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OpenGovIntelligence

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

OpenGovIntelligence: Policy Brief

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Abstract:	This document include the Policy Brief of the OpenGovernmentIntelligence project. The main objects, activities, benefits and implications are included.
Keyword List:	Policy Brief, Co-Creation, OGI ICT toolkit, LOSD.

Consortium

	Role	Name	Short Name	Country
1.	Coordinator	Centre for Research & Technology - Hellas	CERTH	Greece
2.	R&D partner	Delft University of Technology	TUDelft	Netherlands
3.	R&D partner	National University of Ireland, Galway	NUIG	Ireland
4.	R&D partner	Tallinn University of Technology	TUT	Estonia
5.	R&D partner	ProXML bvba	ProXML	Belgium
6.	R&D partner	Swirrl IT Limited	SWIRRL	United Kingdom
7.	Pilot Partner	Trafford council	TRAF	United Kingdom
8.	Pilot Partner	Flemish Government	VLO	Belgium
9.	Pilot Partner	Ministry of Interior and Administrative Reconstruction	MAREG	Greece
10.	Pilot Partner	Ministry of Economic Affairs and Communication	MKM	Estonia
11.	Pilot Partner	Marine Institute	MI	Ireland
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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. This services are 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

1.1   Co-creation for innovative services

Governments are changing the way they interact with the public. Instead of providing services, they move towards co-creation in which governments, companies, citizens and other parties collaborate in all aspect of service development and provisioning to create user-centric services. This transforms the landscape of public administrations in which they 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 provide more insight in societal developments and relationships. For example, this data can show the pollution in an area, but also the sources of the pollutions and the changes that have happened over time. In this way providing deep insight that can be used by 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.

1.2   Co-creation in a complex stakeholders landscape

In data-driven public service co-creation many diverse stakeholders are involved which complicates the efforts, but also their joint efforts can result in better services and innovative insights.   The knowledge of most stakeholders about LOSD technologies, tools and applications is limited and despite that innovative services are developed. 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 think freely about innovations and improvements in session in which various stakeholders participate.
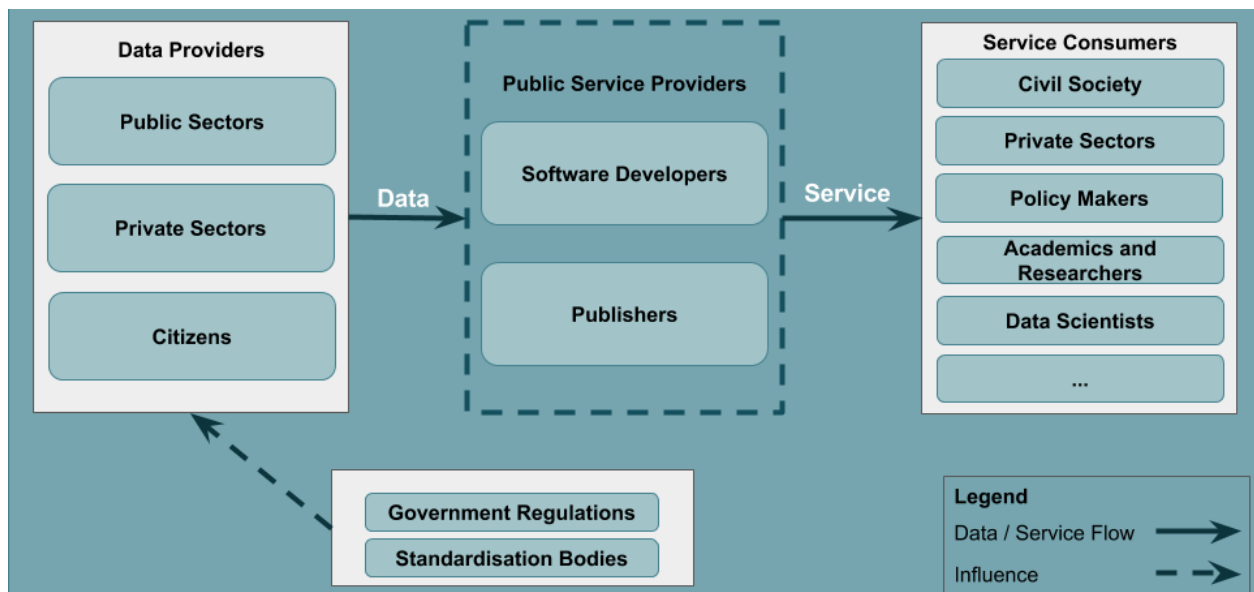

