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### D8.6 Exploitation Plan

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**Abstract:** This deliverable provides the first version of the OBEU exploitation and sustainability plan, based on the current project development and the future potential for the exploitation of the project's results.

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## Executive Summary

Deliverable D8.6 is released within the context of Work Package 8 “Dissemination and Exploitation” and is in particular associated with T8.5, Exploitation plan and impact report. WP8 is a horizontal component within the project work plan, which aims at planning and carrying out OBEU dissemination and user engagement activities, as well as at devising and delivering the OBEU exploitation strategy and sustainability plan. In this context, efforts in WP8, and more specifically in Task 8.5 focus on studying the market potential for OBEU to all stakeholders, and thereby on defining the market characteristics and OBEU’s positioning against competitive solutions in a way that can create value for all stakeholders involved. The ultimate goal of this analysis is the acquisition of the necessary information for the definition of OBEU’s exploitation plan and business model, as well as its contribution to achieving financial transparency at a European and global level.

Following and building upon the results of the preliminary research, conducted during the first year of the project and reported in the submitted deliverables, this deliverable aims to provide the first version of OBEU’s exploitation and sustainability strategy by addressing potential end-users and uses of the results that will be generated in terms of research activities, commercial exploitation activities, standardisation, skills and educational training, and policy making. The purpose of the latter is to identify and define in detail the business exploitation aspects of the project’s results and to summarize the beneficiaries’ strategy and concrete actions related to the protection, dissemination and exploitation of the project’s results.

## Abbreviations and Acronyms

OBEU	Open Budgets.eu
SAB	Stakeholder Advisory Board

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## 1 Introduction

Transparency can be enhanced to a significant degree thanks to the current technological progress that can provide insights for budget allocation at local, regional, national and international level. OBEU (OBEU) aims to integrate the corresponding budget data on the different levels of administration, defining thus a semantic data model for budgets and spending. Transaction and budget allocation items will be available for discussion and debate by stakeholders, such as citizens, NGOs, public service companies, media organisations, and also public administration entities at different levels of administration. The stakeholders will be provided with a toolbox for creating and sharing visualisations, for conducting comparative data analyses and for the discovering trends. Stakeholders will therefore be able to view and compare allocated budgets and transactions, and give feedback on each item. This feedback can then be shared through social media and also directly exploited by Governments and public administrations so that better budget management will be achieved. The OBEU integrated framework will contain and exploit the following components:

- A semantic data model,
- A financial data ingestion tool,
- A library of visualisation tools with a user-friendly interface,
- A library of data mining and comparative analysis tools,
- A feedback and citizen engagement interface
- Comprehensive Open Data export interfaces,
- The OBEU open-source framework and portal
- Three large-scale use-cases in the transparency, journalism and participatory budgeting domains.

### 1.1 Methodological Approach and Structure of the Document

This section presents in brief the methodological approach followed for defining OBEU’s exploitation and sustainability strategy, and more specifically the activities involved in studying OBEU’s market potential. These encompass the steps of identifying the target stakeholder groups, specifying at a high level the characteristics of the market that the OBEU solution will enter, determining the project’s exploitable assets, and studying the competition in this domain in order to position OBEU as a

valuable asset for all the targeted stakeholders. The outcome of this process shall be the generation of OBEU's business model and exploitation plan.

In this context, the current deliverable is structured accordingly as follows:

- Section 1 exposes the Methodological Approach and Structure of the Document, the SWOT analysis for OBEU and the exploitation potential per work package.
- Section 2 presents the use case description.
- Section 3 analyses the stakeholders' perspective and includes information about the Stakeholder Advisory Board (SAB) and the Stakeholder Analysis Matrix.
- Section 4 analyzes the Competition Analysis and the relevant Market trends.
- Section 5 focuses on the Business Model and includes the Business Model Canvas, Revenue Streams for SaaS Business, Analysis of pay-per-use, Software rental and Software licensing and the PESTLE Analysis.
- Section 6 analyzes the Exploitation Plans per Partner and the project's sustainable development.

## 1.2 SWOT analysis

SWOT analysis (alternatively SWOT matrix) is a structured planning method that examines both the external (Opportunities, Threats) and the internal environment (strengths, weaknesses) of a project or business venture, providing thus a clear view and supporting relevant decision making.

**Table 1 - OBEU SWOT Analysis**

Strengths	Weaknesses
<p>Addressed to a very wide audience, since public spending concerns every citizen and every municipality and government</p> <p>Easy to adopt by users without a technical or data science background</p> <p>Data transformation/renovation possible regardless of the original data format</p> <p>Multiple data types, data modalities (e.g. spatial, temporal, statistical) and domains supported</p> <p>Capability to reuse and combine existing (i.e. data visualisation, analytics and data mining) components</p> <p>Particular focus on Linked Data and unified approach to the Linked Data management lifecycle</p> <p>Ad hoc and dynamic visualisation possibilities</p> <p>Complete set of documentation and tutorials</p> <p>A very open license</p>	<p>The transformation of some data types still needs to be improved</p> <p>Expert knowledge is needed in order to perform advanced analytics (learning curve)</p> <p>The lack of wide adoption of the open, linked data concepts from public sector information providers</p> <p>In order for the OBEU to become a market-ready product platform, extra effort will be required</p>
Opportunities	Threats
<p>Technological flexibility and openness to adapt to related developments</p> <p>Citizens are eager to find out how public spending is allocated</p> <p>Government, administrative and municipal officers want to reassure citizens in terms of public spending allocation.</p> <p>Government, administrative and municipal officers want to know which projects have a greater priority from the citizens' perspective</p> <p>Worldwide awareness raised regarding the democratic possibilities that emerge when semantic data models for (open) budget data and integrated datasets, libraries of visualisation, data-mining, and comparative analysis tools, feedback and citizen engagement interface and user groups engagement can be jointly used in order to foster transparency</p> <p>Possibility to include new and complementary services due to open APIs</p> <p>Enabling the development of custom solutions for SMEs and public sector organisations</p> <p>Integration with machine-translation systems</p> <p>Integration with all government related, municipal and administrative services</p> <p>Few competitors offering data visualisation and data mining and analytics functionalities for public spending data</p>	<p>Existing (partial) competition may develop in the future</p> <p>Introduction of new standards, laws and certifications regarding the publication of public fiscal data</p> <p>Bureaucratic resistance / absence of political will by public sector organisations to use the OBEU solution</p> <p>Difficult to find use cases and data sets that are in formats easy to process. For example it is a common case that fiscal data sets are published in complex pdf format.</p> <p>Significant changes in any technology involved in the project</p> <p>The QoS from the public endpoints</p>

### 1.3 Exploitation per Work Package and Objectives

Following this SWOT analysis, it is worth mentioning the exploitation goals and potential of each OBEU Work Package:

**Table 2 - Exploitation per Work Package**

<b>WP Title and Exploitation Potential</b>
<p><b>WP1: Data Structure Definition for Budgets and Public Spending</b>  The data model will cover <a href="#">public budgets</a> and <a href="#">public spending</a> enabling thus the integration of distinct data sources thanks to the use of the flexible RDF as primary data format. This allows to export derivative in RDF (e.g., CSV).</p>
<p><b>WP2: Data Collection and Mining</b></p> <ul style="list-style-type: none"> <li>• To survey and assess heterogeneous sources and formats of existing budgetary data, establishing a generalised process</li> <li>• To provide a service for the privacy preserving transformation of this data into a standardised, interoperable format</li> <li>• To conduct quality assessment over the transformed data, improve its quality and interlink entities across datasets</li> <li>• To analyse the data and detect patterns, correlations and potential anomalies in budgetary cycles</li> <li>• To produce comparative insights between different regions, periods and sectors, outline trends for future budget allocations</li> <li>• To unobtrusively feed the results of the analysis to the end-user components of the OBEU.org platform</li> </ul>
<p><b>WP3: Budget and Spending Data Visualisation and Exploration</b>  Provide a rapid visualization interface tool that will export the created visualizations about spending and budget data in a standardized way, allowing the presentation of the comparative analysis findings in a customized format.</p>
<p><b>WP4: Requirements, Platform Architecture Integration and Development</b>  Develop the OBEU Framework and Portal to enable stakeholder participation</p>
<p><b>WP5: Journalism Test Beds and Evaluation</b>  Create and share visualisations and comparative data analyses in combination with key stakeholder groups.</p>
<p><b>WP6: Transparency Test Beds and Evaluation</b>  Assess the requirements of EU policy makers as end-users of the platform and incorporate their feedback.</p>
<p><b>WP7: Participatory Budget Test Beds and Evaluation:</b> Integrate tools to facilitate and promote the engagement of citizens and other stakeholders in the pre and post budget decision-making process.</p> <ul style="list-style-type: none"> <li>• A tool where citizens can express their budget allocation priorities during the budget approval process</li> <li>• A tool where citizens can monitor budget transactions</li> <li>• Educational resources for citizens, providing online materials to understand i.e. the budget cycle etc</li> <li>• Ensure transparency during the participation process</li> <li>• Increase competences and capabilities;</li> <li>• Provide structured and valuable information to public administrations, avoiding fragmented or too broad feedback.</li> </ul>
<p><b>WP8: Dissemination and Exploitation</b>  Promote the results of this project to the stakeholder groups  Define a detailed exploitation strategy based on a Software-as-a-Service operation model.</p>

More specifically, OBEU objectives are the following:

1. Financial Data publishing and integration employing Linked Open Data
2. Exploratory and comparative Financial Data Analysis
3. Interactive Budget Management
4. Comprehensive OBEU Framework
5. Cross-domain Application
6. Sustainable establishing of OBEU as a Software-as-a-Service

The OBEU objectives align with the scope and challenges put forward in the call for “ICT-Enabled Open Government” (INSO-1-2014/2015):

1. Provide tools which increase transparency of public sector platforms.
2. Pilot tools which will benefit from open data, and could help monitor and enhance accountability
3. Address challenges posed by the evolution of society, while reducing the administrative burden and increasing efficiency of public services
4. Encourage collaboration between stakeholders within an open government setting
5. Exploit social media to increase connectivity
6. Assess the effectiveness, the social and economic impact, of the provided tools

## 2 Use-Case Description

Use cases are of high significance in terms of project scope, process automation, uncovering of process alternatives, process exceptions, undefined terms, and outstanding issues. Furthermore they present a great tool in order to recognize patterns in functional requirements, to discover gaps between the requirements and the delivered software and to ensure the quality of the software product. OBEU has the following use cases:

**Table 3 - Use - Case Description**

<b>Transparency in Financial Data</b>	Assess the needs of one specific set of end-users of the platform Incorporate feedback in the platform development
<b>Exploit OBEU as a Journalism Tool</b>	The journalism test bed, tools and workshops to communicate budget and spending decisions.
<b>Enhance Stakeholders' Engagement in Budget Measures</b>	Stakeholders will be given means and tools to give feedback on budget allocations. Public administrations will have the tools to receive feedback and to increase citizen involvement and participation.

## 3 Stakeholder perspective

OBEU has identified relevant internal and external stakeholders, i.e. all of the organizations and people who may have an impact on the project, and all those who may be impacted by the project and may be affected positively or negatively by its execution.

