WeLive

A neW concept of pubLic administration based on citizen co-created mobile urban services

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D5.4 – SOCIAL, ECONOMIC AND TRANSPARENCY ASSESSMENT AND RECOMMENDATIONS V1

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ILLUSTRATIONS

TABLES

1. INTRODUCTION

WeLive anticipates a high impact in the territories where it will be deployed. Three cities and one territory of different size and belonging to very different geo-economic backgrounds have been selected to trial the huge potential brought forward by the collaborative innovation and public-private partnership solution pushed forward by the project. WeLive pushes co-innovation where everyone, especially citizens, shares resources, harnessing the power of mass collaboration and becomes a stronger part of the social ecosystem. WeLive includes four types of stake-holders (research, companies, public administration, citizens/users of stakeholders in the co-creation of services) as to overcome the limits in the traditional provisioning of public services, but also the generally to put life into the static nature of open government data, which will be enriched and made more dynamic thanks to the active participation of all stakeholders in the value-chain of a city.

What is more, "The benefits of open data can be self-reinforcing: they will increase as individuals perceive the advantages and help to improve the accuracy and detail of the information available. However, this cycle can gather momentum only if private industry and public agencies cultivate a vibrant open-data ecosystem and implement policies to protect stakeholders. For companies, that means putting in place the technologies and talent to collect and analyze data. For individuals—as both consumers and citizens—it means being vigilant, savvy providers and users of open data [1]."

This paper intends to give insights on social, ethical economic and transparency point of view paying special attention on how WeLive addresses these issues arising from deployment and use of open services while producing impact not only to each of these sectors, but to overall behavioral changes within WeLive ecosystem. Moreover, we intend to research possible methodologies to be applied when conducting assessment whereas we need to define research indicators and identify the data collection methods for documenting. The D5.4 & D5.5 implementing participants (BILBAO, FBK, TRENTO, LAUREA, NS) will need to decide what they will monitor on an ongoing basis and what they will evaluate in depth in the frame of WeLive project duration. In each case, they will have to revisit the indicators on a regular basis for the best impact (indicative milestones are M25 and M36).

The aim of this exercise undertaken in D5.4 is also to determine economic/social/transparency outcomes and impact of WeLive so that appropriate follow-up action can be taken by all WeLive ecosystem stakeholders to possibly improve its performance in the Pilot Phase II as well as to secure the appropriate tools which will ensure the sustainability of the project.

2. RATIONALE

Open data fuels economic growth. One can choose to believe in the theory and ask for the proof. However, strong evidence on the long-term impact of open data initiatives is scarce. One might perceive that there is a lack of compelling proof, which is partly due to the relative novelty of the open government field, but also to the inherent difficulties in measuring good governance and social change. For instance, we know that much of the impact of policy advocacy actually occurs even before a new law or policy is introduced, and thus it is difficult to evaluate. Likewise, it is also very hard to detect the causality between a direct change in the legal environment and the specific activities of a policy advocacy group. In the same way, the process of attribution is equally challenging when it comes to assessing behavioral changes, hence it is arguable who gets to take credit for increased political engagement and greater participation in democratic processes.

Economists use terms such as information asymmetry [2], allocative efficiency and network effects to explain why open data creates this return [3]. To put it more simply, by publishing data openly and utilizing them in the form of open public services we may be able to make better use of existing resources and create new products and services. One can conclude that these can be of huge benefit to an economy — since it may help people decide where to build a new house, look up the weather, choose the type of transportation to use, and all these on their smartphones. Indeed, there is a growing body of evidence, which quantifies the utility of open data and demonstrates its impact in many countries and sectors, based on a number of studies and varying approaches.

Macroeconomic studies create models that estimate the impact of change on an economy as a whole. They may consider countries or geographies of very different sizes, and by considering the whole economy they often produce large numbers. To make these numbers comparable it is useful to consider them as a percentage of the gross domestic product for the economy that they are focused on. The applied methodologies may differ, but in the essence, the studies determine a financial value for similar economic effects, such as better consumer decision-making, optimized business operations (including processes and procurement) and maximizing the value obtained from existing and new infrastructure [4].[1]

While big numbers can be useful for high-level analysis, microeconomic studies focus in more detail on the behavior of individuals and organizations, usually focused on a specific sector (s).

We can look more closely at those specific examples themselves through case studies. In the UK, the London transport authority, TfL, commissioned a report into the release of their data. This report concluded that the value of the time saved by passengers due to better access to information can be estimated at between £15m and £58m in 2012 [5].

Similarly, Citymapper app currently provides public transport advice in 29 cities and general manager Omid Ashtari has recently said that “Citymapper was created [in the UK] because of the existence of open data. It’s the essential backbone of what we’re working on.” In Spain, it was found that at least 150 companies like Citymapper sell products or services using data published through the nation’s data portal, employing around 4,000 people in 2012 [6].

[1] McKinsey found potential benefits amounting to 4.1% of global GDP for data across all sectors. Those studies focused on the value of public sector open data alone found that it is worth between 0.4% and 1.5% of an economy’s GDP. Indeed, a UK study found that we may actually underestimate the gains from lower prices of public sector information because of the difficulty in valuing the full effects of downstream and future activities.

One additional conducted case study shows widespread usage of similar products and services based on open data, finding that at least 84% of Americans with a smartphone have used open data through their phone's applications [7].

In relation to these and many more, WeLive will ensure that the developed solutions will not only comply with technical and user requirements, but are also feasible from a business point of view. The Business Model Canvas (BMC), which is a conceptual tool that contains a set of elements and their relationships while expressing a company's logic of earning money, will be utilized in this particular task to assess the business feasibility of the WeLive Ecosystem.

What is particularly important is that WeLive as the Open services and We-government project tends to operate in an environment where the contribution of other stakeholders and initiatives is essential to achieving sustainable change, making it even more difficult to show the causality between a project's activities and the impact it strives to achieve. Therefore, these initiatives cannot be described through simple "cause and effect" relationships, as they mostly achieve changes through their contribution to outcomes produced by a complex ecosystem of stakeholders — including journalists, think tanks, civil society organizations, public officials and many more — making it even more challenging to measure their direct impact.

