www.ujp.gov.si/dokumenti/dokument.asp?id=316>

## 4 Description of Data Gathering, Extraction, Pre-processing and Normalisation activity

### 4.1 Data Gathering

The primary areas of progress for OpenOpps work on data gathering has been in three key areas: new sources, upgrading the TED data processing capabilities and adding contract data.

#### 4.1.1 New sources of data

Having established the priority data sources for our TBFY partners, OpenOpps has gathered data from all of the sources required (where data has been available to be gathered). New harvesting scripts have been created for each source and every script has been tested and run. We have also created a mapping script for each data source so that we can map each record to the Open Contracting Data Standard. We have secured an additional 159 sources of data and now have 60 sources for Italy, 20 sources for Spain and 443 sources for the UK.

#### 4.1.2 New TED import tools

OpenOpps have also rebuilt their import tools for TED. We now import four additional document types, including Voluntary Ex-Ante Tender award notices. We have also now mapped the one to many nature of contract award notices from TED, recording each supplier that has been granted an award. This means that we now have a much more comprehensive record of supplier contract award notices.

#### 4.1.3 New contract sources

Finally, we have added a range of new contract data sources, including sixty CSV based sources from the UK, and 564,150 new contract records from the ANAC data in Italy and two contract register sources from Ireland.

#### 4.1.4 Open Corporates progress

OpenCorporates accesses data from national company registers and other sources. They have added large amounts of data from Germany but have faced [significant issues](#) normalising the data. They have also started work on the Estonian data imports.

#### 4.1.5 JSI progress

Four of the five datasets required by JSI are openly available datasets and have required little effort to secure. There has been a significant difficulty in gaining access to the company register data, which is a closed dataset, and has been released after using a Freedom of Information request and significant lobbying to ensure the request was respected. There remains questions about the viability of this data in the long-term as the data is not available openly.

The data imported by JSI has proved to be well formed and inter-linking between datasets has been successful.



## 4.2 Data Extraction

OpenOpps extracts data from sources using APIs where they are available, but these are rare. Where the data is only available via a webpage we use screen scraping to source the data.

OpenCorporates uses a variety of methods of data extraction, depending on the format of the source data. Where structured data files are available they are imported, although some scraping is required from less structured sources.

JSI have had to convert the Register from an MDB format before import to PostgreSQL, the remaining datasets have been imported successfully direct from source.

## 4.3 Data Processing

To further improve the accessibility of data to TBFY partners OpenOpps has increased the capacity of their data processing platform and is working on steps to improve the speed of processing data from our scrapers into our API indexes. Large scale processing remains a challenge, for instance, when the historical records for a new, high volume source is added.

Open Corporates' scrapers map the data they access to a common schema internal to OpenCorporates. The data is stored in OpenCorporates database and linked.

JSI's data processing, has a much smaller dataset and has fewer engineering challenges, but scripts have been written to collect the slow moving data.

## 4.4 Data Normalisation

The data gathered by OpenOpps continues to be normalised using unique identifiers for each document. We handle potential conflicts, such as contracts that are published separately to tenders, but have a link to the source tender document, on a source by source basis.

We have sought to work on deduplication tools to identify where the same documents are published on different platforms, so that we can provide users with an improved experience, but we are seeking to maintain referential integrity for all of the data going forwards.

OpenCorporates have focussed on the German data, which lacks unique identifiers. The team have been forced to build custom scripts and processes to establish unique identifiers for German companies. <https://blog.opencorporates.com/2019/02/19/wait-what-the-problems-of-company-numbers-in-germany-and-how-were-handling-them/>

JSI have found that their data is well structured and so normalisation has been a matter of designing a correct data structure.

### 4.4.1 Linking

OpenOpps links and augments data in a number of different ways:

- Entity linking – We have built a large reference table for linking entity records to canonical entries, such as to Companies House, providing a link to buyers and suppliers. We are exploring how this data can be used to improve geolocation and other services to the data we provide.
- Categorisation – We automatically categorise all English language records using the ProClass categorisation ([www.proclass.org.uk](http://www.proclass.org.uk)). We also extend a CPV categorisation for the same records.
- Language – We automatically ascribe a language to each record, using a language detection script.
- Country – We automatically ascribe a country of origin to each record.
- Location – Through linked data and improved processing of published data, we are seeking to geolocate records.