### 3.1 Stakeholder Advisory Board (SAB)

The Stakeholder Advisory Board will be coordinated by Daniel Amir Campos Reviriego (CIVIO), Nicolas Kayser-Bril (J++) and Ron Patz (TIEU) and will consist of representatives from the various stakeholder groups (public administrations, transparency and open data advocacy, journalists) from across Europe, and will be

established as part of the work conducted in WP9. The main goal of this board will be to review the OBEU framework produced by the project and ensure that it is applicable, relevant and apt to meet the stakeholder demand. The SAB meets at least twice a year, once in conjunction with the annual Semantic Interoperability Conference (SEMIC) for public administrations.

**Table 4 - Stakeholder Analysis Matrix**

<b>Stakeholder Analysis Matrix</b>						
<b>Stakeholder</b>	<b>Impact</b>	<b>Influence</b>	<b>Stakeholder priorities</b>	<b>Stakeholder contribution</b>	<b>Potential issue</b>	<b>Stakeholder Engagement</b>
Citizens	High	Medium	Gain insights in public spending	Engagement, support	High engagement levels required	Particularly in a difficult economic environment, citizens want to participate in budget allocation processes.
Audit / Reporting	High	Medium	Maintain status and credibility	Share relevant info and actively participate	Not share relevant info	Focus on common goals, i.e. enhance status and credibility via transparency
Business Community	High	Medium	Track revenue streams, uncover opportunities	Share relevant info, actively participate	Not share relevant info	Focus on common goals, since transparency and access to updated info are vital for business and investment decisions
Charities and not for profit	Low	Low	Locate where economic support is needed	Share relevant info, actively participate	Not share relevant info	Focus on common goals, since by tracking the actual budget allocation, the areas that need support are uncovered
Community and community organisations	High	High	Co-decide funding	Share relevant info, actively participate	Not share relevant info	Focus on common goals for financial transparency and democratization of the decision making process
Government / Public Administration	High	High	Maintain status and credibility	Share relevant info and actively participate	Create laws against open data	Focus on common goals of increasing the democratization of the decision making process
IT & Big Data Stakeholders	Medium	High	Co-decide funding	Share relevant info and actively participate	Not share relevant info	Focus on common goals of achieving transparency via digitalization

## 4 Competition Analysis and Market trends

In this section we compare the project's expected market-related progress, through a comparison with existing Open Data portals, and other portals, tools or services promoting financial transparency and supporting citizen engagement.

### 4.1 Open Data Portals

All open data policies are supported by means of so-called data portals, which aim at becoming one-stop shops for open government data. However lack of updated and useful information, as well as lack of political commitment with open data, caused open data portals to fail. One measure to avoid that in the OBEU case is to implement simple applications that user friendly for the stakeholders.

### 4.2 Financial Transparency Portals/Tools/Services

With the current available data, it is very difficult to compare and aggregate transnational financial flows practically, because diverse tools are used to present, search, download and visualise the financial data.

### 4.3 Citizen Engagement Portals/Tools/Services

For the last two decades, cities from all over the world have been implementing participatory budgeting (PB) experiences with different systems and procedures. Germany shows the most advanced digital solutions to engage citizens, as shown in the participatory budgeting portal of the city of Freiburg<sup>1</sup>. However there is no reference digital portal to engage citizens in participatory budgets across the EU. Furthermore currently, in Europe, there is no free and open solution for municipalities willing to engage citizens in budget decision-making. In contrast, OBEU will be free and easy to use and implement, since any public administration providing data to the portal will be able to access the citizen consultation feature of the portal.

### 4.4 Anticipated Obstacles towards Achieving Expected Impact

The anticipated obstacles regard user participation, but can be tackled with an appropriate dissemination plan that will include educative material. Anticipated obstacles:

1. Unwillingness to publish budget and transaction data
2. Unwillingness to use OBEU
3. Difficulty in engaging stakeholders

## 5 Self-Sustainable Business Model

The not-for-profit operational business model of OBEU will be implemented by IAIS and OKFDE, which will sustain the platform and implement this operational model, which allows the use of the platform as a service to public administrations. Two service categories are envisioned:

1. Provisioning of OBEU as Software-as-a-Service (SAAS) to public administrations and public service companies. While the basic usage of the OBEU platform will

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<sup>1</sup> <https://joinup.ec.europa.eu/community/epractice/case/participatory-budgeting-city-freiburg>

be free, service-level agreements and value-added services will be offered against a yearly fee.

2. Provisioning of commercial support, maintenance, deployment/integration and custom extension development for administrations and public service companies, which want to install an instance of the platform on top of their own infrastructure.

## 5.1 Business Model Canvas

Table 5 - Business Model Canvas

KEY PARTNERS	KEY ACTIVITIES	VALUE PROPOSITIONS	CUSTOMER RELATIONSHIPS	CUSTOMER SEGMENTS
<p><b>Common goals</b>            -Optimization of economic development thanks to transparency            -Reduction of risk and uncertainty            -Trust in policies of public authorities            - Bridging the gap between citizens and policy makers by enhancing democratic decision making in real time</p> <p><b>Key Partnerships</b></p> <ul style="list-style-type: none"> <li>• Strategic alliances between non-competitors</li> <li>• Coopetition: strategic partnerships between Competitors</li> <li>• Joint ventures to develop new businesses</li> <li>• Buyer-supplier relationships to assure reliable supplies</li> </ul>	<p><b>Problem Solving</b>            Transparency and Corruption are widely discussed over the last years, leading to problems, such as a lack of trust in public authorities and general social issues. Enhancing transparency and trust has very positive long –term effects for the involved stakeholders.</p> <p><b>Platform/Network</b>            The creation of an easily used platform will increase significantly the scope and the network of the project.</p>	<p>The OBEU platform’s unique value proposition creates value for both citizens and government and administration officials, based on the following characteristics:</p> <p><b>Newness</b>            The OBEU platform presents a new offering in this area, based on the fact that it combines a wide spectrum of elements.</p> <p><b>Performance</b>            High performance standards are set, including for instance better graphics, with the aim to create an efficient and user friendly platform.</p> <p><b>Customization</b>            Tailoring products and services to the specific needs of individual customers or Customer Segments creates value. Our expert developers and data scientists will be able to implement unique, customized solutions based on specific customer needs.</p> <p><b>Design</b>            Design is an important but difficult element to measure. However it plays a great role when it comes to customer acquisition in terms of usability. This is the reason why special focus must be given to creating a user - friendly interface design, which will be appealing for users that do not have a background in data science or development.</p> <p><b>Brand/status</b>            The Consortium Partners are renowned in their areas of expertise, which guarantees the quality of the end-product and facilitates the customer acquisition process.</p>	<p>Our strategy will be to facilitate the Customer acquisition, the Customer retention and to boost sales (upselling). There are several categories of Customer Relationships, which may co-exist within our business model, such as:</p> <p><b>Personal assistance</b>            The customer can communicate with a real customer representative to get help during the sales process or after the purchase is complete. This may happen onsite at the point of sale, through call centers, by e-mail, or through other means.</p> <p><b>Dedicated personal assistance</b>            This relationship involves dedicating a customer representative specifically to an individual client. It represents the deepest and most intimate type of relationship and normally develops over a long period of time</p> <p><b>Self-service</b>            In this type of relationship, a company maintains no direct relationship with customers. It provides all the necessary means for customers to help themselves.</p> <p><b>Automated services</b>            This type of relationship mixes a more sophisticated form of customer self-service with automated processes. For example, personal online profiles give customers access to customized services. Automated services can recognize individual customers and their</p>	<p><b>Mass market</b>            In this context the mass market will be the websites of public administration authorities at regional, national and European level and the websites of public administration authorities, NGOs or any other organization type that is involved in the process of public spending.</p> <p><b>Niche, Segmented and Diversified market</b>            Tailored products such as multi-sided platforms can be specifically designed and offered to public administration authorities, NGOs or any other organization type that is involved with the transparency of public spending.</p>



## 5.2 Revenue Streams for SaaS Business

It is a fact that SaaS by itself is not a profitable business model. SaaS only becomes profitable when coupled with a strategic revenue model. Within the SaaS space, there are endless themes and variations on the theme for the right pricing structure. If you want to succeed in the SaaS space, you would need to plan for profitability from the very start. There are various revenue streams that specifically designed for SaaS business models<sup>2</sup> and can be implemented in the framework of OBEU.

Table 6 - Revenue Streams for SaaS Business

Revenue Streams For OBEU SaaS Business	
<b>Subscription</b>	Subscriptions (fees per term) are fixed installments for cloud-based platforms that allow software to be sold as packages. Furthermore subscription fees are considered a dependable basis for calculating costs and revenues and for planning service levels and capacity.
<b>Transaction-based</b>	User- or usage-based transaction (utility computing) are based to the usage behavior of the platform consumer, benefiting thus the consumer since costs are charged proportional to the volume of the performed transactions.
<b>Affiliate services</b>	This is an indirect mode to generate revenue from a third-party, by offering additional services, such as <b>consulting, certifications, training, and customer service</b> .
<b>Admission fee</b>	Consumers are charged with admission fees, typically a one-time remuneration, in order to be granted access to the cloud-based platform or for cross-charging initial administrative costs.
<b>Downloads / upgrades</b>	A way of generating revenues is the provision of new or significantly improved features by applications.
<b>Customization, New Versions</b>	Adding customization feature, storage, speed, data, bandwidth, etc., along with relevant costs There are risks involved in charging for new versions of your SaaS, such as persuading the customers. The new versions will be specifically designed to meet customer demands and requests, which will facilitate this process.
<b>APIs</b>	An API or application program interface is a means of making the SaaS work with other software applications. Some developers will pay hefty API fees, eyeing the potential of a SaaS that is integrated and customized for their needs. Thus careful consideration should be given to forecasting costs accurately since APIs aren't cheap, and future support burdens may outweigh the potential cost.
<b>Setup Fees</b>	These fees should be kept at a minimum during the onboarding process.
<b>Reporting</b>	Reports and relevant visualizations can be automatically generated or manually prepared according to customer demands. A standard reporting model will be prepared, which will include different elements that can be added and the pricing will be adjusted accordingly.
<b>Pay- per- use</b>	In this case, each unit has a fixed price and the customer is charged periodically. This is a very flexible way to diversify the customer base by adding customers that will use the software only occasionally, and for specific purposes. Furthermore this increases the network externalities effect by enhancing the product's brand and market recognition and awareness.
<b>Software Rental</b>	The customer pays a negotiated subscription fee to use the software license for a certain limited time period.
<b>Software licensing</b>	Software is commonly sold as packaged or server-based licensing. The costs of hosting the software by either the customer's IT organization or the SaaS vendor are significant. The yearly costs of hosting Licensed Software are typically 7% to 15% of the total License Software costs for the IT organization (and 10% to 20% of the yearly SaaS Subscription costs). SaaS vendors' hosting costs should be lower than their customers' IT costs due to economies of scale of running a multi-tenant operation. These hosting costs should be considered both in the customer's ROI and the vendor's Cost of Service. Some Licensed Software vendors transitioning to a SaaS model will charge a separate hosting fee by the vendor or their partners — typically using an MSP (Managed Service Provider). This is generally done during a transitional period when these Licensed Software vendors have customer demand to provide a "SaaS" solution before the vendor has a complete, multi-tenant SaaS architecture. This pricing model is generally not competitive with native SaaS solutions. These separate hosting costs should be added into the total

<sup>2</sup>[https://www.researchgate.net/publication/220891594\\_Revenue\\_Streams\\_of\\_Cloud-based\\_Platforms\\_Current\\_State\\_and\\_Future\\_Directions](https://www.researchgate.net/publication/220891594_Revenue_Streams_of_Cloud-based_Platforms_Current_State_and_Future_Directions)

	SaaS revenue for revenue analysis. The hosting costs are required to compute the Customer Lifetime Value below.
<b>Free Trial</b>	In a free trial, a customer can use the software free for a set timeframe.
<b>Freemium</b>	A Freemium software vendor offers its software at no cost, initially, but upsells a paid version.
<b>Value Based</b>	This is a revenue and pricing model that is based on a metric that most closely resembles the value a customer gets from a product. For instance, the more users use the software and the more valuable the features they use, the more they pay.