WeLive D5.4 (D5.5) participants are expected to gather the examples on how users are empowered by WeLive open services and We-government initiative as well as how open data and digital transparency projects are changing the behaviour, relationships, activities and actions of identified end-users. Instead of basic project descriptions and mere output, we should seek evidence on how open data and technology that WeLive utilizes in the frame of the services help to influence governance and improve lives, both directly and indirectly. After reviewing the examples, our research team should compile the data to form a database with basic facts, short descriptions and links, while categorizing the repository into a couple of significant fields/sectors.

The core idea behind the WeLive concept is that of an **assembly.** The Open & Collaborative Government ICT infrastructure proposed offers tools to **transform the Needs into Ideas**, then tools to **select the best Ideas** and **create the Building Blocks** necessary to build the envisioned solutions, and finally a way to **compose the Building Blocks** into **mass market Applications** that can be exploited through the WeLive marketplace. Briefly, stakeholder collaboration mediated through public-private partnership gives place to ideas turned into applications and exploited into a marketplace [8].

Moreover, it should be emphasized that "impact" can be assessed in various ways, ranging from mere output (such as publishing a certain amount of raw data), through mid-term outcomes (through, for instance, increasing participation in a democratic process), to long-lasting impact (such as increasing social equity). In some cases, the descriptions may focus on short-term outputs only, even when the project does seem to achieve long-lasting change, while in other cases claimed impact may not have credible proof on attribution. Likewise, several potential benefit categories/indicators for the project outcomes in the case of, for example, transparency /open government space may be identified e.g. Educate or inform citizens so that they can make more informed choices; Promote direct civic engagement and increase citizen participation in democratic processes; Gather feedback for policy-makers and/or the private sector; Monitor and hold officials and/or the private sector accountable and similar.

Assessing impact means we should be able to prove if there has been some kind of change in the ecosystem. Whether that change is "good" or "bad" will always depend on a normative position. The outcome mapping approach, as well as other robust evaluation methods, has a strong potential for the long-term evaluation of complex projects through detecting and documenting the desired change model in the behaviors, relationships and activities of people and organizations, i.e. identified user groups, an open data initiative interacts with. It might also provide a good framework for identifying other research methods (such as randomized control trials or quantitative surveys) to prove causality.

In the coming period, D5.4 (D5.5) participants will need to refine the assessment frameworks designed from social, economic, and transparency point of view. We need to define research indicators and identify the data collection methods for documenting. The D5.4 (D5.5) implementing groups will need to decide what they will monitor on an ongoing basis and what they will evaluate in depth in the frame of WeLive project duration. In each case, they will have to revisit the indicators on a regular basis for the best impact (indicative milestones are M25 and M36).

Open Data utilized may supports public oversight of governments and helps reduce corruption by enabling greater transparency. For instance, Open Data makes it easier to monitor government activities, such as tracking public budget expenditures and impacts. It also encourages greater citizen participation in government affairs and supports democratic societies by providing information about voting procedures, locations and ballot issues. Open Data gives citizens the raw materials they need to engage their governments and contribute to the improvement of public services. For instance, citizens can use Open Data to contribute to public planning, or provide feedback to government ministries on service quality [9].

"The European Commission, within the context of the launch of the European Data Portal, wished to obtain further evidence of the **quantitative impact** of re-use of Public Data Resources. A study was carried out with the aim to collect, assess and aggregate all **economic evidence** to forecast the benefits of the re-use of Open Data for all 28 European Member States and the ETFA countries, further referred to as **EU 28+**, for the period 2016-2020.

Direct benefits are **monetized benefits** that are realized in market transactions in the form of revenues and Gross Value Added (GVA), the number of jobs involved in producing a service or product, and **cost savings**. Indirect economic benefits are i.e. **new goods and services**, time savings for users of applications using Open Data, knowledge economy growth, **increased efficiency** in public services and growth of related markets [10]. " [2]

[2] In 2016, there will be 75,000 Open Data jobs within the EU 28+ private sector. By 2020, this number is forecasted to increase to just under **100,000 Open Data jobs**. This represents a **32% growth** over a 5-year period. Thus, in the period 2016-2020, almost 25,000 new direct Open Data jobs will be created.
https://www.europeandataportal.eu/en/content/creating-value-through-open-data

Figure 1: The market size is expected to increase by 36.9% to a value of 75.7 bn EUR in 2020, including inflation corrections. For the period 2016-2020, the cumulative direct market size is estimated at 325 bn EUR. (Graph published on the European Data Portal)

In the frame of WeLive project, public data, and their re-use, are key resources for social innovation and economic growth. Open Data provides new opportunities for governments to collaborate with citizens and evaluate public services by giving citizens access to data about those services. Businesses and entrepreneurs are using Open Data to better understand potential markets and build new data-driven products. Open Data makes it easier and less costly for government ministries to discover and access their own data or data from other ministries, which reduces acquisition costs, redundancy and overhead. Open Data can also empower citizens with the ability to alert governments to gaps in public datasets and to provide more accurate information.

Additionally, Open data can become an instrument for breaking down information gaps across industries, allowing companies to share benchmarks and spread best practices that raise productivity. Blended with proprietary data sets, it can provoke innovation and help organizations replace traditional and intuitive decision-making approaches with data-driven ones. Open-data analytics can also help uncover consumer preferences, allowing companies to improve new products and to uncover anomalies and needless variations. That can lead to leaner, more reliable processes.

Admittedly, there is much work to be done by governments, companies, and consumers to craft policies that protect privacy and intellectual property, as well as establish standards to speed the flow of data that is not only open but also “liquid [11]”. In addition, consumers have serious privacy concerns, and companies are reluctant to share proprietary information — even when anonymity is assured — for fear of losing competitive advantage (further addressed in the WeLive Ethic Assessment Document D5.3 & D8.1 –D8.6 more closely).

Since further work is needed to develop clear change models, there are suggested headings and thematic chapters that should be considered by contributing parties of D5.4 (D5.5) during the assessment process (BILBAO, TRENTO, LAUREA, NS).