Figure 1 - Complex field of stakeholders

The stakeholders are working together 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.

1.3 Benefits and value

The LOSD use addressed relevant challenges and benefits to co-production of innovative data-driven services. OGI goes beyond traditional top down approaches and proposes the co-initiation, design, implementation and evaluation of innovative data-driven public services.

- *Revealing new insights*: by linking data that were previously separated, new insights can be created by combining and analysing data sets.
- *Improving policy-making*: 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.

- *Creating transparency*: 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 creates the necessary transparency.

- *Empowering citizens*: 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.

- *Innovating of services*; open data can unlock value, but the benefits have been limited so far. By using co-creation and LOSD more value can be unlocked and services can be improved.

- *Stimulating competitiveness and Economic growth*; Open data promise is to have economic developing and growth of billions of Euros.

All these benefits are not easy to realize and a comprehensive approach will be taken in which a platform for co-creation and service innovations is developed.

1.4   New insights from a data cube

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.
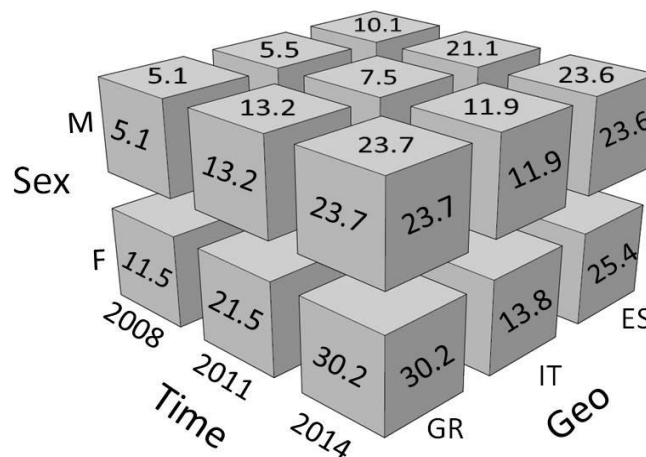