### 5.3 Analysis of pay-per-use, Software rental and Software licensing

The unique advantage of OBEU is that a wide range of services will be provided at a low price to public authorities, administrations and municipalities. A combination of monetization schemes can be possible depending on customer requirements.

**Table 7 - Analysis of pay-per-use, Software rental and Licensing**

	Software provider		Customer	
	Advantages	Disadvantages	Advantages	Disadvantages
<b>Pay per use</b>	<p>Diversification of the external customer base effect</p> <p>Makes software piracy impossible</p>	<p>Risk of not recouping development costs</p> <p>Network externalities effect</p> <p>Need to maintain auditable records of usage</p> <p>Customer has low switching costs</p>	<p>No high initial investment</p> <p>Suits occasional usage</p> <p>Allows shift from capital investment to operational costs</p> <p>Low switching costs</p> <p>Possible to test and evaluate the suitability of the software</p> <p>No need to install, maintain, or update</p> <p>Less expense on own ICT personnel</p> <p>No need for own IC T infrastructure</p>	<p>Same price for all customers (non – negotiable)</p> <p>Data security concerns</p> <p>Actual usage difficult to estimate</p>
<b>Software rental</b>	<p>Flexible pricing strategies</p> <p>Diversification of the customer base</p> <p>Network externalities effect</p> <p>Makes software piracy impossible</p> <p>No need to meter actual usage</p>	<p>More risk of not recouping development costs</p> <p>Customer has low switching costs</p>	<p>Price negotiable</p> <p>No high initial investment</p> <p>Costs are predictable</p> <p>Allows shift from capital investment to operational costs</p> <p>No need for separate budgeting</p> <p>Suitable when product is needed for a fixed period</p> <p>Possible to test and evaluate the suitability of the software</p> <p>No need to install, maintain, update</p> <p>No need for own IT infrastructure</p> <p>Less expense on own IT personnel</p>	<p>Costs are the same whether or not the software is used.</p> <p>Data security concerns</p>
<b>Software licensing</b>	<p>Easier to recoup development costs</p> <p>Customer has high switching costs</p>	<p>Risk of license misuse and software piracy</p>	<p>Suitable when product is needed for a long period</p>	

## 5.4 PESTLE Analysis

A PESTLE analysis is a tool or framework for marketers that can be used in order to analyze and screen the external marketing environment of your company and/or project. This strategic management tool gauges the macro environmental factors with the aim to facilitate the decision making process.

**Table 8 - PESTLE Analysis for OBEU**

<b>PESTLE Analysis for OBEU</b>						
<b>Issue</b>	<b>Description</b>	<b>Impact on OBEU</b>				
<b>Political</b>	Determines the extent to which government decision making can influence the project's progress.	Tax policies Stability of government Entry mode regulations Social policies (e.g. social welfare etc.) Trade regulations (e.g. the EU & NAFTA)	Political stability Tax policy Employment and labor law Taxation regulations Trade restrictions or reforms	Societal reforms Bureaucracy burden Corruption level Ecological/environmental issues Current legislation	Future legislation International legislation Regulatory bodies and processes Government policies	Trading policies Funding, grants and initiatives Lobbying/pressure groups Strategy and priorities in terms of budget allocation
<b>Economic</b>	Describes how the economy's performance directly impacts the project	Disposable income of buyers Credit accessibility Unemployment rates Interest rates Inflation Economic growth Interest rates Inflation rate	Financial position of the customer segments Customer's willingness to spend money on the services offered Inflation Salary trends in the sector Finance and credit Inflation EU budgets & subsidies allocation patterns Inflation	Taxes and duties Exchange rates Globalization GDP and GNP Working practices Trading regulations Assess potential changes to an economy's inflation rate, taxes interest rates, exchange rates, trading regulations, excise duties Unemployment, skills level, expertise availability, wage patterns, working practices	Labour cost trends Economic viability of a market Living cost Credit or finance availability Ecological/environmental issues Current legislation Future legislation International legislation	Regulatory bodies and processes Government policies Government term and change Trading policies Funding, grants and initiatives Home market lobbying/pressure groups International pressure groups (Official economic indicators often highlight areas where more detailed information is required.)
<b>Social / Sociological</b>	Scrutinize the social environment of the market and gauge determinants like cultural trends, demographics,	Population demographics: (e.g. aging population) Distribution of Wealth Changes in lifestyles and trends	Educational levels Diversity Employment levels	Income statistics Education and career trends Cultural and social conventions	Lifestyle trends Demographics Consumer attitudes and opinions	Media views Law changes affecting social factors Brand, company, technology image

	population analytics etc					
<b>Technological</b>	This refers to automation, research and development and the amount of technological awareness in this area.	New discoveries and innovations Rate of technological advances and innovations Rate of technological obsolescence New technological platforms (e.g. VHS and DVD)	Communications technologies Change rate Outsourcing levels R&D	Research funding Associated/dependent technologies Replacement technology/solutions Maturity of technology	Innovation potential Technology access Licensing	Patents Intellectual property issues Global communications
<b>Legal</b>	Legal factors affect business activity to a significant degree.	Employment regulations Competitive regulations	Product regulations Antitrust laws	Patent infringements Consumer law	Antitrust law Compliance	Regulatory bodies
<b>Environmental</b>	These factors include all those that influence or are determined by the surrounding environment	Popular attitude towards the environment	Employee engagement	Organizational Behavior	Organizational culture	Energy availability and cost

## 6 Exploitation Plans per Partner

### 6.1 The Members of the Consortium

The consortium in OBEU brings together a mixture of 9 participating institutions from 7 different countries (Germany, Spain, UK, Czech Republic, Greece, France and Belgium). This project brings together the innovative research and technology capabilities of three institutes and universities (IAIS, UEP, UBONN) with strong expertise and experience of relevant projects on Open Data, Semantic Web, and Data Mining, three independent Open Knowledge Foundation chapters (OKF (Central/UK), OKFDE (Germany), OKFGR (Greece) having expertise in open (budget) data technology, community outreach and management, a public sector multiplier organisation (CIVIO), an SME in the journalism domain (J++), and a transparency advocacy NGO (TIEU), whose common objective is to fight corruption and ensure transparency on all levels. The latter three organisations, the project’s pilot partners, will directly benefit from the OBEU platform, which through its data analytics, mining and visualisations would support them in their effort to monitor financial transparency, enhancing and encouraging accountability within public sectors, and, as a result, increasing public sector efficiency, citizen engagement and corruption prevention.

**Table 9 - Exploitation Plan: Fraunhofer IAIS**

Exploitation Plan	
	Fraunhofer IAIS
1. Company/ Organization Profile	<p>Fraunhofer is Europe’s largest application-oriented research organization. Our research efforts are geared entirely to people’s needs: health, security, communication, energy and the environment. As a result, the work done by our researchers and developers has a significant impact on people’s lives. Fraunhofer promotes and conducts applied research in an international context to benefit private and public enterprise and is an asset to society as a whole. By developing technological innovations and novel system solutions for their customers, the Fraunhofer Institutes help to reinforce the competitive strength of the economy in their region, throughout Germany and in Europe. Their research activities are aimed at promoting the economic development of our industrial society, with particular regard for social welfare and environmental compatibility.</p> <p>Fraunhofer IAIS is the Fraunhofer Society’s "data institute" and one of the most renowned research institutions in the data science area, with an extremely strong track record in data mining, machine learning, semantic technologies, information retrieval and software engineering. IAIS research output is documented through a vast number of publications (&gt; 250 publications since 2010) in renowned conferences (e.g. KDD, ICML, ICDM, AAAI, UAI, IJCAI, ISWC, ECML / PKDD, WWW, CIKM, Coling, IEEE CVPR, IEEE VAST, ACM GIS) and leading journals (Machine Learning JMLR, Data Mining and Knowledge Discovery, ACM computing Surveys, IEEE Transaction and Pattern Analysis and Machine Intelligence). IAIS staff is represented in the organizational and editorial boards and program committees of all relevant conferences (WWW, ICML, ISWC, ICWSM, ILP, ECML / PKDD). In addition to the strong position in research IAIS has an outstanding track record in exploitation and transfer of research results. IAIS employs 200 scientists, developers, project managers and business</p>

	consultants. IAIS is a member of BITKOM, which represents Germany's IT, telecommunication and digital media sectors, of the Networked European Software and Services Initiative (NESSI), and of the Smart Data Innovation Lab, an initiative of IT industry and academia in Germany. IAIS coordinates 24 institutes from various engineering sectors in Fraunhofer's Big Data Alliance and its vocational training for data scientists. IAIS is also a founding member of the Big Data Value Association (BDVA), the contractual partner of the European Commission within the H2020 Big Data Public-Private-Partnership. Fraunhofer IAIS is also a founding partner in the German Industrial Data Space (IDS) initiative, which is meanwhile the leading German industrial digitization initiative involving more than 30 major companies.
2. Business Model	Fraunhofer has a hybrid business model that allows funds for research and funds from industrial business activity to be aligned.
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	IAIS will take advantage of its various connections (including press contacts), and regular activities in academic conferences and journals and industrial conventions to promote the OBEU platform and encourage relevant stakeholders to participate in the initiative. In addition, IAIS will also disseminate project results to various standardization bodies in which it is active, especially in the Linked Open Data, Digital Preservation and Public Sector Information domains. In particular Sören Auer serves as an invited expert in W3C's Data Activity Coordination Group and Relational Databases to RDF Working Group. Project results will also be promoted amongst the W3C's eGovernment Interest Group, given that the OBEU portal will enable the citizens to participate in participatory budgets through eGovernment.
4. Market Analysis	With the digitization of all business and public oriented activities and the current demand to gain a better view of public spending revenue streams, it is expected that OBEU has a great market potential at regional, national, European and even international level, since the platform and all related tools can be added to sites of municipal and public authorities and relevant organizations.
4a. Market situation	There is currently a very wide demand to gain insight into public spending and to democratize public policy decisions via the use of new technologies. Both sides, i.e. citizens and administrations, want to have a better insight into the priorities of each other.
4b. Target users, audience, products and work teams	All stakeholders are potential target users. Public administrations can share the available data and interact with the citizens in real time, gaining thus a better insight into their priorities and enhancing the democratic decision making process. Citizens want to be informed about public spending decisions that directly affect their life quality and desire to communicate with public authorities in a more direct way.
4c. Open Budgets' technical contribution	As analyzed in the above sections, a team of highly qualified data scientists and developers collaborate at a European level in order to set up a fully functioning platform, along with related and customized tools.
4d. Open Budgets' competitive position	A unique and multidimensional offering that covers all the facets of this venture, ranging from the technical development to journalistic tools and dissemination strategies and exploitation potential. This unique competitive position is directly related to the unique competencies that each partner contributes to the development of OBEU.
5. Ease of use	Special attention is dedicated to the fact that the platform and all related tools will be user friendly and specifically designed for users with no developer nor data scientist background.
6. Domain-specific Solutions	Not domain specific
7. Exploitation Strategy	IAIS will take advantage of its various connections (including press contacts), and regular activities in academic conferences and journals and industrial conventions to promote the OBEU platform and encourage relevant stakeholders to participate in the initiative. In addition, IAIS will also

