



OpenGovIntelligence

Fostering Innovation and Creativity in Europe through Public
Administration Modernization towards Supplying and Exploiting
Linked Open Statistical Data

OpenGovIntelligence: Policy Brief

Editor(s):	Ricardo Matheus and Marijn Janssen
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	<i>Role</i>	<i>Name</i>	<i>Short Name</i>	<i>Country</i>
1.	Coordinator	Centre for Research & Technology - Hellas	CERTH	Greece
2.	R&D partner	Delft University of Technology	TU Delft	Netherlands
3.	R&D partner	National University of Ireland, Galway	NUIG	Ireland
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9.	Pilot Partner	Ministry of Interior and Administrative Reconstruction	MAREG	Greece
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Executive Summary

OpenGovIntelligence (OGI) goes beyond traditional top down approaches and proposes the co-initiation, design, implementation and evaluation of innovative, data-driven public services. These services exclusively address specific society's needs improving in that way the effectiveness of public sector's processes, but also promoting the citizen-centric character of these processes. The co-initiation and design of public services will tap into the exploitation of public sector statistical data transformed as Linked Open Statistical Data (LOSD) and also into the adoption/expansion/development of ICT tools that will enable the effortless creation and delivery of qualitative, data-driven public services.

1 POLICY BRIEF for EC internal use

Project title: OpenGovIntelligence

1.1 INTRODUCTION

Governments are changing the way they interact with the public to empower them. Instead of providing services, they move towards co-creation in which governments, companies, citizens and other parties collaborate in all aspects of service creation and provisioning. This transforms the landscape in which public administrations traditionally perform their own tasks and do not cooperate with others. Co-creation crosses organizational boundaries and innovations should not be limited by organizational structures and institutional constraints.



Linked Open Statistical Data (LOSD) can help governments, companies and citizens to address societal challenges. Value is created by creatively combining various data sources and conducting statistical analysis. These insights can be used by citizens and policy-makers, but also provide insight for the public which can be used by them to ask questions and influence policies. Although this data is available is often distributed over siloed data sources that store data in heterogeneous formats. Collecting and linking this data is often challenging which hinders the creation of new insights. Once the data can be combined visualization in such a way that the results are easy to understand is of vital importance. In this project tools for enabling the easy use of LOSD are developed.

In data-driven public service co-creation many diverse stakeholders are involved which complicates the efforts, but also their joint efforts can result in the creation of better services and innovative insights. The creation of these innovative services need to be guided as there are many stakeholders, as show in figure 1. For this a co-creation framework has been developed which supports the co-creation between data providers and users. The figure below shows that apart from data providers and service consumers other organizations are involved. Furthermore citizens and companies have different roles when the provide data, use data or co-create. In the latter they should give up their positions irrespective of the organization structure and the co-creation framework should help them to think freely about innovations and improvements.

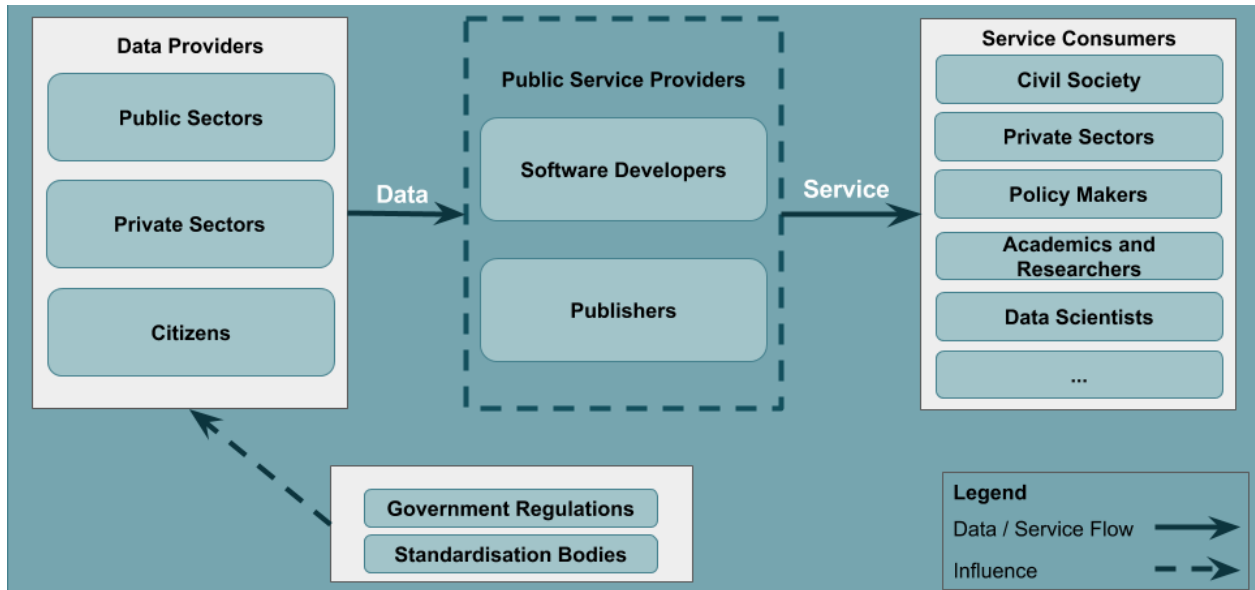


Figure 1 - Complex field of stakeholders

The OpenGovIntelligence works toward a vision of government-wide transformation that strives to achieve an open, transparent and accountable government while providing responsive customer-centric services. The OpenGovIntelligence overcomes the political, institutional, social, and technical issues challenges in opening-up and exploiting LOSD for the co-production of innovative data-driven services. A user-centric LOSD approach is used and orchestrates the collaboration of civil society, enterprises and public administration.