OpenCorporates identifies and categorises inactive companies and sole traders where possible.

JSI's data is provided with unique identifiers that link correctly from the outset.

#### 4.4.2 Mapping

OpenOpps has taken in 23.2m procurement documents to its database and mapped them all to a common format, the internationally recognised and highly usable Open Contracting Data Standard.

TBFY partners have reviewed the standard to confirm it meets the needs of the business cases and will suggest where links should be made and additional data should be gathered.

OpenCorporates' company data is mapped to OpenCorporates' own schema which can be seen in its API (see: 6. Description of Open Corporates API).

JSI is using the current standard for spending and procurement documents used by the Slovenian government.

## 5 Description of OpenOpps API

OpenOpps has created an API for TBFY partners to access the tender and contract data. Access keys have been made available to all partners. An OpenOpps run training workshop attended by representatives of all the TBFY partners demonstrated how to use the API. This demonstration is included with this deliverable and can be accessed here:

<https://sintef.sharepoint.com/:v:/r/teams/work-2368/Shared%20Documents/Work/Deliverables/D1.2%20Data%20Gathering,%20Extraction,%20Pre-processing%20and%20Normalisation%20Components%20v1/TBFY%20Open%20Opps%20API%20Demo.mov?csf=1> (accessible only to TBFY team members).

Here is an excerpt of the response to the following API call <https://openopps.com/api/tbfy/ocds>.

```
{
  "count": 1622,
  "next": "https://openopps.com/api/tbfy/ocds/?page=2",
  "previous": null,
  "results": [
    {
      "ocid": "ocds-0c46vo-0102-CSL_2018_A1RpOdY4es",
      "countryname": "France",
      "language": "fr",
      "source": "td_achatpublic_fr",
      "releasedate": "2018-05-31T00:00:00Z",
      "date_created": "2018-06-01T01:34:54.430619",
      "json": {
        "uri": "https://openopps.com/tenders/ocds-0c46vo-0102-CSL_2018_A1RpOdY4es/?format=json",
        "license": "https://opendatacommons.org/licenses/odbl/",
        "releases": [
          {
            "id": "CSL_2018_A1RpOdY4es",
            "tag": [
              "tender"
            ],
            "date": "2018-05-31T00:00:00+00:00",
            "ocid": "ocds-0c46vo-0102-CSL_2018_A1RpOdY4es",
            "buyer": {
              "name": "Mairie d'Oye Plage",
              "address": {
                "countryName": "France"
              }
            },
            "tender": {
              "id": "CSL_2018_A1RpOdY4es",
              "title": "Réfection de la toiture et du plafond suspendu de l'école de l'Etoile à Oye-Plage",
              "status": "active",
              "documents": [

```

```

{
  "id": "tender_url",
  "url":
  "https://www.achatpublic.com/sdm/ent/gen/ent_detail.do?selected=0&PCSLID=CSL_2018_A1RpOdY4es",
  "format": "text/html",
  "language": "en",
  "documentType": "tenderNotice"
},
{
  "description": "Réfection de la toiture et
du plafond suspendu de l'école de l'Etoile à Oye-Plage",
  "tenderPeriod": {
    "endDate": "2018-06-14T12:00:00+00:00",
    "startDate": "2018-05-31T00:00:00+00:00"
  },
  "language": "fr",
  "initiationType": "tender"
},
{
  "publisher": {
    "uid": "https://beta.companieshouse.gov.uk/company/04962733",
    "uri": "https://openopps.com",
    "name": "Open Opps",
    "scheme": "Companies House"
  },
  "publishedDate": "2018-06-01T01:33:10.836410+00:00",
  "publicationPolicy": "https://openopps.com/legal/"
},
},
}

```

More details are provided in deliverable D5.2. Full API documentation is in the development and testing phase.

Data from the API can be brought into the Knowledge Graph and linked to other data as part of the Work Package 2 deliverables.

## 5.1 Accessing the API

TBFY participants have all been granted access to the OpenOpps API. We have added more fulsome technical documentation of the API and provided a working codes examples for how to access the API using Python. For details on access, please refer to deliverable D5.2 Procurement APIs and platform release.