The value assessment (transparency, social innovation, economic value) – one for each criterion

- *Results of the assessment: scope of use Results of the assessment: direct benefitsMethod of calculationOther benefits Supplementary benefits further down the value chain Indirect and derived benefits Potential for further benefits Challenges – not all expectations realizedPlan to secure further benefits – recommendations*

3. IMPORTANT CONSIDERATIONS – SWOT ANALYSIS

3.1. Social and transparency impact measurements

Strengths The impact of open data and technology – enabled transparency does not lie solely in the economic sphere. There are numerous other benefits for our societies through increasing state of institutional responsiveness, reducing the levels of corruption, building new democratic spaces for citizens, empowering local and disadvantaged voices or enhancing service delivery and effective service utilization.
Having in mind the objectives of the project adopted by the WeLive Consortium, it is clear that the main impact of the WeLive project will be in the social domain.
Deliverable partners should provide evidence base on the social and/or political impact of open data initiative/project such as WeLive as well as developing a methodological framework to unpack theories of change to evaluate social impact of open data services provided as well as their digital transparency impact.

Weaknesses On more general level, how effective open data and government transparency actually are at producing these social benefits is not yet at all evident, though. According to a comprehensive synthesis report prepared by the Institute of Development Studies, much of the existing literature seeking to measure impact and effectiveness of transparency and open data accountability initiatives face a common challenge: It is incredibly difficult to come up with definitive, evidence-based generalizations on how "x" type of initiatives produce "y" . There are significant methodological challenges around compatibility and unevenness of evidence [12].
More recent academic literature suggests that evidence on the social and/or political impact of open data initiatives is incredibly scarce. In the second edition of Open Data Barometer (2015), a global assessment of open data initiatives points out that most evidence remains anecdotal and describes output rather than outcomes and impact [13].

Opportunity Although WeLive value assessment will be directed across different sectors separately, it should be noted that they are not only inter-connected, but also co-dependent:
1) The underlying objective of the project is improvement of the quality of life in cities through creation of enabling technologies that will facilitate a range of new smart phone applications for dealing with the public administration and interacting with the city in general. This ecosystem will not only allow consumption of these new services, but will also enable citizens to actively contribute to creation of the services and even profit out of providing information required for the new applications to run or implementing the applications themselves. This new paradigm will inevitably impact the society in a number of ways.
2) In turn, the ability to directly influence development of the city where they live will empower the citizens means increased transparency of the way the public activities are organized and funded will positively influence satisfaction of the citizens with the public administration and the city itself. This will lead to better profile of the city in terms of the attractiveness for living as well as for commercial investments, which will lead to improvement of the local economy.
3) The ability to design applications for dealing with the city matters based on own interests will help citizens to deal with public administration more efficiently thus improving the overall satisfaction and the quality of life which will again lead to making the city a more attractive place to live and work, which will eventually lead to better economic development.

Threats WeLive as the Open services and We-government project tends to operate in an environment where the contribution of other stakeholders and initiatives is essential to achieving sustainable change, making it

even more difficult to show the causality between a project's activities and the impact it strives to achieve. Therefore, these initiatives cannot be described through simple "cause and effect" relationships, as they mostly achieve changes through their contribution to outcomes produced by a complex ecosystem of stakeholders — including journalists, think tanks, civil society organizations, public officials and many more — making it even more challenging to measure their direct impact. Likewise, it is also very hard to detect the causality between a direct change in the legal environment and the specific activities of a policy advocacy group. In the same way, the process of attribution is equally challenging when it comes to assessing behavioral changes, hence it is arguable who gets to take credit for increased political engagement and greater participation in democratic processes.

3.2. Economic impact measurements

Strength In the United Kingdom, one of the leading governments in the field of Open Data and one where the economic benefit has always been strongly on the agenda, an independent review was commissioned as the evidence base for the next phase of the Open Data program and published in 2013. It "conservatively" estimated the direct economic benefits of public sector information at around £1.8bn a year, with an overall impact including direct and indirect benefits (such as time saved by access to real –time travel data) of around £6.8bn [14]. In Spain, a study found that the "infomediary" sector (companies that sell services on top of Open Data) has at least 150 companies and employs around 4,000 people and generates 330-550 million Euros annually that can be directly attributed to Open Data reuse [15].

These studies do not converge on a single, consistent, measure of the economic potential of Open Data. However, a common finding is that although the "direct" economic benefit of the business providing data – rich services is significant, the majority of the overall benefit is "indirect" in the sense that it accrues to the users of data-rich services, in the business and the personal sectors, rather than the providers of those services. Many data-rich services are themselves delivered over the internet and so have very low marginal costs of distribution and customer management so, freed of upstream data charges or restrictions, end-user prices can be driven down so as to reach a very large market. This in turn increases the consumer surplus. Second, there is some evidence that open data attracts new types of re-users, in particular SMEs, and new business models such as advertiser-pays rather than end-user-pays. For instance as a consequence of the price cuts by the Dutch Meteorological Office KNMI, a new SME re-user launched an innovative service which allows anyone to find out whether it is going to rain in the current location over the next few hours. It generated around 300 million hits per year throughout Europe in 2010. This service is provided completely free of charge to end-users, and is paid for through advertising revenues. Third, it is also apparent that the value is not in the data by itself. **It is the combination of the data with one or more other factors such as an innovative idea, the inadequacy of existing services, the availability of new techniques to process data (such as "big data analytics" methods) or new technologies for the delivery services, including the use of smartphones or even the "internet of things"** (for instance in-car navigation systems).

Weaknesses Open Data is a relatively new concept in its current, recognizable, form, dating from 2006-07- although in some sectors and in some countries, there were earlier developments which would now be seen as Open Data. Even in countries, which started relatively early to release government information as Open Data the benefits still appear to be developing. Like other innovations, it is likely to be many years until there is full adoption and the implications for downstream users have been fully understood. Indeed, the usage of

Open Data depends not only on the availability of the data itself but also on the ideas of how to use it and the tools to use it effectively [16].

In McKinsey and the UK Advisory Panel on Public Sector Information a range of holistic and sectorial studies were reviewed and some common difficulties noted, including the difficulty already discussed of separating the value of the data from the value of the innovation [17]. It is also increasingly difficult to attribute the total benefits to the individual factors.

It should be also noted that in many cases, economic benefits took time to emerge; moreover, even where entrepreneurs acted quickly it took some time for products and services to come to market and to be widely adopted. Simple applications for presenting essentially the original information in more attractive and accessible ways can develop quickly, as has been seen in the number of public transport applications in cities such as New York (68 for the subway alone), London (500 in total) and St Petersburg (30 for buses); more analytical data services, particularly where the data is enriched, can take longer to design, develop and market widely [18].

