European Public Sector Information Platform

Topic Report No. 2013 / 06

Open Data and EU Funding

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KEYWORDS

Open data, public funding, PSI, CIP, seventh framework, research and development, innovation, research, COSME, Horizon 2020.

EXECUTIVE SUMMARY

This report presents how and what open data related initiatives are being financed by the public administration, European Commission, and their relationship with the research, development and innovation programmes within Europe.

Open data reutilisation needs of the investment in the technologies associated and knowledge on the framework regulations about Public Sector Information. The European Commission is currently supporting projects to promote the use of open data related Information and Communication Technologies at different stages (such us publication, curation, standardisation, application and/or visualisation of the data) and the analysis of different policies across Europe. Moreover, besides the public benefit which open data brings to society, the creation of commercial products based on open data is one of the challenges, which is now starting to be tackled.

This report provides a review on the European Commission funded initiatives, strategies and foreseen activities in the mid-term, related to open data and its funding at European level.

1 INTRODUCTION

From the latest years, the European Commission (EC) research and innovation programmes have been promoting the reuse of PSI from very different perspectives.

The most relevant programme for Research and Development (R&D) across Europe, in terms of public funding, is the 7th Framework Programme, including a budget of over 53b€ since its very beginning in 2007 and ending now in 2013. Divided by areas, Information and Communication Technologies (ICT) has been the one funding the vast majority of open data related projects,

but it is also worth to mention the activities carried out among the Infrastructures (INFRA) and Environment (ENV). Competitiveness and Innovation Programme has also devoted an important amount of investment for related projects, especially the ICT area.

1.1 RESEARCH AND OPEN DATA

As mentioned by the analytics paper published by Deloitte (Richard Hammel et al. 2012), the main issue with open data has been that its existence has been overshadowed unhelpfully by considerations of other related disciplines. Examples are big data, semantic web, information management fields and even geo-ICT based technologies, according to the projects funded by the EC. Therefore, open data research has been a cross-cutting subject within a number of relevant projects, and it has not been till this very last year of Framework Programme Seventh (FP7), since specific actions, in terms of project funding, have been taken as standalone mean for open data (FP7-ICT-2013-SME-DCA call. Objectives a) Integrated Open Data Incubator and c) Software components and intuitive end user applications based on reuse of open data).

Nevertheless, according to the information extracted from CORDIS [http://cordis.europa.eu], the amount of expenditure in projects targeting open data related technologies reaches €453.9M from 2007 to 2012. This number is hard to calculate, given the fact that not specific actions have been taken on open data till 2013. Nevertheless, the efforts are clear and they prove a commitment from the EC to establish the roots on the technologies supporting the following steps for the reuse of Public Sector Information (PSI).

1.2 INNOVATION AND OPEN DATA

Innovation, per se, is the ability of the organisations to improve their selves. Innovation is close to the market, it is focused on the generation of new products and services and Europe needs of innovation to grow and increase the value generated by the industrial sector, especially Small and Medium Enterprises (SMEs).

Competitive and Innovation framework Programme (CIP) counts with a unique area dedicated to support innovative projects in the field of ICT called ICT Policy Support Programme (CIP ICT PSP) which has been on-going since 2007 and which has already closed its last call in May. It aims at stimulating innovation and competitiveness through the wider uptake and best use of ICT by citizens, governments and businesses. The global budget in CIP ICT PSP has been 730m€.

Open data is an area strongly linked with the CIP ICT PSP aim. Good examples are the references by (Tim Berners Lee, 2012), inventor of the World Wide Web: “opening up data is fundamentally about more efficient use of resources and improving service delivery for citizens. The effects of that are far reaching: innovation, transparency, accountability, better governance and economic growth” or the messages launched by (Neelie Kroes, 2013), Vice-President of the European Commission, “open public data can boost transparency, improve public services and fuel innovation”.

During these five years, the evolution of funded projects related to open data has been a constant. Moreover, specific thematic networks, discussing the technical prescriptions for policy makers when releasing the data; the financing of projects piloting Internet based services for citizens and industry being fed with open data; and specific validation of geo-technologies based on open geographical data, have been through these six years.

2 ON-GOING INITIATIVES AND PROJECTS

A better comprehension of the initiatives and projects being funded by the EC requires an understanding of how the programmes work. In this sense, the starting points are the FP7 (Research and Development) and CIP (Innovation). The size, in terms of funding, from both programmes is really different.

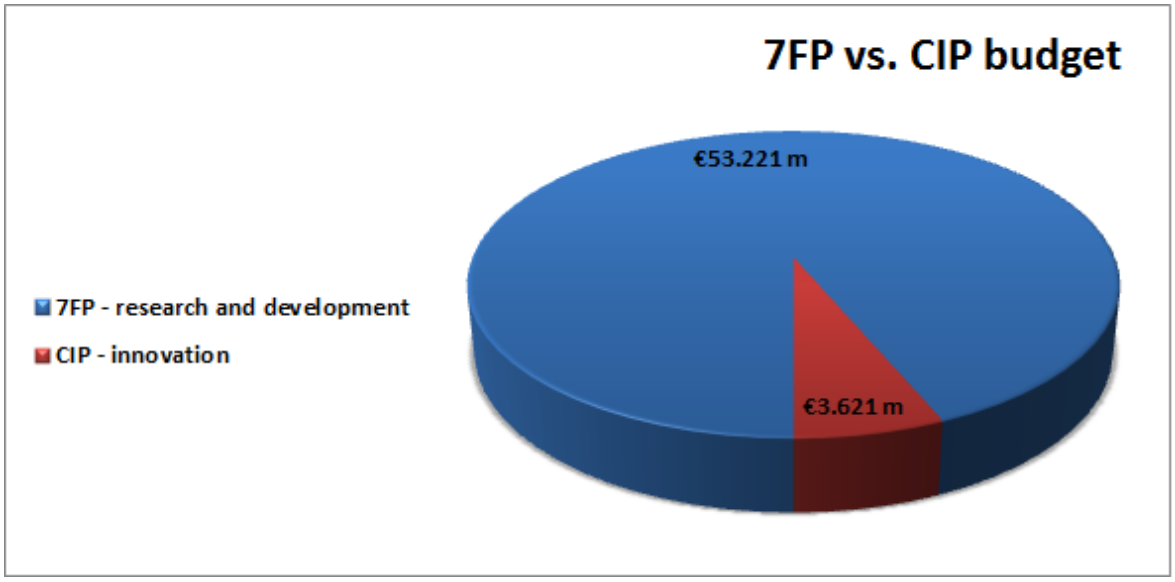


Figure 1. 7FP vs. CIP budget

2.1 FP7

Getting a closer look to each one, there is an internal division per area, which gives again, significant differences in terms of budget. FP7 is made up of 4 main blocks of activities forming 4 specific programmes plus a fifth specific programme on nuclear research.