OpenCorporates API is very well documented <https://api.opencorporates.com/documentation/API-Reference>

JSI have not yet provided the data in an API. Given questions over licensing constraints of the company registration data, it remains to be seen whether the source data can be made available openly.

## 5.2 Continuous monitoring

OpenOpps is already collecting data on the performance of scrapers, such as when they run and how many documents they gather. OpenOpps will be upgrading its scraper estate to allow greater classification richer metadata to be made available on our data gathering activity. OpenOpps's new metadata will include new information on the quality of the data sourced and links to the licensing data published by each scraper.

# 6 Description of OpenCorporates API

OpenCorporates is a database with information about approximately 100 million companies worldwide, obtained from a wide range of data sources, and which can be accessed via an API. Data are available either as share-alike attribution open data or commercially.

The contents of this section are based on the current online documentation available at the OpenCorporates API. An always up-to-date version is available there. The objective of this section is to provide a general overview of the main data models used by the API as well as the main types of resources and calls that are made available by it.

Among the main data offered by the API, we can find the legal name of the company, the identifier given to the company by the company register, the date the company was incorporated, the previous or alternative names of a company, registered address and so on.

As an example, this is the response to <https://api.opencorporates.com/companies/nl/17087985>:

```

"api_version": "0.2",
"results": {
  "company": {
    "name": "Bover B.V.",
    "company_number": "17087985",
    "jurisdiction_code": "nl",
    "incorporation_date": null,
    "dissolution_date": null,
    "company_type": "Besloten Vennootschap",
    "registry_url": "https://server.db.kvk.nl/TST-BIN/FU/TWS001@?BUTT=17087985",
    "branch": null,
    "branch_status": null,
    "inactive": false,
    "current_status": "Active",
    "created_at": "2011-01-12T21:50:57+00:00",
    "updated_at": "2012-02-02T10:36:46+00:00",
    "retrieved_at": "2011-08-25T14:37:37+01:00",
    "opencorporates_url": "https://opencorporates.com/companies/nl/17087985",
    "previous_names": null,
    "source": {
      "publisher": "OpenKVK.nl",
      "url": "https://www.openkvk.nl/17087985",
      "retrieved_at": "2011-08-25T14:37:37+01:00"
    }
  },
  "corporate_groupings": [],
  "data": {
    "most_recent": [
      {
        "datum": {
          "id": 2457732,
          "title": "SEC Edgar entry",
          "data_type": "OfficialRegisterEntry",
          "description": "register id: 1434782",
          "opencorporates_url": "https://opencorporates.com/data/2457732"
        }
      },
      {
        "datum": {
          "id": 2457731,
          "title": "Company Address",
          "data_type": "CompanyAddress",
          "description": "BOKSHEIDE 20, EERSEL P7 5521 PM",
          "opencorporates_url": "https://opencorporates.com/data/2457731"
        }
      }
    ],
    "total_count": 2,
    "url": "https://opencorporates.com/companies/nl/17087985/data"
  },
  "filings": [],
  "officers": []
}
}

```

More details are provided in deliverable D5.2.

Data from the API can be brought into the knowledge graph and linked to other data as part of the Work Package 2 deliverables.

## 7 Success of the approach

We are confident that our approach has been successful. The partners at TBFY have been able to enjoy 13.4m records in a common, internationally recognised data standard, and all of the data required for the business cases has been made available.

Our initial goal aimed to collect every tender in Europe, on finding that there were over 3,000 separate tender sources being used in Europe we had to rein in our ambitions to focus on the data sources required for key partners in TBFY.

The primary goal of the work package; to deliver the procurement tender notices and contract data required for our partners (data gathering, extraction, pre-processing and normalisation) has been met. There is still corporate data to collect and some Slovenian data requires additional processing.

## 8 Looking forward

This work package will continue to maintain the aggregated sources that we have gathered, responding to the changes in sources and gathering data that is published on a daily basis. We will also continue to gather European sources of data as directed by our partners in TBFY.

### 8.1 Upgrades to the API

We have provided a new platform for the OpenOpps API, which is now more responsive and dynamic. The changes to the processing of TED data is currently being made available in a staging version of the API. We continue to upgrade the API and will provide new functionality for the API throughout the project.

### 8.2 New data sources

OpenOpps remains ready to gather available data in Europe for our TBFY partners.