Opportunity Since the first public administrations started sharing their data as Open Data, the idea of Open Government has been disseminated around the world rapidly. Despite this rapid diffusion of Open Government principles, they have not the same influence and the same grade of development in the whole world. For example, as described by the Open Data Barometer, Europe leads the region ranking, with widely known initiatives like data.gov.uk (UK) or opengov.se (Sweden). Apart from these well-known examples of Open Government, many European countries are developing their own Open Data portals inspired by the Right to Information legislation, political freedoms, and the quality of Data Protection Laws. Furthermore, the European Union is empowering the Open Government idea through its Open Data portal (http://open-data.europa.eu/en/data/). Very close to European initiatives, United States and Canada achieve high scores in Open Data Barometer's ranking due their Open Data portals (data.gov and data.gc.ca) [19].

Threats Another difficulty is that it can be harder to measure the indirect benefits to consumers than to measure the direct economic activity of data-rich service providers themselves. This is unfortunate since the majority of the benefits are usually in those indirect benefits. However, in some sectors progress has been made on measuring indirect benefits. For instance in the transport sector the existing approach to cost – benefit analysis usually measures the value of any investment –for instance in a new road or a new public transit scheme –principally by the benefit to end users in terms of the economic value of time saved. The transport sector has developed robust methodologies to estimate this.

A final difficulty is that it has so far proved hard to measure the public sector benefits of open data. Like other business consumers, public institutions are purchasers of data-rich services. Indeed, in some cases they buy back their own data after it has been aggregated or enriched by data –rich service providers. For example, in the Catalonia Region of Spain the cost savings and efficiencies to public institutions themselves of open metadata on geospatial datasets mandated by the EU INSPIRE Directive recovered four years of development costs in just six months [20]. In addition, most of countries which have started adopting Open Government policies have serious lacks on exploiting the potential of Open Data. Many of them have focused their attention only on implementing their open data portals, placing little efforts on bringing open data closer to entrepreneurs and citizens through suitable APIs, easily consumable by application developers.

3.3. WeLive project SWOT Analysis when Assessing Social, Economic, Transparency Impacts

In relation to WeLive project implementation in different European countries and their cities and one Region, SWOT analysis has been performed as to gain clearer insights in task milestones' implementation.

BILBAO SWOT ANALYSIS

Strengths

Bilbao City Council has made a clear commitment to create a "Leader City in Technology, Innovation and Knowledge Management". The formulation of this goal is concretized in the "construction of a competitive city based on knowledge management and innovation".

Bilbao City Council has a long history and recognition of Transparency practices in the City's management including the development of Transparency, Open Data and Participation portals.
In the area of participation, important processes of citizen participation have been developed in different areas, highlighting those related in the definition of Works of Rehabilitation of neighborhoods and participatory budgets.

In the area of data opening, the City of Bilbao has a strategic project to open data and an Open Data service with a degree of definition and maturity.

In the area of economic development of the city, the City of Bilbao has developed important innovation initiatives in different programs aimed at entrepreneurs and start-ups and small and medium enterprises.

Weaknesses

At present there is an insufficient level of training of citizens and other agents of the city's ecosystem in the use of data. Entrepreneurs, research centers and companies are not yet in the key of reusing public data. Policies are needed to promote reuse in order to capture the value of the data. Discontinuity of Initiatives and projects of Innovation and absence of a relational map that allows focusing each one of the innovation initiatives with the corresponding departments of the City council. Implication of companies and the infomediary sector in promoting the use and development of a dynamic ecosystem around data capable of creating solutions that bring knowledge and business intelligence. Lack of visibility of projects and initiatives through social networks to be able to link them with the objectives of public policies of the city council.

Opportunity

Opening data provides raw material for transparency. For the City Council, the data are the basis of accountability and evaluation of public policies. Civil society allows it to exercise a social audit function. The Open Government is the natural setting for these policies as it promotes access to information, collaboration and participation of the public, contributing to the improvement of public management, transparency and increased confidence in their administrations.

Technology allows us to connect with a more active and autonomous citizenship in their social performance. That does not mean that administrations have less to worry about. On the contrary, it demands more information, more transparency, more openness and more collaboration. A very interesting fact is that the

cities that foster and incorporate innovation are cities in which the collaborative economy – the prosumer – is penetrating more. By themselves, the data are often difficult to interpret by the final recipient, so it is important to have a broad base of information intermediaries – or infomediarios – among which play a prominent role and journalists, professionals and amateurs, through the practice of so-called "data journalism".

The infomediary sector can generate an active data market and a volume of business that even translates into generation of quality employment. As already mentioned, the data alone do not generate value and it is necessary to promote a dynamic ecosystem around them capable of creating solutions that contribute knowledge and business intelligence.

Threats

Lack of involvement of citizens in the definition and implementation of public policies in the city. Lack of creation of local economic fabric, difficulties in attracting talent to the city and lack of access by SMEs to city-building processes.

Limits on transparency in public management and lack of accountability on the part of public officials

HELSKINI REGION SWOT ANALYSIS

Strengths

Corruption Perceptions Index (CPI) assesses the occurrence of corruption in the public sector in 176 countries. According to Corruption Perceptions Index 2016 estimated incidence of corruption within the public sector in Finland is the third lowest (89 points). In 2015, Finland was the second. Typical for countries with low level of corruption is government transparency, extensive freedom of the press and independent courts, which do not place the citizens in an unequal position. According to The Chairman of Transparency International, José Ugaz, only freedom of expression, transparency of political decision-making and strong democratic institutions guarantee the civil society and low level of corruption. (Transparency International).

Finland is a society strongly based on information and its utilization. Finnish information policy covers the activities of both the public and the private sector, and it cannot be allocated to any specific actor or administrative branch. Information policy is linked to all other policies because the objective is that any issue will be prepared and decisions will be made based on comprehensive information. Other goals of information policy include improving services, developing administration, sustainable economy and promoting democracy. (The Ministry of Finance).