	<p>disseminate project results to various standardisation bodies in which it is active, especially in the Linked Open Data, Digital Preservation and Public Sector Information domains. In particular Sören Auer serves as an invited expert in W3C's Data Activity Coordination Group and Relational Databases to RDF Working Group. Project results will also be promoted amongst the W3C's eGovernment Interest Group, given that the OBEU portal will enable the citizens to participate in participatory budgets through eGovernment. The Organised Knowledge (OK) research group will use OBEU results to further establish and increase its position as one of the major research groups for applied Semantic Web technologies. The results will be integrated on top of the existing Linked Open Data infrastructure to promote its exploitation by any interested third party. In particular, Fraunhofer maintains several large LOD datasets (e.g. DBpedia, LinkedGeoData, ReDD Observatory) and is a member of a consortium building the Pan-European data portal PublicData.eu and the European Commission's new Open Data Portal. Demonstrators showing the value of the OBEU portal for citizens, journalists and other interested stakeholders will also be published so as to increase the potential of further industrial cooperation. IAIS will assist both enterprise and public administrations in exploiting Open Governmental Data. The OBEU solution will enable public administrations in various European countries to enhance relationship with citizens, enable them to discuss and participate in budget planning; and in doing so improving transparency and reducing the potential for corruption. IAIS will exploit the platform's technology components for that purpose and provide support, maintenance and custom extensions at their request.</p> <p>In collaboration with the partners, the principal aim is to further develop the platform and the related tools. At the same time, an intensive search is conducted for relevant use cases, use case scenarios and public spending data sets at regional and national level. This all will contribute to the development of the final, fully functioning platform. Then the focus will be to use the existing network and research regarding potential customers and end-users, and actively work so that OBEU will become a common point of reference when it comes to tracking public spending at e European level. This will be possible with the integration of the OBEU in all related sites.</p>
8. Partnership Strategy	An extended version of the partnership strategy will be developed. There is already an existing network of partners that can be further increased by new partners that share the same transparency values and support this mission.
9. Implementation & Responsibilities	Specific control will be dedicated in order to ensure the quality of the platform and its function. The technical partners will be responsible for that.
10. Monitoring & Evaluation	Quality control is very important. Thus continuous monitoring and evaluation will be planned and carefully conducted in order to ensure the right quality performance.
11. Supported standard/structured Data Format	CSV, RDF, XML
12. Data types Supported	Institutional, Temporal, Spatial, Librarian, Media, Products etc.
13. Functionalities / Additional Features Offered	Data Discovery and Publishing, Data Visualisation, Data Linkage, Existing data transformation/renovation
14. Exploitation Routes / Possible paths for future exploitation	Licensing agreements and joint ventures with public authorities at local, regional, national and European level and with organizations that are active in this domain. There is also potential to integrate the OBEU platform beyond the European level.

Table 10 - Exploitation Plan: Open Knowledge Foundation International

Exploitation Plan	
 OPEN KNOWLEDGE	Open Knowledge International
1. Company/ Organization Profile	<p>Open Knowledge is a worldwide non-profit network of people passionate about openness, using advocacy, technology and training to unlock information and enable people to work with it to create and share knowledge.</p> <p>Open Knowledge International was founded in 2004 as a non-profit organisation incorporated in the UK, at a time when open data was a wholly new concept, and has had significant growth in recent years. Open Knowledge International is a world-leading pioneer in open data and works globally, with a central team of 38 FTE distributed across six continents.</p> <p>A pioneer in the movement, Open Knowledge International has played a leading role both in advocating for open data and open knowledge in government, business and civil society and in creating the technology to make open material useful. It is also a growing global community, providing a home for individuals and groups working to open up information and to build the tools, apps and insights to make that information used and useful - from handbooks for journalists, to the data platforms used by governments to publish their open and spending data.</p>
2. Business Model	<p>We are an independent not-for-profit organization, registered in the UK as Charity. Open Knowledge International is funded through projects, grants, and donations but is also providing commercial work depending on projects. CKAN has recently spun off through Viderum and we foresee opportunities for providing services to Administrations with a platform such as OBEU or OpenSpending.</p>
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	<p><b>Objective 1:</b> As the direction towards a Software-As-A-Service business model for OBEU' future platform is getting more precise, and since this future platform is based on the technical structure of Open Knowledge's project Open Spending, we want to ensure that future commercial work (support, customisation, implementation) will be based on a very solid product and infrastructure. We want to develop Open Spending with the best components, build a reliable API, making sure the platform has high level standards of quality and reliability.</p> <p><b>Objective 2:</b> Stimulating the creation, delivery and use of new services and tools coupled with open public data. OBEU will provide a number of features and services to be used in conjunction to open public financial data. These services include visualisation, data discovery or comparative analysis. OKI is eager to develop, together with other partners, using all expertise and knowledge, robust and steady components.</p> <p><b>Objective 3:</b> Provide a better access to public financial data to citizens. One of the main objective of OBEU is to provide a quantitative and qualitative database for European citizens about allocated budgets and spending transactions. Being able to search and find in this database is fundamental. Again, building a powerful search engine and explorer is an objective for OKI.</p> <p><b>Objective 4:</b> Provide a better and easier publication workflow to Administrations. OBEU will allow public administrations (data providers) to upload their data, map it under an International adopted Open Fiscal Data Standard and publish it on the platform. Building technical capacity, education, relevant training, and generate awareness within Administrations is an important objective to sustain the effort.</p> <p><b>Objective 5:</b> Run as much pilots as possible in Administrations to adopt the publication of data with the Open Fiscal Data Package.</p> <p><b>Objective 6:</b> Increase transparency and trust in public administrations. This increased transparency will also impact public administrations in enhancing their accountability within public sectors. This would further impact public</p>

	administrations by preventing corruption and as a result augmenting the citizens' trust. OBEU would thus impact all stakeholders, motivating data providers (public administrations) to publish their data, and also enabling citizens, NGOs, media organisations, and companies to collaborate in generating a more transparent administration system.
4. Market Analysis	Although some pilots has been run in the past in a few governments with the help of Open Knowledge International, there's currently a growing path in increasing the attention of governments in publishing their Fiscal Data. National Plans of the Open Government Partnership are helping toward this trend, but actual implementations are not currently in place. On a product perspective, current Open Data platforms that provide a specific support to deploy, publish and exploit Fiscal and financial data don't exist. This is something that can be undertook with OBEU. Providing the proper pipelines to publish fiscal data directly on Open Data Portals, whatever the provider is (CKAN / OpenDataSoft etc..)
4a. Market situation	While cities, regions or governments are carrying on individual initiatives of publishing their public data, rare are the platforms allowing to do so. Socrata and OpenDataSoft are the one closely to compete with a limited software offer. Socrata > City of Baton Rouge > <a href="https://data.brla.gov/browse">https://data.brla.gov/browse</a> City of Philadelphia Open Budget > <a href="http://www.phila.gov/openbudget/">http://www.phila.gov/openbudget/</a> The Open Budget, Australia > <a href="http://theopenbudget.org/">http://theopenbudget.org/</a> France, the city of Issy-les-Moulineaux (Paris) > <a href="http://www.issy.com/opendata-en">http://www.issy.com/opendata-en</a>
4b. Target users, audience, products and work teams	Data Producers + Publishers (Administrations but also citizens advocacy groups or journalists) Data Readers Data analysts Developers
4c. Open Budgets' technical contribution	Providing an Open Fiscal Data Standard for publication - User friendly platform with powerful datasets explorer - Easy Search Engine - Embeddable visualisations - visualisations applications Easy to create - Data provided in high quality - Data Mining functionality - powerful API - Stable infrastructure
4d. Open Budgets' competitive position	See a) market situation + The European Data Portal doesn't currently support the treatment of Fiscal Data.
5. Ease of use	Ease of use will be provided by a substantial effort in understanding the user workflow at every step of the use of the platform. Concrete user stories might be created, ensuring it's easy to understand how to publish a dataset, how to prepare the data before publication, how to map the data correctly, how to make the best use of the visualisation, how to create fiscal transparency portals out of Open Budgets.
6. Domain-specific Solutions	n/a
7. Exploitation Strategy	OKF will nurture and develop existing online and offline networks of contacts to promote awareness of this project. These include the OpenSpending mailing list, the participatory budgeting international network, and journalistic events such as the School of Data Journalism at the International Journalism Festival in Perugia. Through previous research, OKF has also developed a strong network of important contacts who will prove crucial to leverage the uptake of the tools at an international level. Such initiatives include the Financial Transparency Coalition, the World Bank - particularly the BOOST team - and the Global initiative for Fiscal Transparency. OKF will exploit the outputs

	particularly of the test beds work packages to further inform its work on technical standards in other spheres. OKF is regularly asked to provide input on related topics such as contracting and having an established standard in the budgeting space and set of tools around the projects will be crucial to gathering critical mass in the other spheres.
8. Partnership Strategy	Institutional Partnerships > Partnership with the GIFT Network makes sense, as well as with IBP CSO Partnerships > Keeping strong links with the CSO European scene is a key for success Administrations / Governments > Being attentive to the legislation where cities or regions need by law to publish their budget and spending data
9. Implementation & Responsibilities	OKI has the primary responsibility of developing OpenSpending as a base for OBEU and from there, to coordinate further technical implementation, as well as participating in the dissemination effort.
10. Monitoring & Evaluation	Technical Milestones that represent technical components releases should be implemented to follow-up and monitor the platform development. Another way of monitoring and evaluating the work is organising regular user workshops and training to verify all use cases have been carried on.
11. Supported standard/structured Data Format	The Open Fiscal Data Standard specification ( <a href="http://fiscal.dataprotocols.org/">http://fiscal.dataprotocols.org/</a> ) is an important part of the project since it provides an Open Data standard for Fiscal Data.
12. Data types Supported	Machine readable data types: CSV / JSON
13. Functionalities / Additional Features Offered	Identify and explore in depth key use case per domain would be very interesting. Example: How to read a budget data file if we look at public procurements / Health sector / Education etc.
14. Exploitation Routes / Possible paths for future exploitation	Custom implementation of Visualisation applications / Fiscal Transparency portals / Fiscal Analysis data for Citizens / Developing a course on Budget Data and Transparency ( School of Data ) / Cross Budget Data with other Open Data and explore other ways of exploring public finances and decipher policies