### 8.3 New types of data

OpenOpps has been gathering tender notice documents wherever they have been published, we will be adding references to these documents to the API so that project partners can gather and process these documents, allowing them to use these documents in their long-term analysis, particularly in the area of machine learning and artificial intelligence.

OpenCorporates will be continue to discover new potential data supplementary sources and to evaluate them based on whether they will assist the matching and linking required for TBFY. Where useful new supplementary data sources are identified, OpenCorporates will work to incorporate them into its database.

Appendix 1 – Data by country

<i>Country name</i>	Total documents	Avg published per month
India	1,598,394	45,668
Philippines	1,392,855	43,527
France	1,025,146	27,707
Indonesia	892,299	27,884
Germany	848,792	23,578
United Kingdom	649,197	16,230
United States	480,691	14,138
Spain	469,692	13,047
Poland	415,475	11,541
No country named	257,905	7,369
Bulgaria	219,153	6,262
Italy	211,918	5,887
Belgium	186,804	5,189
Lithuania	159,525	4,311
Brazil	157,605	4,925
Bolivia	153,194	5,283
Czech Republic	136,813	3,800
Portugal	132,431	3,679
Netherlands	129,694	3,505
Guatemala	125,891	4,061
Sweden	125,650	3,396
Paraguay	115,593	3,729
England	109,895	2,892
Bangladesh	106,543	3,329
Canada	98,325	2,892
Norway	97,946	2,647
Finland	90,313	2,580
Pakistan	88,337	2,850
Latvia	88,181	2,449
Romania	85,140	2,365
Uruguay	82,989	2,677
Switzerland	80,651	2,240

Austria	56,827	1,579
Ireland	56,238	1,520
Denmark	52,637	1,423
Greece	42,804	1,189
Hungary	42,474	1,249
South Africa	41,396	1,335
Singapore	38,572	1,378
Estonia	38,511	1,070
Slovenia	37,762	1,079
Colombia	37,037	1,122
Slovakia	32,472	928
Malta	32,018	889
Japan	27,877	820
China, People's Republic of	25,646	916
Macedonia	24,592	683
Croatia	23,075	641
Kyrgyzstan	15,601	503
Tunisia	14,994	454
Chile	14,512	537
Kenya	13,076	409
New Zealand	12,999	382
Mexico	12,767	376
Luxembourg	11,969	332
China, Republic of (Taiwan)	7,484	220
Cyprus	6,707	186
None	5,736	337
Uganda	4,319	139
Kazakhstan	3,725	133
Australia	3,087	94
Iceland	2,829	76
Russia	1,980	76
Iraq	1,758	53
Tanzania	1,754	53
Afghanistan	1,440	45
Wales	1,397	39
Mauritius	1,244	50

Ethiopia	1,230	37
Scotland	1,213	33
Cote d'Ivoire (Ivory Coast)	1,120	34
Lebanon	1,093	33
Bosnia and Herzegovina	1,060	32
Ghana	986	32
Argentina	925	29
Turkey	879	26
China	839	27
Jamaica	782	30
Ukraine	727	22
Panama	715	22
Niger	637	19
Jordan	599	17
Myanmar	578	18

Appendix 2 - Data on sources

Entity Name	Language	Notice Types	Login Required	API	Region	country_name
Bulgarian Government	bg, en	Tender	No	No	Europe	Bulgaria
Simap (Switzerland)	en,fr,it	Tender	No	No	Europe	Switzerland
German Government	de	Tender	No	No	Europe	Germany
German e-tendering portal	de	Tender	No	No	Europe	Germany
Danish Government	da	Tender	No	No	Europe	Denmark
Autonomous city of Ceuta Government	es	Awards	No	No	Europe	Spain
Extremadura	es	Awards	No	No	Europe	Spain
Council of Castille and Leon	es	Awards	No	No	Europe	Spain
Spanish Government Contract Portal	es	Awards	No	No	Europe	Spain
Zaragoza	es	Awards	No	No	Europe	Spain
Council of Government of the Principality of Asturias	es	Tender		No	Europe	Spain
Madrid Council	es	Tender	No	No	Europe	Spain
Catalonian Government	cat	Tender		No	Europe	Spain
National Tender Portal	es	Tender	No	No	Europe	Spain
Galicia	gl	Tender	No	No	Europe	Spain