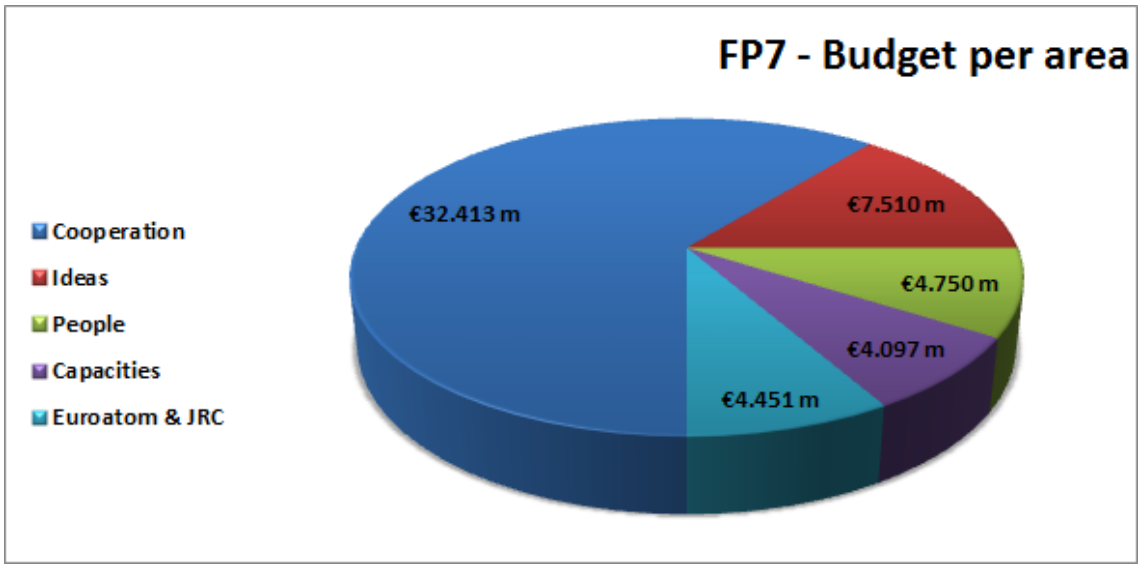


Figure 2. Areas within the FP7 [¡Error! Marcador no definido.]

Among the areas, it is even worth to mention the division between sub-areas within Cooperation, as this is the area where the majority of the open data related projects are located.

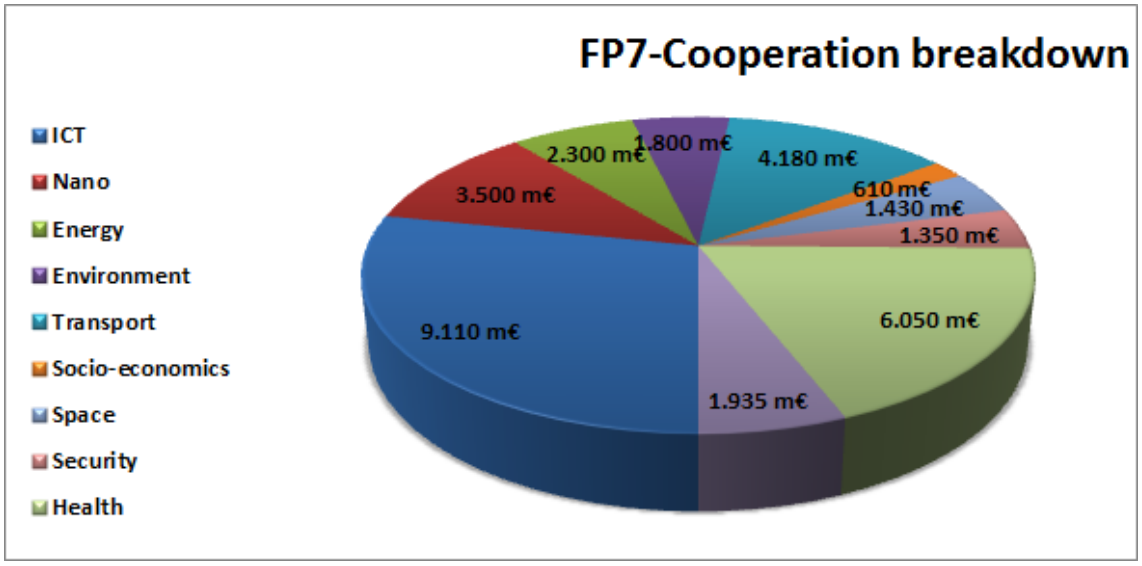


Figure 3. FP7-Cooperation budget breakdown.

As it can be thought, ICT is the outstanding area in relation to open data, but as it will be seen, others do have related initiatives as well. Each subarea, since 2007, has been launching Work Programmes on an annual or bi-annual basis. Within them, a set of open calls for funding have been launched and executed with the aim of financing top research projects in all the related areas. Each Work Programme (annual or bi-annual) has been divided in Topics or Objectives and these into targets as well. A project addresses one or several targets. A set of topics or objectives comprises a call (i.e. ICT area has launched over 15 different calls). The following figure summarises the explained above.