Table 11 - Exploitation Plan: CIVIO

Exploitation Plan	
 <b>Civio</b> <small>Fundación Ciudadana</small>	<b>Fundación Civio</b>
1. Company/ Organization Profile	<p>Fundación Ciudadana Civio (“Civio”) is a non-for-profit organization with the mission of increasing government’s transparency and accountability and citizens’ participation through the use of information technologies, data journalism and targeted advocacy. Civio’s ultimate goal is to achieve significant cultural and legislative changes, fostering civic engagement and a stronger democracy.</p> <p>Civio’s projects combine web applications and data journalism to develop innovative digital tools that facilitate access and interpretation of public information, enabling citizens and other stakeholders to fully participate in the public debate. Combining technology and journalism, we address fields such as public procurement, budgets and expenditure, governmental pardons, public-private power networks and conflicts of interests. Our concrete advocacy agenda allow us to raise these issues with decision-makers, completing the cycle for meaningful change.</p> <p>Founded in December 2011 and officially in operations since February 2012, Civio has partnered with relevant national and international actors – Open Society Foundations, Global Integrity, Sunlight Foundation or Journalism Grants – to become the most relevant civic tech organization in Spain, with over 400,000</p>

	<p>users a year, a broad media presence and a growing community of supporters and donors.</p> <p>Together with the projects and advocacy actions, we develop partnerships with local and regional governments to improve their transparency and accountability practices, we advise and collaborate with the national transparency oversight institution and provide specialized training to civil servants and journalists.</p>
2. Business Model	<p>Civio generates income through three different sources, which ensure the financial sustainability of the organization:</p> <ul style="list-style-type: none"> <li>• Private donations: Citizens and companies who contribute directly to the organization, through 3 different programs: one-time donations, monthly-based contributions and crowdsourcing campaigns. Since 2013, more than 1,000 [C5] private donors have supported our mission. Our policy requires full disclosure of all contributions, which are published in our website. In 2015, private donations accounted for 9% of total income.</li> <li>• Service delivery: professional services provided to local and regional governments to improve their transparency and accountability practices. This include online and in-person training as well as software solutions under a SaaS model. Training and educational services are also provided to media outlets, public administration and universities, as well as consultancy services to corporate innovations centres. In 2015, professional service delivery represented 31% of total revenue.</li> <li>• Institutional support: this stream includes core funding support received from international philanthropists (Open Society Foundations), international project-based awards such as the ones earned from Global Integrity, the European Commission (FP7 and H2020) or the European Journalism Centre, and non-monetary contributions (The Sunlight Foundation). In 2015, institutional support accounted for 60% of total income.</li> </ul>
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	<p>The objective of our Foundation inside the OBEU Consortium is to facilitate and promote the engagement of citizens and other stakeholders in the pre and post budget decision-making process. To do so, stakeholders will be given means and tools to give feedback on budget allocations and specific expenditure transactions. Public administrations will have the instruments to receive and effectively manage the feedback received, enabling greater degrees of active citizen involvement and participation.</p>
4. Market Analysis	<p>We have analysed most of the platforms already developed by enterprises or other NGO's. Public open source platforms have been also analysed, but the number is growing steadily. Examples such as Opennorth, or Partecipare have been analysed, but also public platforms from Paris, Madrid, Ovar, México DF, Guimaraes, Barcelona, and Chicago. We continue analysing more platforms to have broader view of the scope we are working for.</p>
4a. Market situation	<p>We believe a more visual and with a stronger filtering capacity approach will clearly differentiate our solution from existing solutions and gives further value to the platform, as it combines the benefits and addresses the limitations from other tested platforms.</p>
4b. Target users, audience, products and work teams	<p>Our identified targets can be divided in the following categories:</p> <p>Two direct primary target groups:</p> <ul style="list-style-type: none"> <li>• The primary targets are local, regional and national administrations: early-adopters (top-down or bottom-up) of new interactive tools that make the PB processes. This target is formed by regular users of a variety of open-source and interactive tools for the different stages of participation and administration processes.</li> <li>• Civic organizations, activists and social movements conform a target group that increasingly employs on-line participatory tools to engage their communities and</li> </ul>

	<p>communicate with their audiences more efficiently. Along with traditional NGOs, activists and experts in different fields of social change would be part of this landscape.</p> <p>One direct secondary target groups:</p> <ul style="list-style-type: none"> <li>• Education communities, schools, universities. Our PB solution big goal is to make explaining PB processes realities in a much simpler way. This will be helpful to educators.</li> </ul>
4c. Open Budgets' technical contribution	The platform will be open source. Data from other WP's will be assembled to take advantage of the information that can be extracted from the data.
4d. Open Budgets' competitive position	Openbudget's platform will have a strong emphasis in visualisation options than other platforms analysed, will have an enhanced filtering capacity compared to other options and should contain the required learning materials to increase the awareness of the need of citizens' participation in PB processes. It will add simple but effective verification and identification mechanisms and will try to develop a transparency tool for monitoring decision-making processes inside PB platforms including, if possible, previous years' budgets information available to compare with current year's budget.
5. Ease of use	Platform will focus in easiness of use and will have one alfa phase and one beta phase to be tasted by as much as target users as possible to develop a capable and strong solution in terms of user experience and easiness of access and use.
6. Domain-specific Solutions	n/a
7. Exploitation Strategy	<p>CIVIO will further exploit OBEU in Spain among their partners. OBEU will be used as a best practice and awareness raising initiative for municipalities, councils and regions willing to increase their level of budget transparency. It will be promoted as part of CIVIO's project portfolio and, as a result, more administrations are expected to join the project. CIVIO will also use the portal as an information source for the data journalism content of our projects and will promote its use among media partners. Finally, we will promote the use and development of the portal and tools, especially the ones related to citizens' participation and feedback, among our community of users and developers.</p> <p>Functionally, we will define a Minimum Viable Product (MVP) based on the administrators' and users' input gathered in interviews and workshops. This MVP which will be tested for market and audience fit and will evolve from that point iteratively.</p> <p>OBEU PB solution will be a tool targeted at administrators and users without advanced technical skills and will be made available online (Software as a Service, SaaS). Hence avoiding the need for users to download or install any special software. Users will be able to upload their own data (submitting or voting proposals, comments, feedback, etc.) in order to generate discussions, voting processes, announcements, visualizations, etc.) and will be able to interact with data in a more visual and simple way. All in all, the application must be intuitive and user cases should require as few steps as possible.</p>
8. Partnership Strategy	Since product is not ready yet, we cannot assume which part of the platform will need a specific approach from other partners
9. Implementation & Responsibilities	Assess the specific needs of the stakeholders regarding the implementation of digital participatory processes in their jurisdictions. Citizens' organizations interested in budget monitoring will be interviewed to understand their needs and capabilities. The process will result in a collection of user stories, an assessment of the existing knowledge gap, and a list of required educational resources.
10. Monitoring & Evaluation	Monitoring and evaluation practices have not been defined yet since, we do not have the platform ready, neither the features defined that can be evaluated.
11. Supported standard/structured Data Format	n/a
12. Data types Supported	All data type required could be supported, adaptation will be implemented upon request.

13. Functionalities / Additional Features Offered	Our OBEU tool/platform needs to be powerful, but easy to use, avoiding the development of a tool that only technical people would use. We believe a more visual approach will clearly differentiate our solution from existing solutions and gives further value to the platform, as it combines the benefits and addresses the limitations from other tested platforms.
14. Exploitation Routes / Possible paths for future exploitation	Functionally, we will define a Minimum Viable Product (MVP) based on the administrators' and users' input gathered in interviews and workshops. This MVP which will be tested for market and audience fit and will evolve from that point iteratively.  One of the most important lessons learned during our interview work with stakeholders, and through the research of existing tools, is that our OBEU tool/platform needs to be powerful, but easy to use, avoiding the development of a tool that only technical people would use.  We believe a more visual approach will clearly differentiate our solution from existing solutions and gives further value to the platform, as it combines the benefits and addresses the limitations from other tested platforms.  Functionally, we will define a Minimum Viable Product (MVP) based on the administrators' and users' input gathered in interviews and workshops. This MVP which will be tested for market and audience fit and will evolve from that point iteratively.

**Table 12 - Exploitation Plan: Transparency International**

Exploitation Plan	
	<b>Transparency International</b>
1. Company/ Organization Profile	Founded in 2008, TI EU coordinates Transparency International's EU-relevant anti-corruption work, carried out by national chapters across and beyond the European Union, including cooperation among the 26 national chapters in EU Member States, the national chapters in EU accession candidate countries, and the International Secretariat in Berlin (TI-S).
2. Business Model	TI EU is an international non-profit organisation under Belgian law (an "aisbl") with the full name "Transparency International Liaison Office to the European Union" registered as an independent organisation under Belgian law since 2010.
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	TI EU intends on building upon the findings of the research of WP6, as well as using the envisioned functions of the OBEU platform. Research undertaken WP6 includes the main streams of subject matter. First, data needs of European Parliament policy-makers are identified. Second, a quality index will be produced of EU structural funds data, and third, avenues of legislative and/or administrative change will be identified.
4. Market Analysis	N/A given that TI EU is a non-profit organisation
4a. Market situation	N/A given that TI EU is a non-profit organisation
4b. Target users, audience, products and work teams	Advocacy and outreach efforts will primarily be towards EU institutions (Parliament, Council, Commission, Committee of Regions). Target users could include TI EU, CSOs, Parliament (e.g. Regional Policy, Budget, Budgetary Control), Commission, Committee of Regions, Regional and national public bodies.
4c. Open Budgets' technical contribution	N/A given that TI EU does not directly engage in technical work
4d. Open Budgets' competitive position	N/A given that TI EU is a non-profit organisation
5. Ease of use	N/A

6. Domain-specific Solutions	N/A
7. Exploitation Strategy	<p>TIEU will exploit the findings through traditional and innovative channels, in cooperation with relevant CSO allies (Finance Watch, Corporate Europe Observatory, etc.) and through its network of TI National Chapters. TIEU will also present OBEU at workshops and conferences, (e.g. the biennial Conference on Transparency Research) which are tailored to both academic and practical audiences. TIEU is currently in the process of building relationships with youth organisations (European Youth Forum, European Union Studies Association), journalist organisations and piloting a crowd-sourced database in the framework of the 2014 European Elections. This kind of direct engagement with stakeholders and citizens and the resulting European-wide networks of activists, journalists and CSOs will enable TIEU to further diversify and multiply its outreach, which will facilitate the sustainable promotion of the OBEU portal among the target audience.</p> <p>TI EU intends on building upon the findings of the research of WP6, as well as using the envisioned functions of the OBEU platform. Research undertaken WP6 includes the main streams of subject matter. First, data needs of European Parliament policy-makers are identified. Second, a quality index will be produced of EU structural funds data, and third, avenues of legislative and/or administrative change will be identified. The findings of this research, as well as the functions of the OBEU platform, will be utilized in TI EU's future advocacy and research activities that aim to increase transparency and accountability in EU budgets.</p>
8. Partnership Strategy	Findings and use of online platform could be used in transnational advocacy efforts, which include Transparency International national chapters and other civil society organisations
9. Implementation & Responsibilities	Findings and use of online platform could be used in transnational advocacy efforts, which include Transparency International national chapters and other civil society organisations
10. Monitoring & Evaluation	Advocacy and outreach efforts, based upon project findings, will be incorporated into TI EU's monitoring and evaluation exercises.
11. Supported standard/structured Data Format	N/A
12. Data types Supported	N/A
13. Functionalities / Additional Features Offered	N/A
14. Exploitation Routes / Possible paths for future exploitation	<p>The findings of the data needs assessment of EU policy makers will be used in the development and implementation of advocacy and communications strategy. The initial findings, which identified several key focus areas, have already helped in the framing of advocacy messaging and subject matter emphasis. For example, MEPs in the Budget and Budgetary Control committees had placed Cohesion funds as most important in the survey. Therefore, advocacy and communications have stressed this fund in particular when mentioning lack of transparency and/or corruption risks.</p> <p>The findings of the quality index will also be used in future research and advocacy activities, both on an EU and national level. Within the EU, these findings would be highlighted to the main institutions, such as the Commission, Parliament and Council. This will primarily linked to emphasis whether certain Member States and/or national authorities are properly fulfilling their regulatory obligations on transparency/communications of budget data.</p> <p>Legal loopholes and/or shortcomings in legislative and/or administrative will be used also be used for similar advocacy and communications activities in order to try and initiate necessary change to increase transparency in budget data.</p>