Basque Government Portal	es	Tender	No	No	Europe	Spain
Canary Islands	es	Tender		No	Europe	Spain
Andalusia	es	Tender	No	No	Europe	Spain
Government of La Rioja	es	Tender	No	No	Europe	Spain
Navarre	es	Tender	No	No	Europe	Spain
Sistema Nacional de Publicidad de Subvenciones	es	Tender	No	No	Europe	Spain
Murcia	es	Tender	No	No	Europe	Spain
Generalitat Valenciana	es	Tender	No	No	Europe	Spain
Zaragoza	es	Tender	No	No	Europe	Spain
EU EU-Supply	en	Tender	No	No	Europe	Europe
Tenders Electronic Daily		Tender, Award	Yes	No	Europe	Europe
Finnland Government Portal	fi	Tender	No	No	Europe	Finland
Alsace Public Procurement	fr	Tender	No	No	Europe	France
Bulletin Officiel des annonces des marches publics	fr	Tender	No	No	Europe	France
Marches Online France	fr	Tender	No	No	Europe	France
Contracts Finder	en	Tender, Awards	No	Y	Europe	United Kingdom
Wigan Council	en	Awards	No	No	Europe	United Kingdom
Apply for Innovation	en	Tender	No	No	Europe	United Kingdom
Belfast Telegraph	en	Tender	No	No	Europe	United Kingdom
Crown Commercial Service	en	Tender	No	No	Europe	United Kingdom
Carbon Trust	en	Tender	No	No	Europe	United Kingdom
Community Northern Ireland	en	Tender	No	No	Europe	United Kingdom
Crown Commercial Service	English	Tender	No	No	Europe	United Kingdom
Curtis Fitch	en	Tender	No	No	Europe	United Kingdom
Curtis Fitch	en	Tender	No	No	Europe	United Kingdom
Curtis Fitch	en	Tender	No	No	Europe	United Kingdom
Defence Online	en	Tender	No	No	Europe	United Kingdom
Digital Marketplace UK	en	Tender	No	No	Europe	United Kingdom
Kent Business Portal	en	Tender	No	No	Europe	United Kingdom
Advantage South West	en	Tender	No	No	Europe	United Kingdom
Arch Corporate Holdings Ltd.	en	Tender	No	No	Europe	United Kingdom
Bank of England	en	Tender	No	No	Europe	United Kingdom
North Cumbria University Hospitals NHS Trust	en	Tender	No	No	Europe	United Kingdom

Bristol City Council	en	Tender	No	No	Europe	United Kingdom
Homes England	en	Tender	No	No	Europe	United Kingdom
Homes England	en	Tender	No	No	Europe	United Kingdom
Health Education England	en	Tender	No	No	Europe	United Kingdom
LTE Group	en	Tender	No	No	Europe	United Kingdom
NHS Dorset Clinical Commissioning Group	en	Tender	No	No	Europe	United Kingdom
Buckinghamshire Business Portal	en	Tender	No	No	Europe	United Kingdom
YPO	en	Tender	No	No	Europe	United Kingdom
Northumberland County Council	en	Tender	No	No	Europe	United Kingdom
Yorwaste	en	Tender	No	No	Europe	United Kingdom
NCG Corporation	en	Tender	No	No	Europe	United Kingdom
Ports of Jersey Supplier Portal	en	Tender	No	No	Europe	United Kingdom
YORtender	en	Tender	No	No	Europe	United Kingdom
Plymouth Procurement Portal	en	Tender	No	No	Europe	United Kingdom
Worcestershire District Group	en	Tender	No	No	Europe	United Kingdom
Wolverhampton City Council	en	Tender	No	No	Europe	United Kingdom
Supplying the South West	en	Tender	No	No	Europe	United Kingdom
The Donkey Sanctuary Portal	en	Tender	No	No	Europe	United Kingdom
Wokingham Borough Council Portal	en	Tender	No	No	Europe	United Kingdom
Transport for London	en	Tender	No	No	Europe	United Kingdom
The Chest	en	Tender	No	No	Europe	United Kingdom
Public Power Solutions	en	Tender	No	No	Europe	United Kingdom
Southend-on-Sea Borough Council	en	Tender	No	No	Europe	United Kingdom
Supplying 2 NHS	en	Tender	No	No	Europe	United Kingdom
Supply Stoke and Staffordshire	en	Tender	No	No	Europe	United Kingdom
Supply Great Yarmouth	en	Tender	No	No	Europe	United Kingdom
Royal College of Physicians Portal	en	Tender	No	No	Europe	United Kingdom
Paradigm Housing Group	en	Tender	No	No	Europe	United Kingdom
Northumbria Healthcare NHS Foundation Trust	en	Tender	No	No	Europe	United Kingdom
South East Business Portal	en	Tender	No	No	Europe	United Kingdom
Savills Tendering Portal	en	Tender	No	No	Europe	United Kingdom
Sanctuary Housing Group	en	Tender	No	No	Europe	United Kingdom
Royal Mencap Society	en	Tender	No	No	Europe	United Kingdom