Information resources have been opened up in Finland in diverse subject areas, including data and information related to terrain, weather, climate, maritime, traffic, financial and cultural materials. Public access to information resources has been outlined as a part of the preparations related to the government spending limits and current public finances. The Ministry of Finance has requested the ministries to provide their plans as to which information resources in their administrative branch should be opened and what would be the economic and social impacts. In addition, it is important that government agencies and public bodies continue to open also public information materials, which can be opened without additional financing. An increasing number of municipalities are also opening access to their materials. (The Ministry of Finance). International surveys have also shown that Finland has managed to open up access to information resources very well. (The Ministry of Finance).

Since 2011, Helsinki metropolitan cities have been opening their data. The **Helsinki Region Infoshare (HRI) service** aims to make regional information quickly and easily accessible to all. Essentially, HRI is a web service for fast and easy access to open data sources between the cities of Helsinki, Espoo, Vantaa and Kauniainen. The data published is mainly statistical, giving a comprehensive and diverse outlook on different urban phenomena, such as living conditions, economics and well-being, employment and transport. A good proportion of the data material offered by the service is GIS based. (HRI.fi).
The data can be used in research and development activities, decision-making, visualization, data journalism and in the development of apps. The data may be used by citizens, businesses, universities, academies, research facilities or municipal administration. The data on offer is ready to be used freely at no cost. There are no limitations on users; anyone interested in open data can participate. **For example**, existing open data has already been utilized in different ways [21] for an overview of apps and services created with the use of open data. (HRI.fi).
There are **four operational areas** in which the HRI service mainly operates in: producing data, opening data, sharing data and utilising data. The main operational activity is to support the producers of information in opening their data and to increase its utilization by multi-channel communication. The data can be downloaded as files and is also available as raw data via various network services or technical interfaces:

- Downloadable file formats are generally XLS, PC-AXIS or CSV files.
- Data for map materials may be available in KML or GML format.
- Data available via technical interfaces may be in JSON or XML format. (HRI.fi).

Weaknesses

According to Final report of the Finnish Open Data Programme [22] very little is known about the underlying economic and organizational mechanisms and implications of open data use at the organizational level or at the level of economy as a whole. To my best knowledge, there is no reported comprehensive country-level ex-post impact assessment of opening up government data (The Ministry of Finance).

The impacts of opening up government data can be divided to economic impacts and to other social impacts. The prerequisite for this is a careful development of the monitoring and evaluation model for opening up government data as well as a systematic gathering of data for the impact assessment. Furthermore, the usability and usefulness of different public data resources for consumers, firms and public sector organizations can be accessed via the users' own evaluations. In addition, it is important to assess appropriate means to disseminate and promote efficient utilization of information on the best practices of open data re-use in different organizations (The Ministry of Finance).

All this poses challenges to evaluate the impacts of social and transparency issues in the WeLive project. On practical level challenges to the achievement of these objectives are e.g.: how to motivate citizens to develop public services and how to guarantee representativeness of the participants willing to participate?

Opportunity

Various countries have implemented the open (government) data strategy aiming at providing wide access to government data in machine-readable format such that it can be freely used, reused and

redistributed by anyone. Reported ex ante evaluations have estimated that the potential benefits of opening up public data resources are substantial [23]. The benefits of open data can be categorized as follows:

- Transparency and democracy: Open data supports active citizenship, research and journalism by increasing transparency. For example, it facilitates discussions in social media by making it easier to reference to government information.
- Business and innovation: Giving access to government data free is good for Finnish companies. It breeds new markets and supports innovation. For example, new ways to use information have many times been found by people who have a different educational background compared to the usual users.
- Government efficiency: Increasing data openness makes it easier to use for other government agencies, too. Harmonizing information management practices brings economies of scale and makes knowledge transfer between organizations easier. Open data may also help in finding practices where the potential of digital information has not yet been realized. (HRI.fi)

Led by the Ministry of Finance, the Open data Programme – 17 May 2013 to 30 June 2015 – was eliminating obstacles to the re-use of public data as well as creating the preconditions for open data within the public administration. Currently, Finland is among the leading countries in opening up the government data, and it has also a chance to be among the most advanced ones in the impact assessment of open data (The Ministry of Finance).

The open data goals and action proposals is discussed and brought to the digitalization strategy and the digitalization processes of the Finnish Government in 2015-2020. One of the objectives of Finnish Government Programme is to create favorable conditions for new business ideas through open data and better use of information resources. The Government also wants to strengthen knowledge-based decision-making and openness (The Ministry of Finance).

The open data activities support the objectives of the EU Public Sector Information Directive concerning the reuse of public sector information resources. In addition, Finland takes part in the Share-PSI 2.0, which is the European network for developing open data best practices internationally. The Nordic countries are also starting cooperation in open data contexts (The Ministry of Finance).

There are excellent premises in Helsinki region to achieve the objectives related to social and transparency objectives of the WeLive project. In the light of the above presented, the Finnish information and innovation policy strongly supports R&D activities in line with the objectives of the WeLive project. The **Helsinki Region Infoshare (HRI) supports the WeLive project through a letter of support.** It provides for the project about 3500 open data sets to utilize.

Threats

There is no city from Helsinki metropolitan area as a partner in the WeLive project. Finnish pilot area is just a letter of support from the City of Espoo. At the very beginning of the project, they made it clear that their participation in the WeLive project work is limited to few meetings (not, for example, their participation in the pilots is totally out of the question. The Helsinki pilot region has succeeded to create a very fragile and unsettled relationship with the city of Vantaa.

The overall approach and methodology in the execution of the project has been technical-driven. Stakeholder involvement, user-centered approach, user-driven innovation, co-creation methods, or early phase evaluation have not been seriously taken in account in the execution WeLive project (e.g. development of the technical platform and business model).

According to the results of user feedback citizens do not want to use the platform because of complicated structure of the information system and the lousy usability of the user interface.

According to the results of the usability evaluations representatives of the City of Vantaa will not use the platform because of platform's incongruity with the innovation process of the cities and because they have more appropriate platforms in use already.