	The online platform could be used for research and advocacy activities, though much of this depends upon the final product, the functionality and scope.
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**Table 13 - Exploitation Plan: Open Knowledge Foundation Germany**

Exploitation Plan	
	<b>OKFDE</b>
1. Company/ Organization Profile	The Open Knowledge Foundation Germany is the German Chapter of the international Open Knowledge Foundation Network (now Open Knowledge). Founded in 2011, we are an NGO that is dedicated to promoting open data in all their forms – including public information, publicly funded research and public domain cultural content. OKFDE supports government authorities and other organization to publish open data and to help potential re-users to engage with open data and create innovative new products and services. We work on technologies, training and signature projects that enable greater transparency in public life and new spaces for citizen engagement.
2. Business Model	We are an independent not-for-profit organization, registered in Germany as a 'Verein'. Open Knowledge Germany is funded through projects, grants, and donations. We run a variety of projects and programs in the field of Open Data. The key programs revolve around Civic Tech, Youth, Financial and Political Transparency, and Cultural Data.
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	The general objective of OBEU is to provide tools to publish, integrate, visualise, and analyse fiscal data. In the project, Open Knowledge Germany is the work package lead for the dissemination of project results, and the promotion of best practices in fiscal transparency. We link the project and its result to the global network around fiscal transparency and make sure that the developments in the wider community are linked back to our work. Within Open Knowledge Germany, we will be using the activities developed in OBEU to build out our work around Fiscal Transparency. We already advise governments and maintain the website <a href="http://offenerhaushalt.de">offenerhaushalt.de</a> . In addition, we envision to provide resources for journalists, NGOs and public officials alike on financial transparency and open data. This ambition is further supported by our projects for FIOA requests (fragdenstat), the H2020 project on public procurement Digiwhist, and the project on Data training Datenschule. The four project together will form a new stream on politics, transparency and open data, focused on Germany.
4. Market Analysis	Fiscal Transparency connected to Open Data is an expanding field. It started in 2012 with the first instance of 'where does my money go'. This project has now further developed into <a href="http://Openspending.org">Openspending.org</a> , and many local and national open budget and spending data portals. Also the topic areas have expanded, the field now encompasses journalism projects focused on follow the money principles, advocacy for tax justice projects, public procurement watchdog projects, anti-corruption and transparency projects and even government driven projects where public budget and spending data is pro-actively released. Many organisations work in this field such as anti-corruption and advocacy NGOs, local, national and international civil society organisations, journalists and media, as well governments seeking to become more transparent and increase citizen participation. Public money and how it is spend remains an important topic that affects everyone and where more organizations take an interest in.
4a. Market situation	The field is very broad and expanding. We prefer the term field as it is not a traditional market of supply and demand. There is certainly room for monetized services, but there is also a need for not-for-profit efforts in order to ensure that we target fiscal transparency where it is most needed and that we can continue to produce new- and counter knowledge. Budget data is in essence public, and there

	<p>is a market for the visualization and analysis of this data, as the many examples of budget data portals around the world show. We find two models in this market. First, the Do It Yourself model consists of public services that provide tools and platforms for publishing fiscal data. If you have a file with budget or spending data, you can model the data and upload it on these platforms where off-the-shelf visualizations are provided. OpenSpending.org is the most well-known example of this model. Second, the full-service model builds platforms visualizing budget and spending data, usually in cooperation and/or commissioned by the administration themselves. The most well-known examples are platforms by BOOST (a World Bank program) and Socrata. Here we zoom into the field of the publication, integration, visualization, and analysis of public budget and spending data. In particular, the OBEU tools focus on solutions for data-integration of budget and spending data. Data-integration tools are novel in this field. So far, this is done manually or for one particular context. It is our intention to offer this services in a standardized form, beyond the one-off solutions. As a service, we would offer data integration tailor-made based on the more generic tools that are also offered as “do it yourself” toolkits for budget data integration. The business model we will be applying will be a combination of the above. OBEU and its tool will be developed such that they can seamlessly integrate with the OpenSpending.org website. In addition, data-integration can be offered as a service to potential clients: public administration, journalists, and CSOs.</p>
<p>4b. Target users, audience, products and work teams</p>	<p>It is not a traditional market with suppliers, products and clients. We find that roles overlap: most data-producers (governments), are users as well. At Open Knowledge Germany, we support them so they also serve as clients. So it is best to look at the different identities of actors in the market, and see which roles they can take on. We have identified 4 target groups: journalists, civil society organisations, government (executive and legislative branch) and academia (see dissemination strategy for further details). These four different target groups are presented within the consortium by different organizations. Per target group, user assessments and gap analysis are done so that different needs and wants are met in the different tools and products developed.</p>
<p>4c. Open Budgets’ technical contribution</p>	<p>OBEU aims to make an important technical contribution to the field of fiscal transparency, namely addressing the problem of heterogeneity for fiscal data. The solutions developed for this problem in OBEU form important building blocks for further solutions in data-integration for fiscal transparency. Concretely we have already developed a code-list and vocabulary for Fiscal Data. Also the first tools and pipelines that transform CSV files to the fiscal data package to RDF are being developed and tested. It is the goal to move from manual transformation to more generic pipelines where data can be transformed from CSV to FDP to RDF. Second, new visualizations for budget and spending data will be developed. Third, we develop new tools for direct feedback on budget and spending datasets, add comments, start discussions and annotate data. Fourth, we will revisit the current learning materials around open spending and develop new ways of presentation. OKFDE will not work directly on the development of new tools, standards etc. but will be connecting it to the current practices and standards in the open data community.</p>
<p>4d. Open Budgets’ competitive position</p>	<p>The project has diverse goals that it wants to contribute to: expand knowledge on data integration and research on linked data for its use in fiscal transparency, disseminate knowledge and tools in the community of open source solutions and open data for financial transparency, provide tools for CSOs, journalists working with financial transparency, and provide services to public administration. We will now discuss the OBEU position per goal. 1. The research component and its strong commitment to open source and open data solutions ensures that the solutions developed in the project will benefit the wider community. Second, it will allow us to cooperate with the community already during the developed phase. We have a strong position here, with strong partners in the field of Semantic Data in our consortium. 2. The links to the community in open data are ensured by</p>

	<p>having not one, but three chapters of Open Knowledge in the consortium. Already during the development phase, the project is aligned to openspending.org, giving the project a competitive advantage by seeking cooperation instead of competition, becoming stronger together. 3. For the provision of tools to different target groups, we have a numbers of well reputed partners in the respective fields in the consortium. We benefit from their direct access to these networks. In addition, it allows us to adjust our solutions to needs and requirements directly from the community. This gives us a competitive advantage.4. Finally, we have to link to public administration and offer the services. This requires us to lobby and engage with the entire process of the collection of budget and spending data, visualization, and analysis. It forces us to double check the usability of our solutions. Given that we address at the same time a complicated technical problem; we serve to goals at the same time here. Hence, we must keep ourselves in check so that we remain mindful of the importance of usability in order for us to be able to offer OBEU as a service.</p>
5. Ease of use	<p>OBEU takes on the challenge of ‘fiscal data integration’. We have decided to address this by using linked data, a technique not generally known for its ease of use. The underlying technique requires complicated and rigid data modelling. However, its success for lay-users in the community and the fields depends on its usability. Hence, we find ourselves with a double challenge. First the technical challenge of data-integration in the context of fiscal data. Second, the present this in easy to use tools so that the lay-user can take the full benefit from our solution.</p>
6. Domain-specific Solutions	<p>Our solutions are very domain specific as they will be adjusted to the field of fiscal transparency. Within this field we address the particular problem of data integration.</p>
7. Exploitation Strategy	<p>The main strategy for exploitation lies in our alignment with openspending.org. This ensures that there is a platform that is maintained and used beyond the duration of the project that will offer OBEU tools. In addition, Open Knowledge Germany will increase its efforts for financial transparency during OBEU and develop a comprehensive portfolio of political and financial transparency in Germany and beyond</p>
8. Partnership Strategy	<p>OBEU already has strong partnerships by the composition of the consortium itself. In addition we have the possibility to set up a stakeholder board that will tie the thought leaders in the respective fields to the project ensuring their support and input during the development and dissemination process. We have five strategies to engage partners and stakeholders. First, engage in the current conversations in the community and offer solutions through OBEU. Second, find mutual interest and projects and work together on solutions, user research and projects. And third, support local groups, and individuals with our tools. Finally, we conduct ongoing stakeholder mappings and outreach and follow the community strategy that one can find in the stakeholder mapping and outreach plan.</p>
9. Implementation & Responsibilities	<p>We have the responsibility for dissemination of the project results, how we have planned to take this forward can be found in detail in the communication and dissemination strategy.</p>
10. Monitoring & Evaluation	<p>The evaluation and monitoring tools are described in detail in the document belonging to the dissemination and communication strategy. In short, it means that we track our activities and work with set targets for outreach both on- and offline. We will evaluate these goals in the first dissemination report due in April and report and adjust every 6 months, following the consortium meeting.</p>
11. Supported standard/structured Data Format	<p>The project has developed a vocabulary and code list for budget and spending data. In addition, it has adjusted its tools to the currently developed fiscal data package. Moreover, it follows the latest developments in standardization as discussed in 3WC and the open contracting communities.</p>
12. Data types Supported	<p>The data types that OBEU currently supports are machine readable formats: csv, xls, json etc. It is important that we acknowledge that most budget and spending data is still published in csv. This means that we must always allow for this type of format to be transformed and modelled so that it can be used and analyzed with</p>

	OBEU tools. In addition, we find a lot of budget data files in PDF. To transform PDF to RDF is not in the scope of the project. This thus requires a lobby for more publication in machine readable format. The latter is best served if we show the benefits of machine readable format to the data-owners. Thus, we stick to machine readable formats, and will lobby for all budget data to be released as such.
13. Functionalities / Additional Features Offered	Functionalities: Heterogeneous Data Integration, Generic Pipelines, CSV -> FDP -> RDF, Visualisation, Annotation/Feedback tools, Comparative analysis. Additional features offered: Integration through openspending.org
14. Exploitation Routes / Possible paths for future exploitation	Our main strategy for exploitation lies in our alignment with openspending.org. As per future exploitation, this alignment will ensure that there is a platform, which is maintained and used beyond the duration of the project, where OBEU tools will be offered. Furthermore, Open Knowledge Germany will increase its efforts for financial transparency during OBEU and develop a comprehensive portfolio of political and financial transparency in Germany and beyond.