NHS London Procurement Partnership	en	Tender	No	No	Europe	United Kingdom
Norse Group Limited	en	Tender	No	No	Europe	United Kingdom
Proactis Group	en	Tender	No	No	Europe	United Kingdom
Charities Aid Foundation Procurement Portal	en	Tender	No	No	Europe	United Kingdom
Blackburn and Darwen Council Procurement Portal	en	Tender	No	No	Europe	United Kingdom
Department for International Trade	en	Tender	No	No	Europe	United Kingdom
Hull and East Yorkshire Hospitals NHS Trust Procurement Portal	en	Tender	No	No	Europe	United Kingdom
Catapult	en	Tender	No	No	Europe	United Kingdom
Cafcass	en	Tender	No	No	Europe	United Kingdom
Channel Islands	en	Tender	No	No	Europe	United Kingdom
Circle Health	en	Tender	No	No	Europe	United Kingdom
Dextco Ltd	en	Tender	No	No	Europe	United Kingdom
Doncaster Children's Services Trust	en	Tender	No	No	Europe	United Kingdom
EastMidsTenders	en	Tender	No	No	Europe	United Kingdom
ECMWF	en	Tender	No	No	Europe	United Kingdom
Equality and Human Rights Commission	en	Tender	No	No	Europe	United Kingdom
Falmouth Exeter Plus	en	Tender	No	No	Europe	United Kingdom
Greene King	en	Tender	No	No	Europe	United Kingdom
Higher Education Procurement Portal	en	Tender	No	No	Europe	United Kingdom
Housing Procurement Portal	en	Tender	No	No	Europe	United Kingdom
Hutchison Ports (UK) Ltd	en	Tender	No	No	Europe	United Kingdom
JISC	en	Tender	No	No	Europe	United Kingdom
Kent Business Portal	en	Tender	No	No	Europe	United Kingdom
L.E.A.D Academy Trust	en	Tender	No	No	Europe	United Kingdom
Ladbrokes	en	Tender	No	No	Europe	United Kingdom
Leeds Teaching Hospital	en	Tender	No	No	Europe	United Kingdom
Leonard Cheshire Disability Ltd Procurement Portal	en	Tender	No	No	Europe	United Kingdom
LGSS	en	Tender	No	No	Europe	United Kingdom
LHC	en	Tender	No	No	Europe	United Kingdom
London Tenders	en	Tender	No	No	Europe	United Kingdom
Luton Borough Council	en	Tender	No	No	Europe	United Kingdom
NEPO	en	Tender	No	No	Europe	United Kingdom