Figure 2 - Example of an open cube for statistical data

1.5   Co-creation platform for innovating services

Co-creation should be integrated in every phase of the process. OpenGovIntelligence provide a platform and buildings blocks for creating innovative applications for statistical data (OGI ICT Toolkit). The platform and building blocks are used to develop applications in the pilot projects. The applications are evaluated for their acceptance by users and their ability to empower users. The innovative services result in outcomes like improved insights, transparency and improved policies.
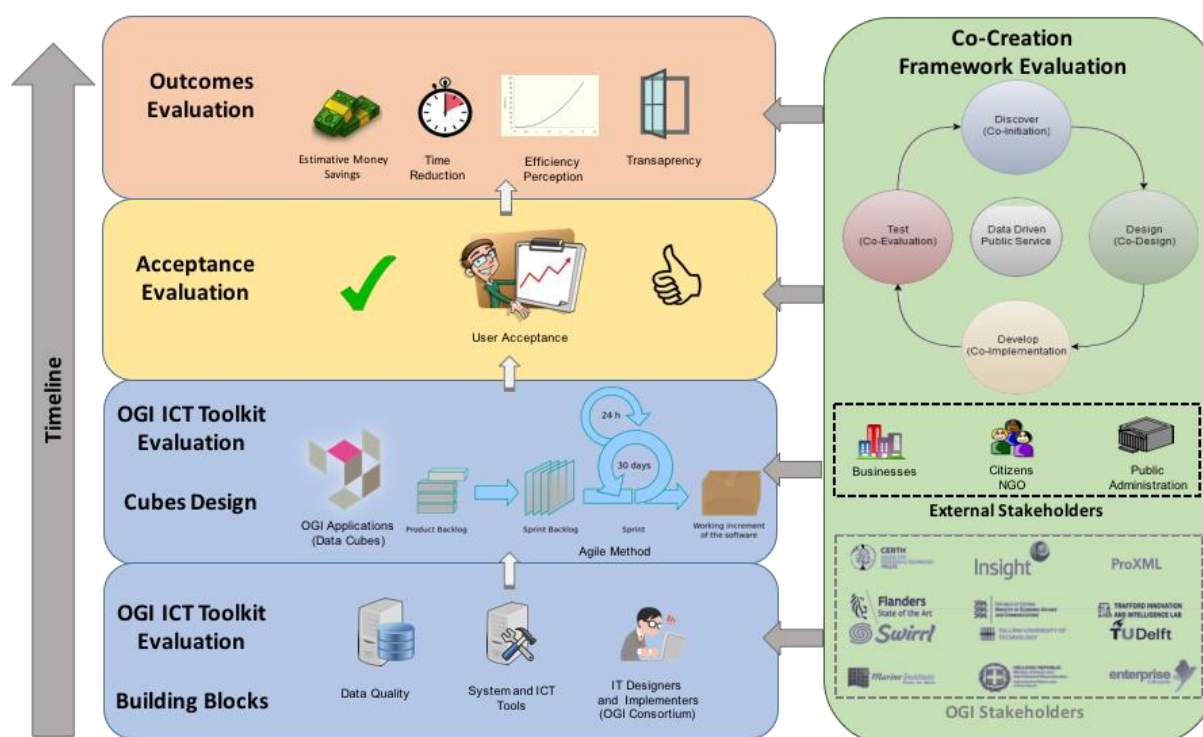

Figure 3 - Stakeholders and dimensions of Evaluation

1.6   Co-creation and disruptive innovation

Open data drives a shift towards a new conception of public services which can be initiated and co-created by anyone, the public sector as well as citizens and businesses. A framework for transforming the traditional public service production process to a lean and agile process of data-driven service co-creation.

The core content of this innovation is a vision of public services, which are driven by the goal of generating public value through innovative uses of data, and which are produced in a user-centric manner through co-creation between public administrations, citizens and businesses. Co-creation is

based on lessons originating from lean and agile service development models that have become the norm in the private sector but not yet so in the public sector. At the same time, the complexity of the public sector context, the variety of factors, actors and processes that affect the shift to data-driven public service co-creation are taken into account.

1.7 Six Pilot Projects demonstrating the value

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.
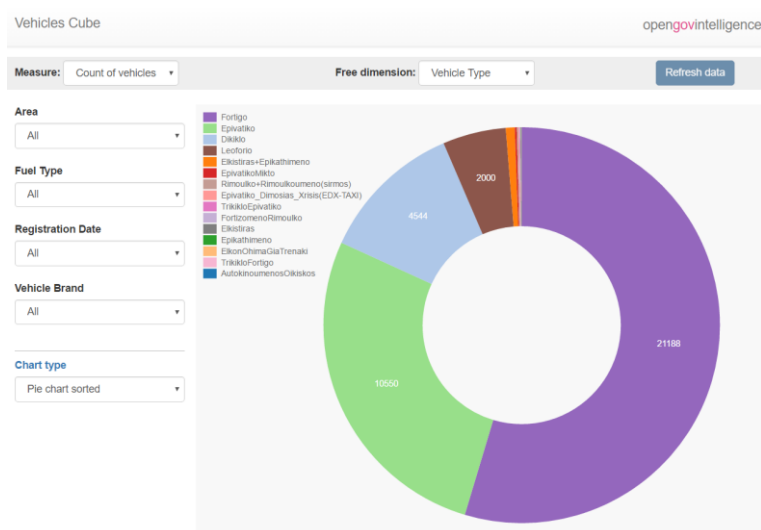