**Table 14 - Exploitation Plan: University of Economics, Prague**

Exploitation Plan	
	<b>University of Economics, Prague</b>
1. Company/ Organization Profile	The University of Economics, Prague is the biggest public university of economics in the Czech Republic. UEP has six faculties offering applicants a broad spectrum of study fields and branches in bachelor's, master's and doctoral degree study programs. Studies at UEP meet the requirements of the European Credit Transfer and Accumulation System (ECTS). Currently, there are almost 18,000 students at UEP.
2. Business Model	The University of Economics, Prague collaborates with many multinational companies <sup>3</sup> .
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	Objectives and mission of Open Budgets project are specified in description of action. Besides the description of action, the objective of participating UEP on this project is to establish a relationship with partners and elevate the issues of open data on European and also on the national level. We hope that the result will be the greater awareness of open (budget) data in the (at least) professional community.
4. Market Analysis	Stakeholders in the field of open (budget) data and financial transparency.
4a. Market situation	UEP has been actively contributing to the Open Government Data movement in the Czech Republic through research and practical projects and activities. Together with Otakar Motejl Fund and the Faculty of Mathematics and Physics of the Charles University in Prague, UEP is a member of the Open Data Forum that promotes Open Data in the Czech Republic. UEP has also been collaborating with public sector bodies in the Czech Republic on various projects dealing with Open Data publication. UEP has been involved in number of national and international research projects aimed at Open Data, Linked Data and semantic technologies. This allows UEP to promote the results of the OBEU project towards students as well as towards its partners in academia, private and public sector.
4b. Target users, audience, products and work teams	The OBEU platform will be exploited for the education of students both in technological and public administration subjects.
4c. Open Budgets' technical contribution	Open Budget's technical contribution is based on the core objectives of the project which are: - a semantic data model

<sup>3</sup> <https://www.vse.cz/obecne/partneri.php?lang=en>

	<ul style="list-style-type: none"> <li>- a library of visualization tools with a user-friendly interface</li> <li>a library of data mining and comparative analysis tools</li> <li>- a feedback and citizen engagement interface</li> </ul> <p>UEP's main focus is on data model and data mining/analysis tools."</p>
4d. Open Budgets' competitive position	There is a plenty of projects focusing on open data. Open budget's position is unique in focusing on budget open data.
5. Ease of use	A prerequisite of wider using of this platform is clear and simple user interface enabling load external data and perform analysis on them. The results must be clearly interpretable and well visualized.
6. Domain-specific Solutions	The whole platform is domain specific, focusing on public spending and budget data. Details can be found in Description of action.
7. Exploitation Strategy	UEP will promote the results of the project both along the technological and usage line. For the former, a number of scientific contacts and collaborations will be exploited: in the linked/open data field, in the data-mining field, and particularly in their intersection (building on the tradition of co-organizing thematic workshops in this intersection, associated with major conferences such as ECML/PKDD, ESWC or EKAW). The latter will focus on government agencies and municipalities at national level, for which UEP (as major partner in the national OpenData.cz initiative), and in collaboration with outstanding NGOs such as the Open Society Fund <sup>34</sup> , has recently served as important contact point and tutor. UEP will transfer the OBEU principles and technological solutions to transparency NGOs, data journalists, government agencies and relevant corporate entities within the Czech Republic, as well as, to some degree, in neighboring countries (esp. Slovakia). It will leverage on its own as well as OpenData.cz credits in the linked/open data field and on its position of publisher/maintainer of several important LOD datasets (such as Czech DBpedia or public procurement datasets). J++ will use the OpenBudget tools to reinforce the catalogue of products they offer to clients throughout the world, who are looking for ways to communicate on data-heavy, including budgets and spending items. They will reuse the open source parts of the developments, when the license allows them to, in order to integrate the technology to other products on different markets (outside of Europe) and on different verticals (beyond budgets). The openness of the code of the tools developed under OBEU will also let J++ demonstrate its coding skills and reinforce the company's standing among other agencies in Europe.
8. Partnership Strategy	Partnership strategy is based on close cooperation on technical issues with relevant partners including Skype calls and in some cases also personal meetings (despite the geographical distance of individual partners).
9. Implementation & Responsibilities	Our team is leading Work package 1 and significantly contributes to Work package 2, two main parts on which the whole platform is going to be based. WP1 creates a flexible data model to describe public finance while WP2 is responsible for setting up an infrastructure for the retrieval, semantic lifting, enrichment and optimisation of heterogeneous financial data.
10. Monitoring & Evaluation	Monitoring and evaluation are important for UEP's team, because Vojtěch Svátek is a quality manager for the whole project. The key for the monitoring and evaluation is the respect of deadlines allowing sufficient time for a thorough review. In case of delays of certain deliverables it is necessary to postpone follow-up deliverables.
11. Supported standard/structured Data Format	The data model to describe public finance is heavily build on previous work done in capturing data about use of public funds, such as the data model of Openspending.org and Payments Ontology of data.gov.uk. It is formalized as several data structure definitions expressed using Data Cube Vocabulary standardized by W3C. The other expected standard refers to outputs of data analysis and mining parts - PMML language for data mining results a SBVR for output rules.
12. Data types Supported	In terms of finance domain we expect to support both budget and spending data.

13. Functionalities / Additional Features Offered	All functionalities are anticipated in Description of Action document. Currently we do not plan any additional features. It is not excluded that during the implementation phase some additional features will emerge.
14. Exploitation Routes / Possible paths for future exploitation	In addition to the gradual deployment in teaching we assume of hosting a workshop called Data for research and analysis in public finance domain. This workshop is going to be arranged within the conference Theoretical and practical aspects of public finance 2016. This national conference is attended by many experts from public finance domain, it is, therefore, conceivable to spread the awareness about the Open Budget project among them. Other opportunities for exploitation will probably emerge in the following months.

**Table 15 - Exploitation Plan: J++**

Exploitation Plan	
 <b>JOURNALISM++</b>	<b>J++</b>
1. Company/ Organization Profile	J++ is an agency for data-driven storytelling that by turning content into visuals, helps discover trends and gain valuable insights. The analyses and data-visualizations are key to exploring and unlocking value in data.
2. Business Model	We help organizations work with data and publish data-driven stories.
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	OBEU will help us create and provide trainings in budget data and tools to visualize budget data for journalists after the grant period ends.
4. Market Analysis	Journalists require skills in budget analysis to uncover stories and fight corruption as well as tools to explore data and tell stories.
4a. Market situation	No trainers can provide these skills.
4b. Target users, audience, products and work teams	Journalists.
4c. Open Budgets' technical contribution	We will use the OB platform to link to budget data.
4d. Open Budgets' competitive position	OB will be the most comprehensive database of budget data.
5. Ease of use	Our offerings will be based upon thorough review of past experiments and will follow a carefully prepared curriculum.
6. Domain-specific Solutions	Our solutions are tailored to fit the needs of all domain stakeholders in the field of journalism, notably by designing curricula that take into account the specificities of this branch.
7. Exploitation Strategy	Journalism++ will work with our existing and prospective clients to best serve their needs, leveraging OB's key strengths.
8. Partnership Strategy	Journalism++ works with dozens of newsrooms and journalism schools in Europe and will continue to do so with the products we develop based on OB.
9. Implementation & Responsibilities	Journalism++ implements the strategy in full and resorts to subcontractors strictly on an as-needed basis.
10. Monitoring & Evaluation	Journalism++'s shareholders and partners will be kept informed of the implementation status of the exploitation plan.

11. Supported standard/structured Data Format	n/a
12. Data types Supported	n/a
13. Functionalities / Additional Features Offered	n/a
14. Exploitation Routes / Possible paths for future exploitation	n/a

**Table 16- Exploitation Plan: University of Bonn**

Exploitation Plan	
 <p><b>universität<b>bonn</b></b> Rheinische Friedrich-Wilhelms- Universität Bonn</p>	<p><b>University of Bonn (Rheinische Friedrich-Wilhelms-Universität Bonn)</b></p>
1. Company/ Organization Profile	<p>The Rheinische Friedrich-Wilhelms-Universität Bonn (<a href="http://www.unibonn.de">http://www.unibonn.de</a>) was founded almost 200 years ago and is considered to be one of Germany's and indeed Europe's most important institutes of higher education. As home of learning to over 31,000 students, Bonn enjoys an outstanding reputation both at home and abroad. UBO is particularly specialized in the fields of research and teaching and this has led to evolving into the position of a truly prominent international institution.</p> <p>The Enterprise Information Systems research group at the Institute for Computer Science at University of Bonn was established in May 2013 and is led by Prof. Sören Auer. The group focuses on research leading to applications of Linked Data for Enterprise Data integration. The group is closely affiliated with the Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS), where Prof. Auer holds a joint leadership position. Together with Fraunhofer IAIS, UBONN will also explore how the project can be exploited in enterprise settings. Prior to assuming the position in Bonn, Prof. Auer founded and led AKSW research group at University of Leipzig, with which he maintains a close relationship and continues to be an affiliated faculty member of University of Leipzig.</p>
2. Business Model	The University of Bonn is a Public University. With this status, its funding comes from the German State.
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	Given the forces of change impacting the higher education sector, we expect university business models to transform significantly along three broad lines of evolution: Streamlined Status Quo; Niche Dominators; and Transformers.
4. Market Analysis	This depends on the forces impacting higher education that may affect to an unknown at the moment degree the State University Business Models, possibly increasing thus the collaborations with companies and other public entities.
4a. Market situation	At the moment the state and public universities are not active on a market level in terms of sponsorships or any other revenue increasing collaborations.
4b. Target users, audience, products and work teams	The Department of Informatics at the University of Bonn has a great number of students of all levels, e.g. Bachelor, Master and PhDs that are actively working on development and data related projects. From this standpoint, there will

	always be teams willing to further develop the platform by adding additional features for instance.
4c. Open Budgets' technical contribution	A very experienced team forms part of the technical partners and works on the development and the data aspects for the platform.
4d. Open Budgets' competitive position	Unique combination of partners with very advanced technical skills.
5. Ease of use	Our goal is that the platform and the related tools will be user-friendly and specifically designed in order to be easily used by users with no technical background.
6. Domain-specific Solutions	n/a
7. Exploitation Strategy	<p>Given that the University of Bonn is funded by the state, there is no exploitation strategy developed in terms of profit making. However the focus is set on the exploitation potential of this project from a research, data and development perspective. Since it is a very advanced project, it serves as prototype in order to conduct innovative research in this domain. Also it serves as a learning prototype for Informatics Master's degree students that can be assigned small parts of the technical development and be taught and monitored in terms of quality control.</p> <p>UBONN will exploit its academic connections and activities for the dissemination of OBEU technologies, in particular data analysis and mining technologies - for which it will play a leading role in the project. Besides targeting various conferences and journals related to this domain, UBONN will also strive to establish further collaborations with a number of W3C working groups, including the SPARQL Working Group (promoting OpenBudget's Sparql endpoint as an application), and the Semantic Web Deployment Working Group (dissemination of use-case activities and results). By maintaining close collaboration with these initiatives, OBEU will have the potential to influence decisions taken by standardization bodies for the advantage of European regions and municipalities. Through its established connections, UBONN will also actively promote the OBEU' initiative with the main players behind the European Commission's Data.eu data portal. Date.eu enables European governments and public administrations to publish governmental data, and therefore a lot of parallel efforts can be identified between the two initiatives.</p>
8. Partnership Strategy	At a development level, at the moment, the partnership strategy is deployed between the technical partners. When the platform will be fully functioning, partnerships are envisaged with other research centers and university faculties.
9. Implementation & Responsibilities	Quality control in terms of the technical aspects of the platform and of the related tools in order to ensure a high quality function.
10. Monitoring & Evaluation	The University of Bonn is responsible for the regular monitoring in terms of quality of the technical aspects of the platform and of the related tools, in order to ensure that all the project's goals are met.
11. Supported standard/structured Data Format	CSV, RDF, XML
12. Data types Supported	Institutional, Temporal, Spatial, Librarian, Media, Products etc.
13. Functionalities / Additional Features Offered	Data Discovery and Publishing, Data Visualisation, Data Linkage, Existing data transformation/renovation
14. Exploitation Routes / Possible paths for future exploitation	Depends on the State University's Business Model. At the moment, there is no existent Business Model, since the University is funded from the German State. Thus all exploitation potential are related to research, data and technical development aspects. However if the University will have a Business Model in the future, collaborations with companies can be explored depending on the context of that Business Model.