TRENTO SWOT ANALYSIS

S The "We-government" approach fostered by the Welive project shows different point of strength in its application to the context of the city of Trento. From a general point of view, this stems from the possibility of building its results on top of pre-existing activities and achievements that are already in place since years and that, by now, are deeply embedded in the tissue of this territory. The attention paid by the municipality of Trento to participation and co-creation is witnessed by the projects, initiatives, tools, and resources that are devoted to listening to people's needs and to the suggestions from the users of the available IT services about how to improve their already high-level quality. Another example of how fertile is the soil in which WeLive is operating in Trento is the effectiveness of the Open Data movement in the province in which Trento is located. Both from the qualitative and the quantitative point of view, the interest and the promotion of the Open Data initiative, in particular amongst the Public Administrations, is outstanding and perfectly matches the focus that the WeLive project puts on the exploitation of data for enhancing the quality of life.

W Most of the stakeholders involved in the WeLive co-innovation process are ready to accept the challenge proposed by this new paradigm of services co-creation. Citizens are used to be part of the innovation, the academia has a very long tradition in the Trento province about educating people and performing high quality research, the public administration is willing and ready to promote and sustain the overall WeLive process. Nevertheless, it is possible to envisage a weak ring in this chain: the involvement of businesses. Their participation in the process is by now quite limited from all points of view. The actual exploitation of the already big amount of open data available is not yet part of the habits of established companies. New startups are, by nature, more accustomed to a brand new approach like the WeLive one and to taking advantage of this new resource that consist of open data.

O One of the main opportunities that are triggered by WeLive, from the economical point of view, is bound to the effort that the territory around Trento has been putting in supporting the creation of an economy based on the exploitation of open data. Entrepreneurship, in particular the one involving youngsters and the one related to the re-use of data is highly encouraged and concretely sustained. From a social point of view, the actuation of the WeLive process can also give the opportunity to enforce the growing attitude of Trento people of taking part to the discussion about how to improve the quality of life, by providing a new facet that consist of the technological enablement. The promise of empowering citizens to create their own added value services, by wiring together building blocks consisting of open data and basic services, can be considered a realistic opportunity for Trento. Finally, the public administration has a real chance to climb another step in the transparency ladder. The municipality already stands for the enactment of the legislation about

transparency. Nevertheless, opening a new window on the concrete results achieved through the engagement activities like the ones in WeLive, and not only those, can write another important chapter of this book.

T The main threat pending on the effective establishment of the WeLive approach in the city of Trento, is the realization of the WeLive business model. The sustainability of the WeLive life cycle is still a question mark. The weakness elicited above about the participation of private companies makes the scenario even more fragile. The failure in setting up a completely self-sustaining eco-system of services co-created, that are promoted by participation and co-innovation, is a concrete menace. In particular, the expected continuous feeding of stable building blocks on top of which services should be developed and delivered to citizen seems at the moment a major concern, whose resolution is not fully clear.

NOVI SAD SWOT ANALYSIS

S In the context of Serbia and Novi Sad, WeLive is innovative in many ways, promoting transparency, participation, co-creation of government policies, framed as "We-Government", but above all it is recognized as very important ignition point addressing Open Data is Serbia, which is a question not yet legally binding by domestic legislature. In turn, WeLive has motivated us to be the first local self-government in Serbia, to be formally addressing the question of opening up of data by institutions. In this multilayer way, WeLive sustainability is ensured, since it is the matter of time when the (local) government will understand Open Data importance and start to accept the principles of open government fully. At this stage, we can make benefits from new data sets in Open Data Stack. IT companies and developers that have participated in Novi Sad workshops during Pilot Phase I generally perceive WeLive as novel and interesting concept and like the idea of gathering of open data and making them available at one place. Likewise, they embrace the existence of a kind of WeLive as an intermediary between companies (developers), and the City that facilitates communication and ensures better cooperation between the City and the Company.

W Open Data is Serbia is a question not yet legally binding by domestic legislature. Moreover, as promising as this all sounds, Novi Sad as the cities from the EU is not going to become smarter overnight. It takes time to adapt the technology needed for smart cities and put it into place. Although the whole initiative of WeLive has been perceived by companies as more than interesting and extremely useful for the wider community, unfortunately, presently companies do not have enough resources that they could set aside to deal with this issue. They also perceive that all variants of "subscription" can hardly survive in the market such as ours – stating even that they are not sure if the market is small or non-existent.

O It is realistic to believe that Idea contest will populate the platform with variety of ideas and significantly push WeLive concept from theoretical and promising to one with concrete business models being offered to companies. Moreover, we have become aware that even more marketing is necessary which will let developers know that there are open data available which will also greatly help WeLive project to gain its momentum, since we also discovered large number of programmers do not know that there are open data that can be exploited. WeLive has huge potential to become useful tool to promote the publication and usage of new datasets, while it also has huge potential when involving citizens in the decision procedures, and the can also become a tool for reducing the existing gap between citizens' expectations and PPAA strategies allowing PPAA to know more about citizens needs even.

T The biggest issue when considering why Novi Sad council would (or would not) incorporate WeLive and having impact on its policies is the awareness of the policy makers about Open Data which goes in hand in hand with the national legislature where open data and their democratization is still not at top of the priorities' list. WeLive has the pioneering role in making more space to talk about open data importance and we hope to make it an influential tool. Further to this, it will take just as long to conceptualize collected data and understand how it can be used in the grand scheme. Once active, Smart City technology will constantly be recording and measuring data, and it is going to take a lot of manpower to analyze it and filter it properly – which also has to be taken into consideration. It will take a lot of time, even years beyond the project's official end, for We-Government agenda behind it, to be recognized and accepted as such, since overall climate has to change in favour of WeLive and/or any other similar initiative in Serbia.

3.4. Assessing of "Impact"

It should be emphasized that "impact" can be assessed in various ways, ranging from mere output (such as publishing a certain amount of raw data), through mid-term outcomes (through, for instance, increasing participation in a democratic process), to long-lasting impact (such as increasing social equity). In some cases, the descriptions may focus on short-term outputs only, even when the project does seem to achieve long-lasting change, while in other cases claimed impact may not have credible proof on attribution.

Bearing this in mind, focusing on mid-term outcomes in D5.4 as opposed to long-term impact or short-term output should be the right next step in order to create solid base for evaluation at later stages.

Further to this, the outcome mapping approach, as well as other robust evaluation methods, has a strong potential for the long-term evaluation of complex projects through detecting and documenting the desired change model in the behaviors, relationships and activities of people and organizations, i.e. identified user groups, an open data initiative interacts with. It might also provide a good framework for identifying other research methods (such as randomized control trials or quantitative surveys) to prove causality.