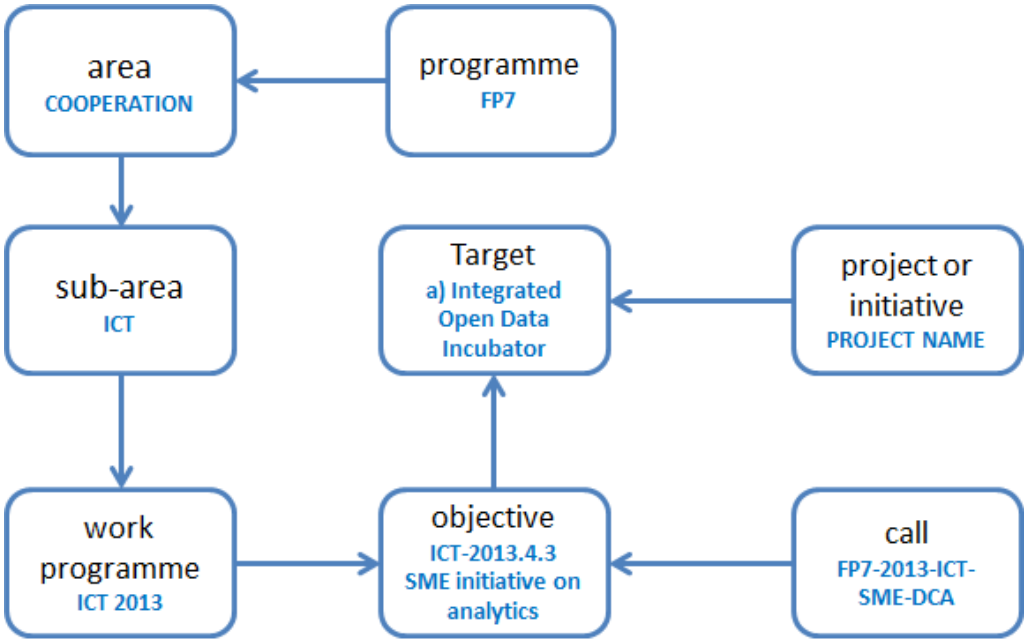


Figure 4. Entity relationship model for funding in FP7 including an example in blue.

Focusing into open data, the analysis focuses in the objectives including projects related to open data somehow in the different objectives and targets of different areas.

2.1.1 ICT AREA

Related projects have been under execution under the very first Work Programme in 2007. In the initiatives funding since then, the concept of open data has not been coined per se till the very latest calls in January 2013 (its results are not yet public). The projects since then were more centred in the technologies around open data such as semantics, linked data, decision support systems, etc. The topics providing funds for these related initiatives have been:

- ICT-2007.4.2. and 4.4 Intelligent content and semantics.

- ICT-2009.4.3. Intelligent information management.
- ICT-2011.4.1. SME initiative on digital contents and languages.
- ICT-2011.4.4. Intelligent information management.

Pending for resolution are the projects funded within the calls in 2013 Work Programme. The objectives are:

- ICT-2013.4.2 Scalable data analytics.
- ICT-2013.4.3 SME initiative on analytics.

Among those objectives some projects are not related to open data directly or indirectly (such as language technologies ones). The original projects in the earlier calls where designed to cover research activities in information management areas: decision support systems, knowledge management, data handling and manipulation, semantic technologies, ontologies creation and even the scalability and security problems related to massive amounts of data manipulation. Nevertheless it is worth to see the evolution of project funding during the FP7 in those related objectives.

The figure below shows the information aggregated by objective. It may seem at first the investment has decreased with the course of the years, but it is important to remember, that up to 2013's objectives, the open data and PSI initiatives have been mixed within other related data projects, so it cannot be concluded that the efforts have been decreasing. It is the other way round; open data has achieved enough relevance to have its own dedicated objectives.

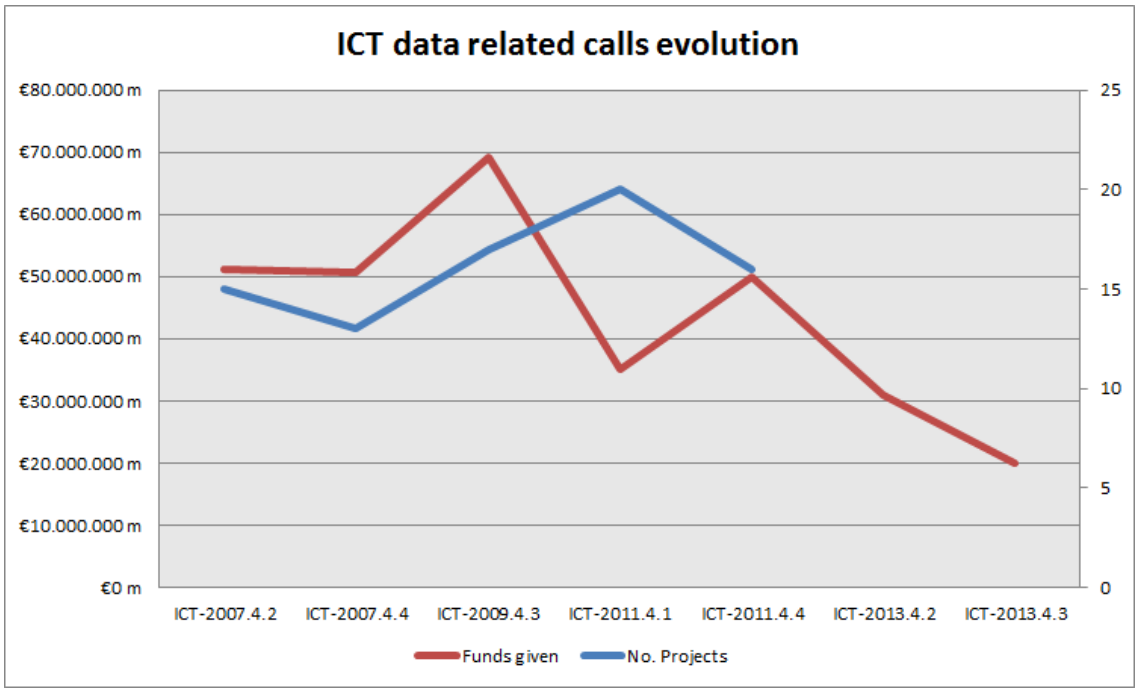


Figure 5. ICT data related to calls' evolution.

An extract of the most representative projects within FP7-ICT can be seen in Table 1 in the Annex section. Nevertheless it is worth to underscore the objectives on several projects in this area:

- **LOD2** [http://lod2.eu] project will develop: enterprise-ready tools and methodologies for exposing and managing very large amounts of structured information on the Data Web; a testbed and bootstrap network of high-quality multi-domain, multi-lingual ontologies from sources such as Wikipedia and OpenStreetMap; algorithms based on machine learning for automatically interlinking and fusing data from the Web; standards and methods for reliably tracking provenance, ensuring privacy and data security as well as for assessing the quality of information and; adaptive tools for searching, browsing, and authoring of Linked Data.
- **PlanetData** [http://www.planet-data.eu/] aims to establish a sustainable European community of researchers that supports organizations in exposing their data in new and useful ways. The ability to effectively and efficiently make sense out of the enormous amounts of data continuously published online, including data streams, (micro)blog posts, digital archives, eScience resources, public sector data sets, and the Linked Open Data Cloud.