1.2 SOCIOECONOMIC AND DEMOCRATIC IMPACTS

The OGI toolkit and co-creation framework was used in 6 pilots, which were evaluated in various manners. Most users of 219 people surveyed found the pilots benefits include the creation of transparency, reduction the administrative burden by more efficient search of information and visualizing the results at a glance. Below the descriptive statistics of Transparency, Decision-Making, Efficiency and Better Data Interpretation:

- The apps were evaluated on the acceptance by the users. The overall acceptance of the pilots' apps was 90%;
- Transparency and insight into the government functioning is a key conditions for democracy. Governments have been struggling with creating transparency and co-creation combined with LOSD should create transparency. 92% pointed out an *increase of transparency* after accessing the Pilots' Apps;

- Policy-making highly depends on the evidence generated by data. By combining and analysing data the effects of policies can be evaluated and used as an input for developing new policies resulting in evidence-based policy-making. The Pilots' apps helped to 94% of surveyed people to arrive at *better decision-making*;
- By linking data that were previously separated, new insights can be created by combining and analysing data sets. 93% of people answered there is a *better interpretation* of data;
- By providing data and capabilities to analyse the data and visualizing the results the citizens are empowered. This enables them to respond to and influence public policies. For 92% of respondents, Pilots' app *reduced the time spent* searching information and 94% of end-users identified a *cost reduction* when use OGI pilots' apps; and, There is an increase of *efficiency* to 91% of OGI Pilots' users.

1.3 USE CASES

Statistical data is not new and many organizations collect statistical data. This kind of data can answer questions like what is the criminality rate in a certain area during the last year. What is the difference in employment between males and females in a large city? What is the effect of policy measures introduced on the past on the reduction of pollution? Many of these questions can be asked and for this data cubes need to be create in which often time and location are important variables. Locations might different in criminality and time can show an increase or a decrease.

The OpenGovIntelligence supports six pilot projects to create value from the linked open statistical data. The pilots are in different areas showing the potential applications an possibilities and all have embraced co-creation practices.

1. *The Greek Ministry of Administrative Reconstruction (MAREG)*

MAREG uses the OGI ICT Toolkit to improve the monitoring and management of Government Vehicles used by all Greek Public Agencies. Thousands of vehicle are owned by the government and little is known about their use. The data that MAREG possesses for this monitoring and management originate from different sources was not properly be defined, structured. In the pilot this data was disclosed and combined into new insights about the consumption of fuel, the purpose and the age of vehicles information. This information will facilitate internal decision making about the renewal of the fleet and the governance. Furthermore this can result in increased transparency towards the public and better fleet management can save money.

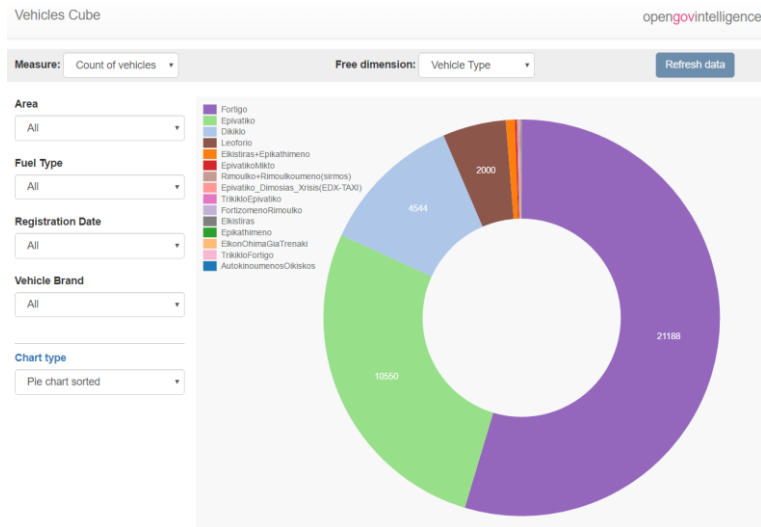


Figure 2 The Greek pilot using OGI ICT toolkit

2. Enterprise Lithuania

The objective of this pilot is to identify the needs of business for exploiting LOSD, developing new user-friendly tools for businesses to help them benchmark their business ideas in the overall context of Lithuania business, providing tools for enabling businesses co-create applications using LOSD, and helping businesses to co-create value from LOSD. This co-creation process can result in entrepreneur starting new businesses and by current businesses to expand their business and in this way contributing to economic growth.