Figure 4 - The Greek pilot using OGI ICT toolkit

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 entrepreneursstarting 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 ad 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.
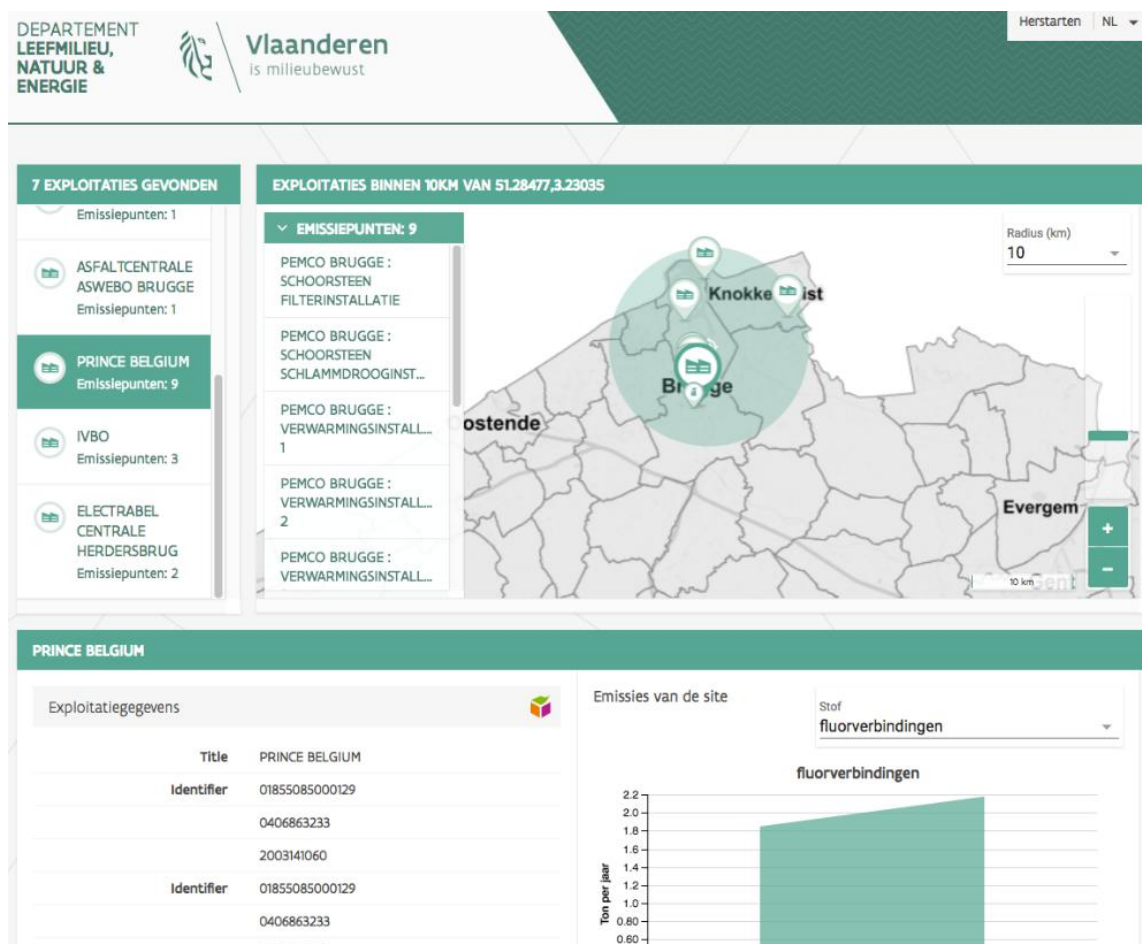
Figure 5 - The environmental dashboard of the Flemish government

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.

1.8   Policy suggestions

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.
- Openness in all stages. 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 can take part in the co-creation of this service.
- 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
- Open data at the source. Data should already be collected at the source and semantics added. This makes the processing and use of data or statistical analyses easier at a later stage.
- Adopt an existing technology platform. The connection of data sets encounters many challenges that can be overcome using the building blocks included in the OGI platforms. Co-creation helps to overcome the challenges and to unlock value from the data.
- Agile development. 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.
- Start small and scale up fast. Work agile and learn from the experiences. One this is clear the situations can be scaled up.