- **CODE** [http://code-research.eu/] aims to establish the foundation for a web-based, commercially oriented ecosystem for Linked Open Data. This ecosystem establishes a sustainable and commercial value-creation-chain among traditional (e.g. data provider and consumer) and non-traditional (e.g. data analyst) roles in data marketplaces.

But besides the "logical" objectives, where it is expected to find PSI related projects, there is another group found in other ICT objectives.

ACRONYM / NAME	FUNDING	OBJECTIVE
OMELETTE Open Mashup Enterprise service platform for LinkEd data in The TElco domain	€3,823,392	ICT-2009.1.2 Internet of Services, Software & virtualisation
NETMAR Open service network for marine environmental data	€2,970,950	ICT-2009.6.4 ICT for environmental services and climate change adaptation
EUBRAZILOPENBIO EU-Brazil Open Data and Cloud Computing e-Infrastructure for Biodiversity	€1,049,737	ICT-2011.10.1.5 e-Infrastructures

2.1.2. OTHER AREAS AND SUBAREAS

Though not directly related to PSI or open data technologies, different funding areas have also tackled the issue of PSI. Some examples below:

ACRONYM / NAME	AREA	FUNDING	OBJECTIVE
PANDATAODI Photon and Neutron Data - Open Data Infrastructure	FP7-INFRASTRUCTURES	€1,950,000	INFRA-2011-1.2.2. Data infrastructures for e-Science
ENGAGE An Infrastructure for Open, Linked Governmental Data Provision towards Research Communities and Citizens	FP7-INFRASTRUCTURES	€2,250,000	INFRA-2011-1.2.2. Data infrastructures for e-Science
RECODE Policy RECommendations for Open Access to Research Data in Europe	FP7-INFRASTRUCTURES; FP7-SIS	€949,488	SiS.2012.1.3.3-1 Scientific data: open access, dissemination, preservation and use
LINKED2MEDIA An open linked data platform for semantically-interconnecting online, social media leveraging the corporate brand and market sector reputation analysis and response optimization services	FP7-SME	€2,216,500	SME-2011-2 Research for SME associations
AGRICAB A framework for enhancing EO capacity for Agriculture and Forest Management in Africa as a contribution to GEOSS	FP7-ENVIRONMENT	€3,499,234	ENV.2011.4.1.4-1 Developing increased EO capacity for better agriculture and forestry management

ACRONYM / NAME	AREA	FUNDING	OBJECTIVE
			in Africa
VOICES Providing open data after a EU wide consultation	FP7-SIS	€1,496,624	SiS Science in Society

It can be seen there are different kinds of projects as well. A special attention is given to RECODE, focusing in the policy recommendations of data generated in research. It must be noted that an increasing debate has risen out of the publication of the data generated in these kind of projects funded with public money. The issue as it can be seen, it has been tackled by the projects themselves and will be done in future project around the Open Access concept.

2.2 CIP

A similar situation is found in CIP project. CIP ICT PSP area is the one funding the majority of projects related. This programme has been funding projects through calls for proposals mechanism (one each year) from 2007 to 2013 (2013 call closed in May and is pending for resolution).

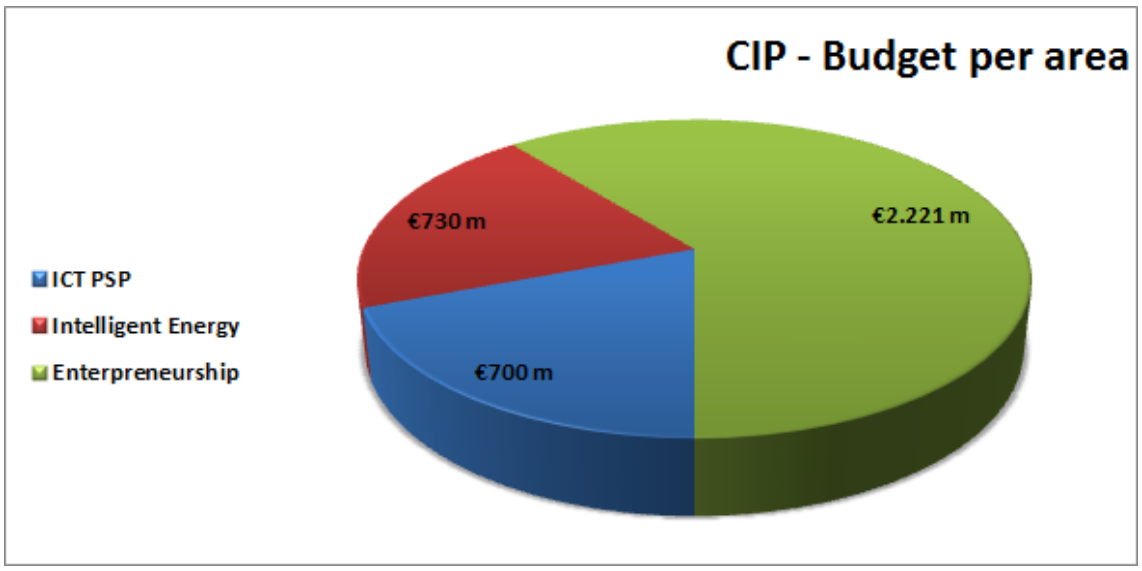


Figure 6. CIP budget per area.