3. Trafford's Innovation and Intelligence Lab

This pilot focusses on the worklessness. Trafford innovation lab cooperated closely with Swirrl, who are handling the more technical aspects of modelling and storing the linked data. The goal is to build a tool that will bring together data from a range of sources to help understand the factors that contribute to, or are impacted by, worklessness. Unemployed, representatives from the Department for Work and Pensions; Trafford's Economic Growth Team and the Greater Manchester Combined Authority are involved in the co-creation. This should result in less unemployment and better use of spending on the worklessness.

4. The Flemish Government

The Flemish Government utilizes the OGI ICT Toolkit to enhance their environmental policy making in terms of timely publication of the actual state of affairs related to environment, evaluations of the permits policy, and develop tools to benchmark the pollution of companies to others working in the

same economical domain. Insight into the location of polluters were created, benchmarks with other geographical area and the impact of population on society. An environmental dashboards was created empowering citizens, with maps data on geographic map and connect datasets, previously disconnected.

5. *The Marine Institute*

Ireland's national agency for marine research, technology development and innovation, uses the OGI toolkit and co-creation to convert their oceanographic observations and measurements data to Linked Open Statistical Data enriching data with information from other Linked Data resources to create dashboards empowering governments, companies and citizens. The new insights results in benefits in three main domains 1) maritime search and rescue, 2) marine renewable energy development and 3) maritime tourism and leisure.

6. *The Estonian Ministry of Economics*

The Estonian Ministry uses of the OGI ICT Toolkit to address issues in the Estonian real estate market such as timely publication of data and information asymmetry. In order to best identify the barriers facing transparency in the Estonian real estate sector co-creation have been carried out with all stakeholders from the private sector, the public sector, and the Estonian public at large. Co-creation resulted in better understanding of the needs of those with an interest in the real estate sector and the proposal of innovative services.

1.4 POLICY IMPLICATIONS AND RECOMMENDATIONS

The pilots connected services that have not been connected before. People were involved that were traditionally not included and insights were created to save public money. The pilots provide insights for improving policy-making practices.

- *Create a culture of co-creation and co-production.* Co-creation should become an integral part of the public service innovation system, instead of an addition to the current system. Government should stimulate others to use the data and co-create and shift from an internal to an external focus.
- *Create awareness of the possibilities.* Often businesses and citizens have a need and are unaware of the available data. Public service co-creation implies that any actor, whether public or private, can take the lead in developing a new service to create public value, and any actor should be able to take part in the co-creation of this service.

- *Create user incentives.* Introduce incentives for users to co-create by connecting to their needs and societal problems. Focus on value creation and makes this leading while developing prototypes in agile way to support value creation. Provide the capabilities to support the use of LOSD.
- *Create Open Linked Statistical data at the source.* The pilots showed that many steps were needed before data was fit for uses. This was often a time consuming process. Data should already be collected at the source, linked with other data and semantics added. This makes the processing and use of data or statistical analyses easier at a later stage.
- *Hide the complexity.* Barriers of using LOSD are high. Effective use of LOSD requires the relating the data using data cubes, the use of statistical analyse and developing of apps. By pre-defining views, the threshold for use can be lowered.
- *Develop an European infrastructure.* Many organizations are re-inventing the wheel and put a lot of resources on developing their own technologies and infrastructure. This result in a fragmentation and unawareness of each other activities. By developing an EU wide-infrastructure resources can be used in a more efficient way and the focus can shift towards value creation.
- *Start small and scale up fast.* The search for innovations might not be clear from the start. During the co-creation process new opportunities are identified. Build prototypes using agile teams in which multiple stakeholders are involved. Work agile and learn from the experiences. One this is clear the situations can be scaled up.

1.5 SUSTANABILITY TOOLKIT

There are various products that will ensure the sustainability of the OGI project after its ending. The OGI project has developed a set of building blocks and toolkit and approach to make easy-use of LOSD. Swirrl intends to adopt a business model in which the OGI toolkit and methodology for LOSD are integrated into a software product and provide it to government organisations.

Several universities have been using the OGI toolkit and approach in courses offered to their students. The universities will advance the results of the project by continuing to research and teaching in this area, and to build communities of interest around better use of data and co-creation. The software code is available at GitHub and might be updated based on their findings. Also outside Europe there have been interest in using the OGI toolkit and co-creation framework.

The six pilots, but also other government organizations have already or are starting to incorporate the techniques of co-creation and exploitation of statistical data into their practices. The apps that are developed will remain available for use. There has been a growing awareness and practical application of the approach across their own organisations and related organisations that has been adopted.

The online videos, tutorials, papers, online courses and presentations produced by the project to raise skills and awareness remain available and can be used. The intention is to run the 'open government' Massive Open Online Course (MOOCS) for a least another 2 years which includes the videos and practical use of LOSD using eth OGI toolkit and co-creation framework.