2 OpenGovIntelligence project

The OpenGovIntelligence project is coordinated by the Centre for Research and Technology – Hellas (Greece) and supported by the Technische Universiteit Delft (The Netherlands), National University of Ireland Galway (Ireland) and Tallinna Tehnikaülikool (Estonia) as the R&D partners. The OpenGovIntelligence consortium includes six government agencies: Trafford Borough Council (UK), Vlaams Gewest (Belgium), Hellenic Ministry of Administrative Reform and E-Government (Greece), Majandus- ja Kommunikatsiooniministeerium (Estonia), Marine Institute (Ireland) and Versli Lietuva Viesoji Istaiga (Lithuania), as well as two commercial partners: SWIRRL IT LIMITED (Manchester, UK) and ProXML BVBA (Keerbergen, Belgium).

The OGI project is divided into six packages (challenges and needs identification; Co-Creation Framework; ICT tools development; Pilots planning and evaluation; Dissemination and exploitation; and, Project Management. The Figure 6 summarizes the working packages and deliverables, including the interconnections and interdependencies of them.
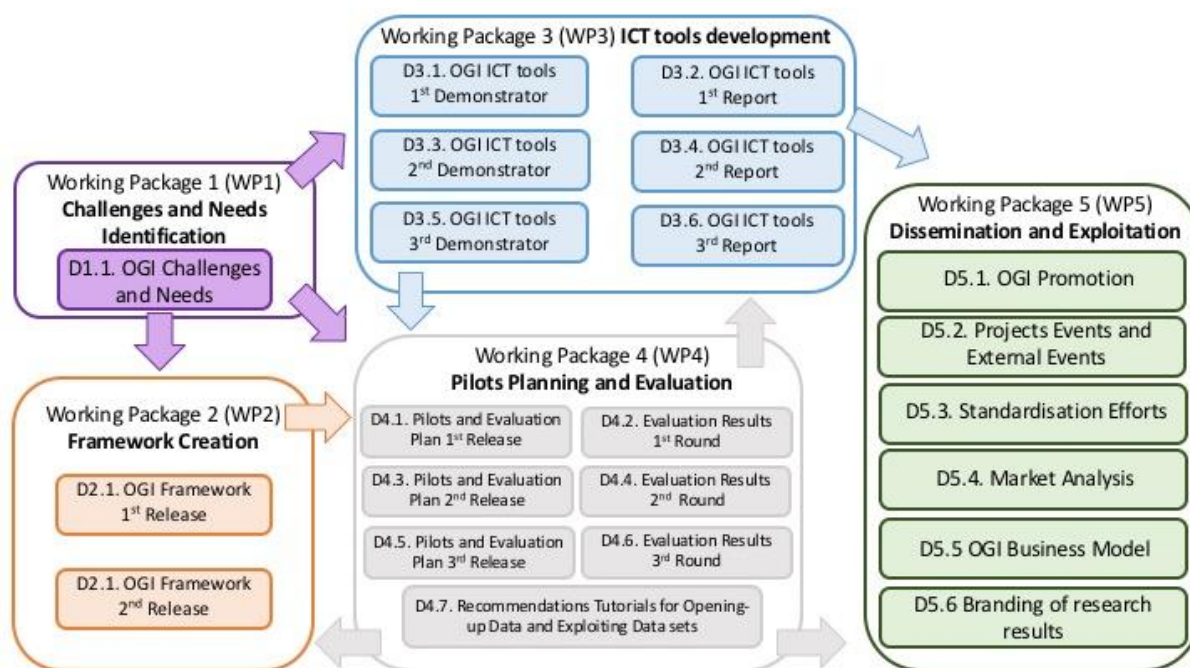

Figure 6 - Interconnections and Interdependencies of OGI Working Packages and Deliverables