The relation among objectives, projects and work programmes is defined in the figure below:

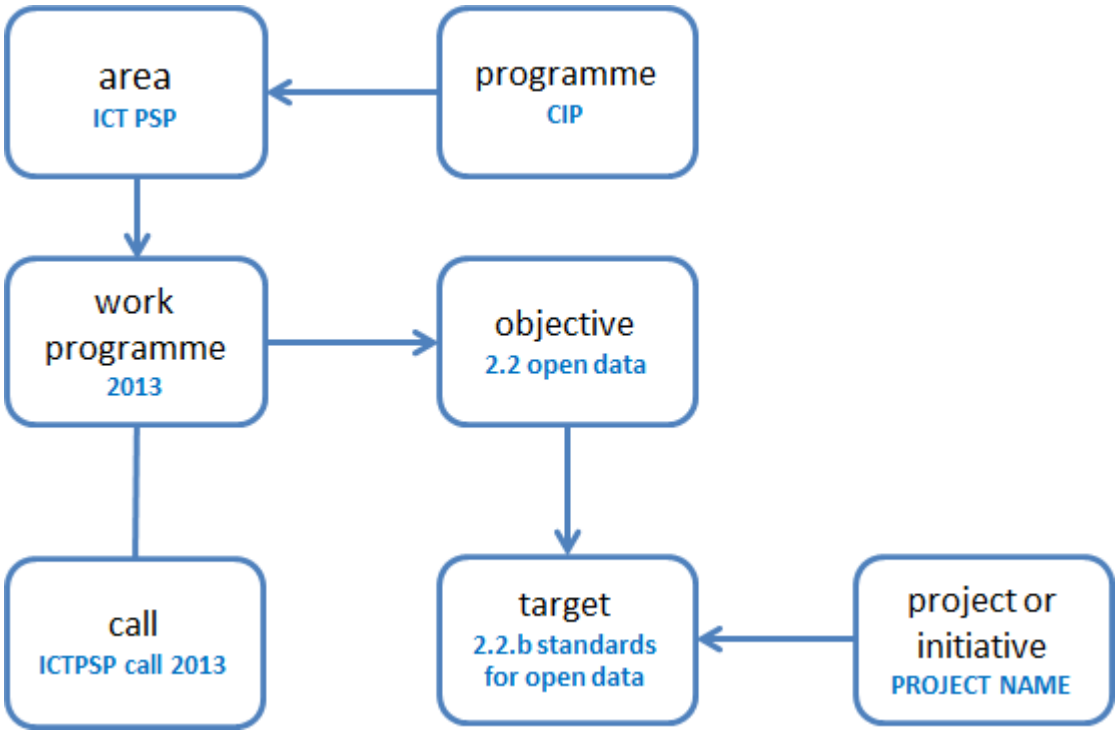


Figure 7. Entity relationship model for funding in CIP ICT PSP including an example in blue.

Different objectives have been directly focusing in open data and PSI. One of the most relevant objectives was launched in 2009 and was called Public Sector Information (legal aspects and geographic information). Only for this objective the EC invested €8,570,000. Check the full list of funded projects for this objective in Table 2.

Some of the projects funded under CIP-ICT-PSP.2011.4.1 - Towards a cloud of public services are also related to PSI and open data. This is the case of:

- Open-DAI wants to enable Public Administration to pace the evolution of legacy systems with open data initiatives.
- OASIS facilitates access to PSI, public services and economic promotion by grouping online services in a unified portal following a user-cantered logic.
- SEED reuses as much as possible the European, National, Regional and Local stocks of Public Sector Information (PSI).

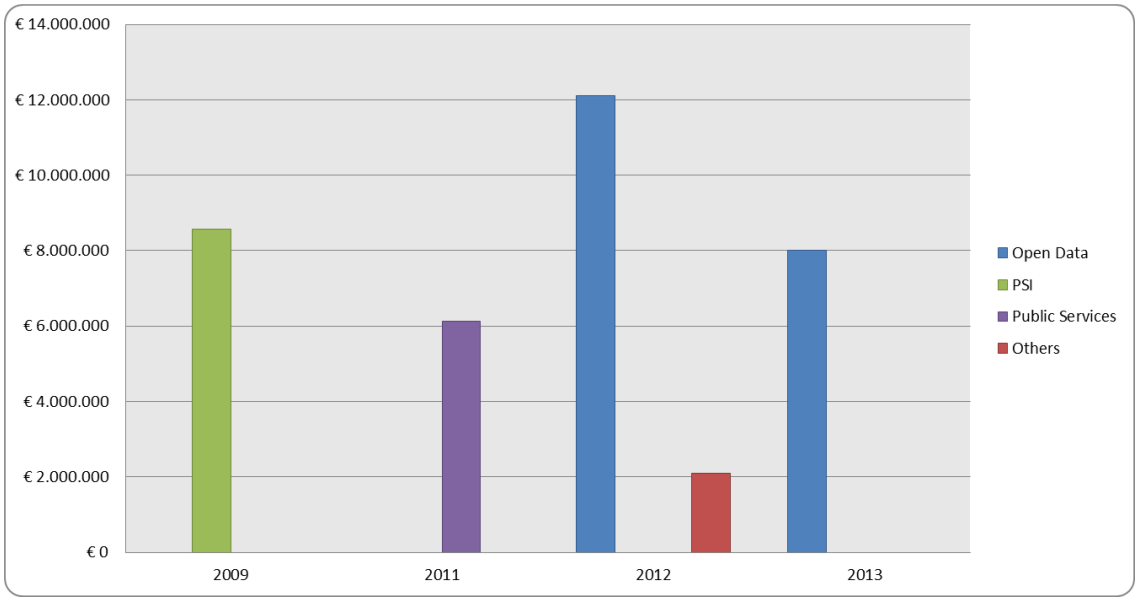
Another objective was CIP-ICT-PSP.2012.2.2 Open Data and open access to scientific information, where five projects: Apps4EU, LAPSI 2.0, OpenScienceLink, E.L.F. and eENVplus were funded. Check details in Table 3. The invested amounts from the EC in under these projects have been €12,100,000.

Without been strictly focused into the open data or PSI objectives, there are initiatives focusing on open data as well. This is the case of IES-Cities, which will develop services for citizens based on the released PSI in different places across Europe. It was funded under the Internet Enabled Services objective in 2012.

The latest call of CIP ICT PSP had a dedicated objective to open data, which is still pending for resolution. It plans to fund different projects focused in geographic information (€7m) and the creation of a network to foster the standardisation of open data (€1m).

And last but not least in is worth to mention Europeana [http://www.europeana.eu], the cultural resources portal in Europe whose creation has been funded via CIP ICT PSP initiative, has recently opened its data (2.4m texts, images, videos and sounds).

The following figures summarise the investment by the EC in CIP ICT PSP related projects from 2009 to 2013.