4. USE

How is data utilized in WeLive apps and what possible outcomes? Separating use and outcomes from impacts is conceptually helpful in developing a deeper understanding of how open data can bring about change. This section of framework looks at the category of users accessing data, the purposes for which the data will be used and the activities being undertaken. It addressed the "who, what and why" of WeLive open data in use.

Understanding the purpose to which data is being put and the goals for its use is important form many forms of impact assessment.

SUBCOMPONENTS – CORE QUESTIONS	POTENTIAL INDICATORS (**EXAMPLES**)
• Users: Who is using WeLive open services apps? Who should be, or could be using open data? • Purpose: For what purposes are citizens/organizations/SMEs/researchers using WeLive open services apps? To achieve what goals? • Activities: To what uses are individuals/organization putting WeLive open services apps? In which sectors?	• Users: Categories of users drawn case studies, site analytics, surveys, and other sources (ex: researchers, entrepreneurs, media organisations) • Purposes: The intended goal/result of open data programmes as expressed in research/project objectives (ex: to reduce spending) • Activities: The particular forms of uses for open data (ex: benchmarking, hot spotting). What business models are being used in commercial open data re-use?

Table 1: Describing core questions and distinction of potential indicators to be taken in methodological approaches (Retrieved from Open Data Research Org Site [24]

5. METHODOLOGY

Overview of data collection and measurement

Data Sources	Data Collection Methods	Techniques (**examples**)
Primary: Data managers, users in industry, academia and government Secondary: mainly government proxy data (e.g., GDP, household income, employment, payroll and exports) and industry reports	Desk research Web survey Online questionnaires Interviews Self-reporting In-depth case studies Focus groups Delphi study or expert opinion ……	Estimate of overall market size based on estimates of respondents Estimate of overall market size based on turnover International comparisons Projection, scenario analysis, expert opinion, team consensus approaches ……..

Table 2: Identifying sources, methods and techniques of the applicable technology

Harmonizing the operational definitions of datasets or data categories in different surveys can help to avoid confusion when the results of assessments of dataset availability are presented. Likewise, the weighting of different dataset features in data assessment is also an important consideration.

There are number of taxonomies of typologies needed to support further harmonization in this part of framework. In particular, taxonomies of:

- Kind of users (going deeper than just “private sector”/ “public sector”)
- Purposes for WeLive open services use
- Activities of WeLive open services use
- Business models for open data

These lists may be sector specific, although it may be possible to move towards shared taxonomies in this area. Impact measurements may look at the benefits gained from using specific open datasets, or the returns from open data initiatives in general. In this section of the framework, and for the purposes of WeLive D5.4 & D5.5 (included in T5.2) the benefits are studied according to social, transparency (political/governance), and economic/commercial dimensions. We split out economic and social as distinct categories, although some existing frameworks group these together, or group transparency and political in with social to offer a “triple bottom line” impact assessment. Collecting data against the three categories allows analysis to be carried out in a range of different ways.

SUBCOMPONENTS – CORE QUESTIONS	POTENTIAL INDICATORS (**EXAMPLES**)
Social: What are the social benefits to be gained from the use of WeLive open services apps? How can open data be used to increase equality, target resources to citizens and improve public services?	**Social:** Rates of public participation in government and policy making; evidence of increased social inclusion; building new democratic spaces for citizens; evidence of improved social policy; empowering local and disadvantaged voices; greater citizen participation in government affairs and supporting democratic societies by providing information about voting procedures, locations, ballot issues etc.
Transparency (governance): How do WeLive open services apps improve government efficiency and accountability?	**Transparency (governance)** use of open data to identify and challenge corruption; use of data to deliver better public services; increasing state of institutional responsiveness; monitor government activities, such as tracking public budget expenditures and impacts, public procurements; monitoring and holding officials and/or the private sector accountable etc.
Economic: What are the impacts of WeLive open services apps on economic growth and innovation?	**Economic:** Number of jobs created out of products/services; better understanding of potential markets and building new data-driven products; easier and less costly for government ministries to discover and access their own data or data from other ministries, which reduces acquisition costs, redundancy and overhead; contributions to economic growth from open data producing business; breaking down information gaps across industries, allowing companies to share benchmarks and spread best practices that raise productivity etc.

Table 3: Collecting data against the three categories allows analysis to be carried out in a range of different ways

To address to our research question, there are varieties of different possibilities. One of these is mixed method approach **tailored to the field**, including tools such as crowdsourcing, content analysis, qualitative/quantitative stakeholder interviews/surveys/assessments and outcome mapping workshop, bearing in mind that each partner should opt for the most suitable methods in relation to his research indicators and desired outcomes.

5.1.1 Additional definitions

In addition to the data collection method listed, here are some definitions for clarification purposes relevant for our research with D5.4 & D5.5:

- **Theory of Change** is essentially a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context. It is focused in particular on mapping out or "filling in" what has been described as the "missing middle" between what a

project/program or change initiative does (its activities or interventions) and how these lead to desired goals being achieved. It does this by first identifying the desired long-term goals and then works back from these to identify all the conditions (outcomes) that must be in place (and how these related to one another causally) for the goals to occur. These are all mapped out in an Outcomes Framework. The Outcomes Framework then provides the basis for identifying what type of activity or intervention will lead to the outcomes identified as preconditions for achieving the long-term goal. Through this approach the precise link between activities and the achievement of the long-term goals are more fully understood. It also leads to better evaluation, as it is possible to measure progress towards the achievement of longer-term goals that goes beyond the identification of project outputs.