**Table 17 - Exploitation Plan: Open Knowledge Foundation Greece**

Exploitation Plan	
	<b>OPEN KNOWLEDGE FOUNDATION GREECE</b>
1. Company/ Organization Profile	OKFN Greece is the official chapter of Open Knowledge Foundation in Greece. Led by Dr. Charalampos Bratsas, it is a non-government organization that pursues openness and public information freedom in Greece, through participation and transparency activities. It is supported by a national network of volunteers most of which are experienced professionals in the fields of Computer Science, Mathematics, Medicine, Journalism etc.
2. Business Model	OKF GR participates in the development of applications on linked data, it has built the Greek Open Data Hub, it organises hackathons, schools of data and competitions. OKF Greece participates also in the formulations of the Policy of the Greek Open Government and is a strong player in transparency matters in Greece, having signed a MoU with the Greek Ministry of Finance, to provide consulting services to the General Secretariat of Public Revenue.
3. Open Budgets: Objectives / Mission / Vision / Anticipated Project Results	OKFGR will utilize OBEU results directly in public bodies and local authorities municipalities in Greece, starting from the Municipality of Thessaloniki which is an associate partner. The tools developed in OBEU will be deployed and supported for data journalism teams, further extending OKFGR network of volunteers (students, professors of Journalism Departments from Greek Universities and journalists from Union of Journalists of Macedonia-Thrace) and reinforcing its activities in Greece.
4. Market Analysis	The Greek Law N.4305/2014 makes it compulsory for Greek public services to provide open access to their fiscal data. This is in accordance with the European Guideline 2013/37 about the re-use of fiscal data for transparency.
4a. Market situation	OKFGR has already started disseminating information and promoting the value of the OBEU functionality as a means to increase transparency in Greece.
4b. Target users, audience, products and work teams	Public administrators, Journalists, Data scientists
4c. Open Budgets` technical contribution	The contribution of OKFGR in Open Budgets.eu is mainly technical. OKF GR is carrying out research on code lists, transformation of data, data model design, leads the budget and spending data visualization and exploration tasks, as well as, the integration of the Open Budgets.eu platform
4d. Open Budgets` competitive position	OBEU will integrate data from different public sectors at different levels. Various datasets will be comparable and analytics tools will be provided to users, and data conversion will be possible from RDF to other common data formats (e.g. XML, CSV)
5. Ease of use	The OBEU project aims at the development of a SAAS operating platform which will be available to a wide audience, irrespective of their technical skills. This is why it has foreseen the involvement of users in various stages of the development through hands-on workshops which will provide feedback to the development process.
6. Domain-specific Solutions	Budget and spending data framework will be tested in public budget, participatory budgeting and data journalism, but modules implemented in the operating platform are applicable to other domains.
7. Exploitation Strategy	OKFGR will continuously spread the results of the project through its various dissemination channels. The Greek chapter of OKF consists of members and volunteers that are actively participating in the Linked Data research communities with papers submitted to conferences, such as ESWC and ISWC. Apart from the academic networks, OKF will use its access to public bodies and the Open Government Partnership to reach the state officials and public servants. The end users will also be contacted through data journalism

	<p>demonstrations in the country's media platforms. OKFGR will utilize OBEU results directly in public bodies and local authorities municipalities in Greece. The Greek chapter of Open Knowledge Foundation has signed a memorandum of understanding and collaboration with the Greek Ministry of Finance, which is an ideal field of application for the project's purpose, especially in terms of transparency. The tools developed will be deployed and supported for data journalism teams, further extending OKFGR network of volunteers (students, professors of Journalism Departments from Greek Universities and journalists from Union of Journalists of Macedonia-Thrace) and reinforcing its activities in Greece.</p> <p>The exploitation of OBEU results will be twofold:</p> <ol style="list-style-type: none"> <li>1. Exploitation in public administration in Greece, i.e. <ol style="list-style-type: none"> <li>a. Utilization in the Municipality of Thessaloniki for opening up fiscal data</li> <li>b. Promotion in other municipalities of Greece</li> <li>c. Promotion in Prefectures</li> <li>d. Promotion in Public services, ministries etc.</li> </ol> </li> <li>2. Exploitation in Education, promoting especially Data Journalism in various Lifelong Learning programmes, in undergraduate and post-graduate programmes of the AUTH Journalism Department, in the post-graduate programme of AUTH on Complex Systems, as well as, in Schools of Data (training programmes organized by OKF GR). The aim of those training activities will also be to foster entrepreneurship by creating opportunities for the development of applications and services based on financial data.</li> </ol>
8. Partnership Strategy	<p>The OBEU consortium is working towards a platform that will be easy to use and will allow users to achieve comparable and aggregated analysis of budget and spending data. This will increase transparency of public spending in the EU and will enable stakeholders to view analyses and compare datasets form different countries and different public administrations.</p>
9. Implementation & Responsibilities	<p>OKFGR is one of the consortium members that tackles the technical aspects of the project. Specifically, OKFGR is performing the integration of the OBEU platform, as well as, the implementation of visualisation tools.</p>
10. Monitoring & Evaluation	<p>A lot of user involvement was foreseen from the beginning of the project, especially through workshops in which target users would collaborate for the establishment of use cases and user requirements. The consortium has indeed involved citizens and stakeholders and the project milestones have been monitored so as to achieve the best possible outcomes.</p>
11. Supported standard/structured Data Format	<p>RDF data format primarily, users will be able to export derivative data formats, Fiscal Data Package, Standard OpenSpending API</p>
12. Data types Supported	<p>RDF, XML, CSV (Financial Data), JSON</p>
13. Functionalities / Additional Features Offered	<p>Mapping of budget and spending data to the semantic OBEU scheme, Integration of various visualisation tools allowing users to discover patterns and trends, Platform compatible with relevant available platforms already available, Additional tools such as converters will allow transformation of data, code mappings and translations.</p>
14. Exploitation Routes / Possible paths for future exploitation	<p>Public administration bodies, Education, Entrepreneurship</p>

## 6.2 Sustainable development

The OBEU Platform will be developed in order to meet both present and future needs. Sustainable development's dimensions are threefold:

- **Economic:** provides very useful insights in terms of budget allocation
- **Social:** actively supports social integration and inclusion, poverty reduction, effective and democratic governance, and related policies by bridging the gap between policy makers and citizens in the context of the decision making process
- **Natural:** citizens can actively engage in the decision making process by sharing their preferences and priorities in terms of budget allocation decision making.
- The goals of OBEU are in alignment with the Sustainable Development Goals adopted by the 2030 Agenda for Sustainable Development in 2015<sup>4</sup>. More specifically the Agenda<sup>5</sup> includes 17 Sustainable Development Goals (SDGs) aiming to **end poverty, fight inequality and injustice**, and **tackle climate change** by 2030.

## 6.3 Sustainability through Liaisons with other Projects/Initiatives

Although the OBEU framework will be newly designed, we can capitalize on the mature existing implementations being used at OpenSpending.org and OffenerHaushalt.de. Furthermore, OBEU has identified key European Research projects that are re-used and/or extended by its involvement, ensuring thus that it will build upon and leverage existing technologies and encourage strong liaisons amongst the enlisted projects. The following are among the key European Research projects identified:

- **OpenSpending:** OpenSpending seeks to both visualise and build context around information on how governments spend citizens' tax money. OpenSpending is an open source project, which aims to build the world's largest database of spending transactions. This platform provides both an established community to test the components developed as part of this proposal and technical components. In order to make data from multiple countries easily uploadable and in some regards comparable, OpenSpending has developed a lightweight data model based on the needs of its users and other existing data standards. This standard will be built upon by the leaders of WP1 as part of the OBEU project. OBEU's aim is to be integrated in the OpenSpending Platform, which is currently managed and developed by the OBEU Partner OKI. Both OpenSpending and OBEU share the same values for open data and transparency and complement each other.

At the same time, thanks to the policy and networking event organized by the REA and DG CONNECT on February 18th and 19<sup>th</sup> 2016<sup>6</sup>, we had the chance to meet participants of relevant projects<sup>7</sup> and we are in contact with them aiming to increase the project's scope and to create constructive synergies.

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<sup>4</sup> <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

<sup>6</sup> [http://ec.europa.eu/rea/pages/policy\\_and\\_networking\\_meeting\\_on\\_ict\\_en.htm](http://ec.europa.eu/rea/pages/policy_and_networking_meeting_on_ict_en.htm)

<sup>7</sup> [http://ec.europa.eu/rea/pdf/2016\\_policy\\_and\\_networking\\_meeting\\_on\\_ict/participating\\_projects\\_summaries.pdf](http://ec.europa.eu/rea/pdf/2016_policy_and_networking_meeting_on_ict/participating_projects_summaries.pdf)

## 7 Conclusions

This deliverable serves the objective to unlock existing exploitation potential for OBEU. We have taken a great number of management and technological tools in consideration with the aim to properly address all project related aspects and involved stakeholders. In this deliverable, we have conducted a detailed SWOT and PESTLE analysis, which focuses on both the external and the internal environment in relation to the project. Furthermore exploitation objectives and potential have been considered per Work Package. At the same time, the importance of use case descriptions, the careful analysis of stakeholder perspectives and current trends in terms of related portals are among the aspects that have been considered. By conducting risk management, we tried to uncover potential obstacles, while working on the business side of the project and developing the Business Model Canvas and Revenue Streams for SaaS business. The various Exploitation plans per Partner and the focus on OBEU's sustainability constitute significant parts of this deliverable. Taking all the above into consideration, we believe that there is market potential for OBEU, not only thanks to its unique value proposition that makes high technology affordable at a low price for municipalities, public administrations and citizens, but also thanks to the positive effects that will result by the project's implementation in terms of democratizing the decision making process, achieving financial transparency for public funds and investing in the good collaboration between citizens and public authorities, which is one of the fundamental engines for societal progress. Thus, in the next deliverables we will continue to develop all the project related aspects that will guarantee its success.