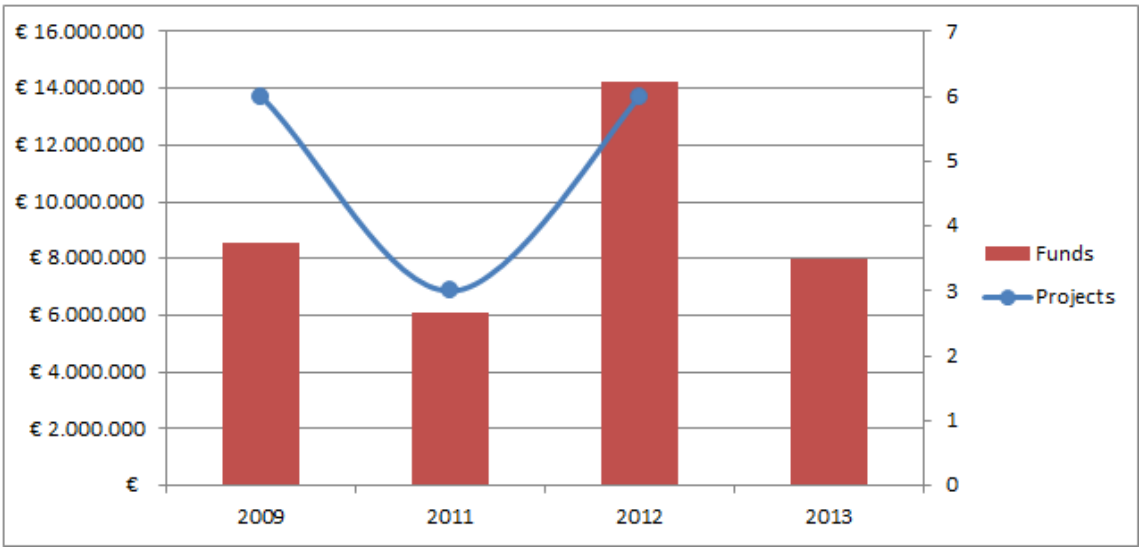


Figure 8. Funds and projects related to PSI and open data in CIP ICT PSP.

The latest years concentrate the majority of funds in open data and PSI related initiatives, with a remarkable number of funds devoted in 2012. 2013 have not been yet been evaluated, that is the reason for the un-existent number of projects funded.

2.3 CONCLUSIONS

The commitment of the EC on PSI and open data surrounding technologies is proven and has been a constant during the past years. In both programmes 2011 and 2012 have been the most "productive" in project funding for these areas. Open data initiatives have been included in other related areas till 2011 where PSI and open data objectives have had their dedicated lines for funding.

Even the Digital Agenda for Europe (DAE) covers the dedicated efforts on the matter. Action 3 in Pillar I is focused into "open up public data resource for re-use", which means the topic is considered as strategic by the EC in their strategy till 2020.

As a summary, it must be considered that every year, since 2007, the EC has invested an average of around €65m in R&D and innovation projects related to open data technologies.

3 FUTURE OPPORTUNITIES

Future opportunities in Research and Innovation are strongly aligned with the to-be-launched programmes Horizon 2020 and COSME. Both of them will be published by the end of the year

and the first calls for funding are planned for 2014. The latest possible means of funding related to the FP7 is the call under the Future Internet technologies, closing in December. Moreover the European policies on open data can also give hints on what the efforts will be like during the next years.

3.1 EUROPEAN POLICIES ON OPEN DATA

According to (Szymon Lewandowski, 2013) three major objectives will be pursed:

- Creation of "data value chain friendly" policy environment.
- Building of Multilingual (Open) Data infrastructure.
- Supporting Research and innovation.

Subject to public financing are the measures approaching the creation of open data infrastructure like the pan-European data portal (beta version in December 2012) or the Connecting Europe Facility (CEF) [https://ec.europa.eu/digital-agenda/en/connecting-europe-facility] for the Horizon 2020 period.

It has been said that “the digital service infrastructure projects would be selected for CEF grants by the Commission from proposals received in such areas as: […] enabling access to public sector information and multilingual services […] or […] enabling access to Europe's cultural heritage (Europeana)” (MEMO/11/709).

In terms of supporting research and innovation Horizon 2020 and COSME will be the main aids granted by the EC in the next years.

3.2 FUTURE INTERNET

The EC opened the Future Internet Public-Private Partnership Programme (FI-PPP) to advance a shared vision for harmonised European-scale technology platforms and their implementation, as well as the integration and harmonisation of the relevant policy, legal, political and regulatory frameworks. Aligned within the FP7-ICT work programmes, there is still a call which will be funding initiatives, that could be related to open data.

Within FI-PPP different projects have created a technological platform developed to be the roots of the technological foundation for the Future Internet. FI-WARE [http://www.fi-ware.eu] project has been in charge of the development and has delivered a novel service infrastructure, building upon elements, called Generic Enablers (GEs) which offer reusable and commonly

shared functions making it easier to develop Future Internet Applications in multiple sectors.

The creation of GEs has been also the subject of different projects and it is for this very last call of FI-PPP (within FP7 as it is expected to last in time) where open data is explicitly mentioned. Objective ICT-2013.1.8 Expansion of Use Cases indicates the projects sought will create "[…] challenging services and applications […] making innovative use of technologies […] validating the concepts developed under the previous phases of FI-PPP […] through tight integration with Internet networking and computing capabilities, and notably exploiting **open data**." There is a €100m of funding for 20 projects in this objective, which will, in addition, organise their own calls for SMEs involvement.

3.3 HORIZON 2020

Horizon 2020 will be the future programme for R&D and innovation from 2014 to 2020 with an expected budget of €80b for the whole period. ICT sector will get a major funding boost, representing around a 20% of the total funding of Horizon 2020 (Neelie Kroes 2, 2013).

ICT topics are expected to be published under the so called "Industrial leadership" and "Societal Changes" challenges. Horizon 2020 ICT calls will be presented in a massive event in Vilnius in November 2013. According to its agenda, one of its three thematic plenaries, ICT for industrial leadership, will organise a conference called "Innovating by exploiting big and open data and digital content" [http://ec.europa.eu/digital-agenda/events/cf/ict2013/item-display.cfm?id=10450] where it will be illustrated the increasing innovation and exploitation potential of big & open data and the innovation potential of ICT for digital content and creativity.