Met Office	en	Tender	No	No	Europe	United Kingdom
Newcastle and Northumbria Universities	en	Tender	No	No	Europe	United Kingdom
Gala	en	Tender	No	No	Europe	United Kingdom
Tansport for London	en	Tender	No	No	Europe	United Kingdom
Irish Government Portal	en	Tender	No	No	Europe	United Kingdom
UK EU-Supply	en	Tender	No	No	Europe	United Kingdom
UK EU-Supply	en	Tender	No	No	Europe	United Kingdom
UK EU-Supply	en	Tender	No	No	Europe	United Kingdom
UK EU-Supply (Covers all UK portals)	en	Tender	No	No	Europe	United Kingdom
UK EU-Supply	en	Tender	No	No	Europe	United Kingdom
Department of International Trade	en	Tender	No	No	Europe	United Kingdom
Fermanagh & Omagh District Council	en	Tender	No	No	Europe	United Kingdom
Arts Council England	en	Tender	No	No	Europe	United Kingdom
Basildon District Council	en	Tender	No	No	Europe	United Kingdom
University of Bradford	en	Tender	No	No	Europe	United Kingdom
Braintree district council	en	Tender	No	No	Europe	United Kingdom
Brenwood borough council	en	Tender	No	No	Europe	United Kingdom
The Castlepoint	en	Tender	No	No	Europe	United Kingdom
Chelmsford City Council	en	Tender	No	No	Europe	United Kingdom
City University London	en	Tender	No	No	Europe	United Kingdom
Colchester Borough Council	en	Tender	No	No	Europe	United Kingdom
Department for Culture, Media, and Sport	en	Tender	No	No	Europe	United Kingdom
Epping Forest District Council	en	Tender	No	No	Europe	United Kingdom
Essex County Fire and Rescue Service	en	Tender	No	No	Europe	United Kingdom
London Borough of Haringey	en	Tender	No	No	Europe	United Kingdom
Harlow District Council	en	Tender	No	No	Europe	United Kingdom
The Maldon District Council	en	Tender	No	No	Europe	United Kingdom
The Comptroller and Auditor Genera	en	Tender	No	No	Europe	United Kingdom
Northern Lighthouse Board	en	Tender	No	No	Europe	United Kingdom
Northern Lighthouse Board	en	Tender	No	No	Europe	United Kingdom
Peterborough City Council	en	Tender	No	No	Europe	United Kingdom
Scottish Environment Protection Agency	en	Tender	No	No	Europe	United Kingdom

St Georges Community Housing	en	Tender	No	No	Europe	United Kingdom
Student Loan Company	en	Tender	No	No	Europe	United Kingdom
Student Loan Company	en	Tender	No	No	Europe	United Kingdom
Strathclyde Police	en	Tender	No	No	Europe	United Kingdom
Telford & Wrekin Council	en	Tender	No	No	Europe	United Kingdom
The Tendring District Council	en	Tender	No	No	Europe	United Kingdom
Lancashine Local Government Portal	en	Tender	No	No	Europe	United Kingdom
Mid & East Antrim Borough Council	en	Tender	No	No	Europe	United Kingdom
Mid Ulster Council	en	Tender	No	No	Europe	United Kingdom
Millstream Scotland	en	Tender	No	No	Europe	United Kingdom
Millstream Wales	en	Tender	No	No	Europe	United Kingdom
Ministry of Defence	en	Tender	No	No	Europe	United Kingdom
Multi Quote	en	Tender	No	No	Europe	United Kingdom
My Tenders UK	en	Tender	Yes	No	Europe	United Kingdom
Nepo	en	Tender	No	No	Europe	United Kingdom
Northern Ireland Federation of Housing Associations	en	Tender	No	No	Europe	United Kingdom
Oppshop Northern Ireland	en	Tender	No	No	Europe	United Kingdom
Peak District National Park	en	Tender	No	No	Europe	United Kingdom
Proactis	en	Tender	Yes	No	Europe	United Kingdom
Ilse of Scilly	en	Tender + Award	No	No	Europe	United Kingdom
Source East Midlands	en	Tender	No	No	Europe	United Kingdom
Staffordshire Moorlands District Council	en	Tender	No	No	Europe	United Kingdom
City of Stoke-on-Trent	en	Tender	No	No	Europe	United Kingdom
North West Fire and Rescue Services	en	Tender	No	No	Europe	United Kingdom
United Kingdom Hydrographic Office	en	Tender	No	No	Europe	United Kingdom
Borough Council of King's Lynn & West Norfolk	en	Tender	No	No	Europe	United Kingdom
Open Data Institute	en	Tender	No	No	Europe	United Kingdom
MAV group	hu	Tender	No	No	Europe	Hungary
Ireland Eu-Supply	en	Tender	No	No	Europe	Ireland
The online network for Irish nonprofit organisations	en	Tender	No	No	Europe	Ireland
Isle of Man Government Portal	en	Tender	No	No	Europe	Isle of Man