Moreover, an important issue which will be tackled in Horizon 2020 will be the openness of the project results. It is in fact planned that the Commission will make open access to scientific publications a general principle of Horizon 2020 (IP/12/790).

It is also expected that data handling technologies will be one of the envisaged areas on ICT. Actions on community building and exchange like the European Data Forum [http://www.data-forum.eu/] and road-mapping to foster the growth of the data economy will be actions that will be considered as well.

3.4 COSME

COSME is the Programme for the Competitiveness of enterprises and SMEs which will be launched in 2014 till 2020. Its planned budget is €2,5b and will be centred in SMEs. COSME will be a good opportunity for small companies and entrepreneurs. Incipient data business companies and models will be the most related target for this programme.

It will be focused into four main actions:

- Access to finance for SMEs.
- Enterprise Europe Network support services.
- Supporting initiatives for entrepreneurship.
- Access to the markets.

There is not yet a published defined set of areas under which projects or initiatives will be funded, given the fact the focus of COSME are SMEs and can be aligned to different fields of expertise.

4 CONCLUSIONS AND RECOMMENDATIONS

Taking into account the past initiatives and the yet-to-come ones, the commitment on data-based actions by the EC has been clear and a constant during the time.

Research and innovation projects are one of the best ways to advance and progress for and to the society, despite the risks that organisations may assume when participating in research and innovation projects (uncertain results, hardness to bring theories into practice, financial investment, etc.). The financial aid is certainly a good stimulant for its investment but it is worth mentioning the important side is the project itself and the progress to-be-obtained.

Simplification of administrative procedures and the chance for international cooperation are actual incentives for the funds to-be-coming within Horizon 2020 and COSME, without forgetting it is a good opportunity to foster the technologies, policies and applications based on PSI and open data, given the fact that the support by the European authorities is guaranteed.

ANNEXES

ACRONYM	TITLE	START	END	FUNDING	OBJECTIVE	Key Words
VALUE-IT	Adding value to RTD: Accelerating take-up of semantic technologies for the enterprise	2008-03-01	2010-04-30	€1,928,316	Intelligent content and semantics (ICT-2007.4.2)	Semantics
KIWI	Knowledge in a Wiki	2008-03-01	2011-02-28	€2,690,002	Intelligent content and semantics (ICT-2007.4.2)	Semantics
CASAM	Computer-aided semantic annotation of multimedia	2008-04-01	2011-03-31	€3,030,000	Intelligent content and semantics (ICT-2007.4.2)	Semantics
KYOTO	Knowledge yielding ontologies for transition-based organization	2008-03-01	2011-02-28	€2,195,000	Intelligent content and semantics (ICT-2007.4.2)	Semantics, environment
WEKNOWIT	Emerging, collective intelligence for personal, organizational and social use	2008-04-01	2011-03-31	€5,367,909	Intelligent content and semantics (ICT-2007.4.2)	Semantics, social
OKKAM	Enabling the Web of Entities. A scalable and sustainable solution for systematic and global identifier reuse in decentralized information environments	2008-01-01	2010-06-30	€5,125,000	Intelligent content and semantics (ICT-2007.4.2)	Linked data
JUMAS	Judicial management by digital libraries semantics	2008-02-01	2011-01-31	€2,725,001	Intelligent content and semantics (ICT-2007.4.2)	Semantics, libraries
ACTIVE	ACTIVE: Enabling the knowledge powered	2008-03-01	2011-02-28	€8,249,680	Intelligent content and semantics	Semantics

ACRONYM	TITLE	START	END	FUNDING	OBJECTIVE	Key Words
	enterprise				(ICT-2007.4.2)	
LARKC	Large scale semantic computing semantic Web technologies distributed reasoning probabilistic reasoning web-scale inference information retrieval	2008-04-01	2011-09-30	€7,703,293	Intelligent content and semantics (ICT-2007.4.2)	Semantics
INSEMTIVES	Incentives for semantics	2009-04-01	2012-03-31	€3,777,342	Intelligent content and semantics (ICT-2007.4.4)	Semantics
NOTUBE	Networks and ontologies for the transformation and unification of broadcasting and the Internet	2009-02-01	2012-01-31	€6,150,000	Intelligent content and semantics (ICT-2007.4.4)	Semantics
ONTORULE	Ontologies meet business rules	2009-01-01	2011-12-31	€5,400,000	Intelligent content and semantics (ICT-2007.4.4)	Ontologies
SMARTPRODUCTS	Proactive knowledge for smart products	2009-02-01	2012-01-31	€6,964,308	Intelligent content and semantics (ICT-2007.4.4)	Data, business
PLUGIT	Business and IT alignment using a model-based plug-in framework	2009-03-01	2011-08-31	€2,559,786	Intelligent content and semantics (ICT-2007.4.4)	Ontologies
IMP	intelligent metadata-driven processing and distribution of audiovisual media	2009-01-01	2011-06-30	€2,905,000	Intelligent content and semantics (ICT-2007.4.4)	Semantics
CALBC	Collaborative annotation of a large biomedical corpus	2009-01-01	2011-06-30	€1,499,687	Intelligent content and semantics (ICT-2007.4.4)	Data generation, Semantic, Bio
LOD2	LOD2 - Creating Knowledge out of Interlinked	2010-09-01	2014-08-31	€7,249,999	ICT-2009.4.3 Intelligent Information	Linked data

ACRONYM	TITLE	START	END	FUNDING	OBJECTIVE	Key Words
	Data				Management	
GEOKNOW	Making the Web an Exploratory for Geospatial Knowledge	2012-12-01	2015-11-30	€2,950,000	ICT-2011.4.4 Intelligent Information Management	Semantics, Geo
DIGITAL.ME	Integrated digital.me Userware for the Intelligent, Intuitive, and Trust-Enhancing Management of the User s Personal Information Sphere in Digital and Social Environments	2010-11-01	2013-10-31	€3,118,910	ICT-2009.4.3 Intelligent Information Management	Semantics
OPTIQUE	Scalable End-user Access to Big Data	2012-11-01	2016-10-31	€9,759,694	ICT-2011.4.4 Intelligent Information Management	Big data, semantics
IPROD	Integrated management of product heterogeneous data	2011-02-01	2014-01-31	€3,300,180	ICT-2009.4.3 Intelligent Information Management	Semantics
CUBIST	Combining and Uniting Business Intelligence and Semantic Technologies	2010-10-01	2013-09-30	€3,029,834	ICT-2009.4.3 Intelligent Information Management	Semantics
LATC	LOD Around The Clock	2010-09-01	2012-08-31	€1,059,999	ICT-2009.4.3 Intelligent Information Management	Linked open data
SMART VORTEX	Scalable Semantic Product Data Stream Management for Collaboration and Decision Making in Engineering	2010-10-01	2014-09-30	€7,800,000	ICT-2009.4.3 Intelligent Information Management	Semantics
INSIGHT	Intelligent Synthesis and Real-tIme Response using Massive Streaming of Heterogeneous Data	2012-09-01	2015-08-31	€2,779,995	ICT-2011.4.4 Intelligent Information Management	Big data

ACRONYM	TITLE	START	END	FUNDING	OBJECTIVE	Key Words
LDBC	Linked Data Benchmark Council	2012-09-30	2015-03-30	€2,660,000	ICT-2011.4.4 Intelligent Information Management	Linked data
LINKEDUP	LinkedUp: Linking Web Data for Education Project – Open Challenge in Web-scale Data Integration	2012-11-01	2014-10-31	€1,058,497	ICT-2011.4.4 Intelligent Information Management	Linked data
BIG	Big Data Public Private Forum	2012-09-01	2014-10-31	€2,499,998	ICT-2011.4.4 Intelligent Information Management	Big data
AXLE	Advanced Analytics for EXtremely Large European Databases	2012-11-01	2015-10-31	€2,948,465	ICT-2011.4.4 Intelligent Information Management	Big data
SMESPIRE	A European Community of SMEs built on Environmental Digital Content and Languages	2012-05-01	2014-04-30	€1,791,000	ICT-2011.4.1 SME initiative on Digital Content and Languages	Linked data
GAPFILLER	GNSS DAta Pool for PerFormances PredIction and SimuLation of New AppLications for DevelopERs	2012-05-01	2014-04-30	€1,126,536	ICT-2011.4.1 SME initiative on Digital Content and Languages	Data generation
CODE	Commercially empowered Linked Open Data Ecosystems in Research	2012-05-01	2014-04-30	€1,996,965	ICT-2011.4.1 SME initiative on Digital Content and Languages	Linked data, open data
SOPCAWIND	Software for the Optimal Place CAlculation for WIND-farms	2012-05-01	2014-04-30	€1,950,000	ICT-2011.4.1 SME initiative on Digital Content and Languages	Open data reuse

Table 1. FP7-ICT related projects.

Acronym	Call	Objective	Title	Start date	End date	Funding

Acronym	Call	Objective	Title	Start date	End date	Funding
ThermoMap	CIP-ICT-PSP.2009	CIP-ICT-PSP.2009.6 - Public Sector information	Area mapping of superficial geothermic resources by soil and groundwater data	01/09/2010	31/08/2013	€1,930,000
LAPSI	CIP-ICT-PSP.2009	CIP-ICT-PSP.2009.6.1 - Public Sector information: Legal aspects of Public Sector Information	Thematic Network on Legal Aspects of Public Sector Information	22/03/2010	31/08/2012	€520,000
HABITATS	CIP-ICT-PSP.2009	CIP-ICT-PSP.2009.6.2 - Public Sector information : Geographic Information	Social Validation of INSPIRE Annex III Data Structures in EU Habitats	01/04/2010	30/09/2012	€1,210,000
BRISEIDE	CIP-ICT-PSP.2009	CIP-ICT-PSP.2009.6.2 - Public Sector information : Geographic Information	BRIdging SErvices, Information and Data for Europe	01/03/2010	31/08/2012	€1,910,000
HLANDATA	CIP-ICT-PSP.2009	CIP-ICT-PSP.2009.6.2 - Public Sector information : Geographic Information	Creation of value-added services based on Harmonized Land Use and Land Cover Datasets	01/03/2010	28/02/2013	€1,700,000
EuroGeoSource	CIP-ICT-PSP.2009	CIP-ICT-PSP.2009.6.2 - Public Sector information : Geographic Information	EU Information and Policy Support System for Sustainable Supply of Europe with Energy and Mineral Resources.	01/04/2010	31/03/2013	€1,300,000

Table 2. Public Sector Information objective funded projects in 2009.

Acronym	Call	Objective	Title	Start date	End date	Funding
Apps4EU	CIP-ICT-PSP.2012	CIP-ICT-PSP.2012.2.2 - Open Data and open access to scientific information	Apps 4 Europe - Turning Data into Business	01/01/2013	31/12/2014	€600,000
LAPSI 2.0	CIP-ICT-PSP.2012	CIP-ICT-PSP.2012.2.2 - Open Data and open access to scientific information	Legal Aspects of Public Sector Information 2.0	01/01/2013	31/12/2014	€450,000
eENVplus	CIP-ICT-PSP.2012	CIP-ICT-PSP.2012.2.2 - Open Data and open access to scientific information	eEnvironmental services for advanced applications within INSPIRE	01/01/2013	31/12/2015	€2,450,000

Acronym	Call	Objective	Title	Start date	End date	Funding
E.L.F.	CIP-ICT-PSP.2012	CIP-ICT-PSP.2012.2.2 - Open Data and open access to scientific information	E.L.F.: The European Location Framework	01/01/2013	29/02/2016	€6,500,000
OpenScienceLink	CIP-ICT-PSP.2012	CIP-ICT-PSP.2012.2.2 - Open Data and open access to scientific information	Open Semantically-enabled, Social-aware Access to Scientific Data	01/02/2013	31/01/2016	€2,100,000

Table 3. Open data and open Access to scientific information funded projects in 2012.

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Miguel García was born in 1982 in Santander, Spain. He holds a BSc Computing and BEng Industrial Organisation at the University of Deusto, Bilbao, Spain. Including a strong technical background in software development, he has worked for different ICT companies (including SAP AG). During the past years he has specialised in European public funding at Zabala Innovation Consulting, where he currently works as an R&D and Innovation senior consultant focused on ICT initiatives. He is also in charge of the internal open data strategy of the company. He is a member of the local Spanish group of the Open Knowledge Foundation and has participated in different open data events such as “Open data on the web” by W3C, the

ODI and OFKN.

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