Ireti Public Energy Company	it	Awards	No	No	Europe	Italy
Ministerio delle Infrastrutture e dei Trasporti	it	Tender	No	No	Europe	Italy
Gruppo Ferrovie Dello Stato Italiano	it	Awards	No	No	Europe	Italy
Gruppo Ferrovie Dello Stato Italiano	it	Awards	No	No	Europe	Italy
Gruppo Ferrovie Dello Stato Italiano	it	Awards	No	No	Europe	Italy
AIM Gruppo	it	Tender	No	No	Europe	Italy
Comune Ligure	it	Tender	No	No	Europe	Italy
Acquedotto Pugliese	it	Tender	No	No	Europe	Italy
atac Roma	it	Tender	No	No	Europe	Italy
Venice/Treviso Airport	it	Tender	No	No	Europe	Italy
Viveracqua	it	Tender	No	No	Europe	Italy
Orio al Serio International Airport	it	Tender	No	No	Europe	Italy
Etra S.p.A. - Energia Territorio Risorse Ambientali	it	Tender	No	No	Europe	Italy
Portale Acquiti di Terna S.P.A	it	Tender	No	No	Europe	Italy
Genoa Airport	it	Tender	No	No	Europe	Italy
Eappalti FVG	it	Tender	No	No	Europe	Italy
Radiotelevisione Italia	it	Tender	No	No	Europe	Italy
Aquedotto Pugliese	it	Tender	No	No	Europe	Italy
Trenitalia	it	Tender	No	No	Europe	Italy
Autostrade per Italia	it	Tender	No	No	Europe	Italy
Carabinieri	it	Tender	No	No	Europe	Italy
Comune Latina	it	Tender	No	No	Europe	Italy
Comune Venezia	it	Tender	No	No	Europe	Italy
Consip	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy

Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Italian Ministry of Defence	it	Tender	No	No	Europe	Italy
Regione autonomia Friuli Venezia Giulia	it	Tender	No	No	Europe	Italy
Emilia Ambiente Water Company	it	Tender	No	No	Europe	Italy
Enel Energy Company	it	Tender	No	No	Europe	Italy
Poligrafico e Zecca dello Stato Italiano	it	Tender	No	No	Europe	Italy
FNM Group	it	Tender		No	Europe	Italy
Guardia di Finanza	it	Tender		No	Europe	Italy
Italian Ministry of Justice	it	Tender		No	Europe	Italy
Gruppo Hera	it	Tender		No	Europe	Italy
Ministerio Interno	it	Tender	No	No	Europe	Italy
atac Valle d'Aosta	it	Tender	No	No	Europe	Italy
Labiennale	it	Tender	No	No	Europe	Italy
Autorita Nazionale Anticorruzione	it	Tender	No	No	Europe	Italy
Italian Postal Service	it	Tender	No	No	Europe	Italy
Provincia di Lecce	it	Tender		No	Europe	Italy
Regione Molise	it	Tender	No	No	Europe	Italy
Gruppo Ferrovie Dello Stato Italiano	it	Tender	No	No	Europe	Italy
Gruppo Ferrovie Dello Stato Italiano	it	Tender	No	No	Europe	Italy
Gruppo Ferrovie Dello Stato Italiano	it	Tender	No	No	Europe	Italy
City of Rome	it	Tender	No	No	Europe	Italy
Regione Sardegna	it	Tender	No	No	Europe	Italy
Regione Lombardia	it	Tender	No	No	Europe	Italy
Regione Basilicata	it	Tender	No	No	Europe	Italy
Regione Toscana	it	Tender	No	No	Europe	Italy
Services Ambiente Energia Valle Sabbia	it	Tender	No	No	Europe	Italy
EU EU-Supply	lt	Tender	No	No	Europe	Lithuania
Latvian Government Portal	lv	Tender	No	No	Europe	Latvia
Malta Government	en	Tender	No	No	Europe	Malta
National tender portal of the Neatherlands	nl	Tender	No	No	Europe	Netherlands

Polish Government	pl	Tender	No	No	Europe	Poland
Portuguese Government	pt	Tender	No	No	Europe	Portugal
Serbian Government	sr	Tender	No	No	Europe	Serbia
Lenobl	ru	Tender	No	No	Europe	Russian Federation
Slovenian Government Portal	sl	Tender	No	No	Europe	Slovenia