- **Output:** defined as the final product, or goods and services WeLive project produces or delivers. Typical examples in the open government can include a new tool or info-graphics based on government datasets; the number of unique visitors to a website, etc.;
- **Outcome:** defined as the medium-term result for specific beneficiaries that are the consequence of achieving specific outputs, for example: more informed citizenry; changes in policies related to government transparency etc.
- **Impact:** defined as the long-term change in a society, such as reduced poverty or increased equity.
- **Outcome mapping** – the approach which has great potential for impact assessment through detecting and documenting the changes in the behaviours, relationships and activities of people and organizations a project interacts with, and can be applied to both organizational evaluation and long-term impact assessment in complex contexts. The methodology is less effective for demonstrating the project's *direct* contribution to impacts, or producing generalizable findings that allow for comparative analysis between different contexts. However, Outcome Mapping might provide a good framework for identifying other research methods such as **Randomized controlled trials (RCTs), or randomized impact evaluations;** in our context, **RCT randomizes who** uses open data within WeLive Open Services **–** and who does not – the control**.** It then compares outcomes between those two groups; this comparison gives us the impact of the program or **quantitative surveys** to prove causality. Besides developing a robust **theory of change**, the approach works best when accompanied by **rigorous documentation** and **data collection**.
- **Key boundary partner groups** – all the individuals, groups or organizations with whom the project interacts directly and with whom the project can anticipate opportunities for influence.
- **Milestones –** graduated progress markers. By weighing the difficulty of the identified milestones, the project team engaged in D5.4 & D5.5 can put the progress markers in order, so they advance in degree from the minimum the project implementing team would expect to see (relatively easy to achieve), to what they would like to see them doing (activities that require more active learning or engagement), to what they would love to see (truly transformative milestones).
- **Delphi method** is a structured communication technique or method, originally developed as a systematic, interactive forecasting method, which relies on a panel of experts. The experts answer questionnaires in two or more rounds. After each round, a facilitator or change agent provides an anonymous summary of the experts' forecasts from the previous round as well as

the reasons they provided for their judgments. Thus, experts are encouraged to revise their earlier answers in light of the replies of other members of their panel. It is believed that during this process the range of the answers will decrease and the group will converge towards the "correct" answer. Finally, the process is stopped after a predefined stop criterion (e.g. number of rounds, achievement of consensus, stability of results) and the mean or median scores of the final rounds determine the results

- **Self-report study** is a type of survey, questionnaire, or poll in which respondents read the question and select a response by themselves without researcher interference. A *self-report* is any method, which involves asking a participant about their feelings, attitudes, beliefs and so on. Examples of self-reports are questionnaires and interviews; self-reports are often used as a way of gaining participants' responses in observational studies and experiments.

6. ASSESSING THE IMPACT: SOCIAL, TRANSPARENCY, ECONOMIC INSIGHTS

Each partner should be aware that as to address to our research question, there are varieties of different possibilities. One of these is mixed method approach **tailored to the field**, including tools such as crowdsourcing, content analysis, qualitative/quantitative stakeholder interviews/surveys/assessments and outcome mapping workshop, bearing in mind that each partner should opt for the most suitable methods in relation to his research indicators and desired outcomes.

When conducting assessment each partner should also be aware of WeLive Objectives adopted by the Consortium, measurable results – defined by the Consortium as reference points for its own "awarding of points" of the level of impact realized in relation to the impact research of the specific sector. For easier understanding, they are being summarized and grouped below:

Objectives	Measurable results
SO1– To promote the economic growth and job creation with added-value vertical apps and datasets	*MS-SO1 – Number of commercial apps and datasets created and sold through WeLive.*
SO2– To increase transparency and trust in public administrations through new datasets and apps	*MS-SO2 – Available datasets and apps usage, number of active WeLive user*
TO3 – To provide holistic support for the Open Innovation process of public services	*MS-TO4 – Availability of the WeLive Open Data Layer: Open Data Toolset and Citizen Data Vault components*
TO5 – To democratize creation of novel public services	*MS-TO5 – Availability of the WeLive Open Services Layer*
TO6 – To enable personalization and analytics of public services	*MS-TO6 – Availability of WeLive Intelligence Layer: Personalisation & Analytics.*
IO6 – To enable public service parameterization and exchange among public administrations	*MS-IO6.1 – Availability of several public services, which are deployed in different target cities. MS-IO6.2 – Availability of several public services, which are customizable to the profile and context of different citizens.*
IO7 – To reduce the public burden of citizens and businesses prosuming public services	*MS-IO7 – Number of stakeholders registered with WeLive which prosume new public service apps*
IO8 – To provide services that will enable transparent monitoring of the process of creation of new public services, from the selection to deployment and evaluation as well as monitoring of execution of existing	*MS-IO8 – Number of new services registered with WeLive which enable monitoring of public administration processes.*

public services	

Table 4: WeLive Objectives adopted by the Consortium, measurable results – defined by the Consortium

As described in the text above, social impact assessment includes the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, and projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.

Likewise, what is closely connected to this issue is transparency assessment which is in real life addressing the ability of citizens to directly influence development of the city where they which will empower them and it is expected that increased transparency of the way the public activities are organized and funded will positively influence satisfaction of the citizens with the public administration and the city itself.

All deliverable's stakeholders should be aware when conducting assessment and related analysis of the co-dependency of each subject of our research and how they can lead to the better profile of the city in terms of the attractiveness for living as well as for commercial investments, which will lead to improvement of the local economy.

As for economic impact assessment deliverable participants should pay attention to division to public (government) sector and private sector, as mentioned earlier governments can benefit, for example on the business activity generated around the development of apps (their associated additional tax income) on top of their datasets, saving costs derived from the exploitation of linked data or foster the local economy by giving support to entrepreneurship and similar. For the private sector, new business opportunities are opened, enabling them to commercialize Open Data based value-added services, apps and datasets as Software as a Service (SaaS), Data as a Service (DaaS) or even Algorithms as a Service (AaaS). Likewise, businesses can generate high returns through the development of new products and services based on high value data domains.

Additionally, here is the example of potential economic impacts retrieved from the WeLive Description of Works:

	Drive Revenue through multiple areas	Cut Costs and Drive Efficiency	Generate Employment and develop future-proof skills
Benefit to Government	▪ Increased tax revenues though increased economic activity ▪ Revenues through selling high value added information for a price	▪ Reduction in transactional costs ▪ Increased service efficiency through linked data	▪ Create jobs in current challenging times ▪ Encourage entrepreneurship
Benefit to Private Sector	▪ Drive new business opportunities	▪ Reduced cost by not having to invest in conversion of raw government data ▪ Better decision making based on accurate information	▪ Gain skilled workforce

Source: Capgemini Consulting Analysis

Figure 2: Economic impacts benefits for public and private sector

Awarding of points should be based on data from two different sources for deliverable's own measured economic data (public and private entities) as described in the document and/or interviews, questionnaires and other suitable, tailored to the field, methods of research for social and transparency assessments . All of

the results should be measured against selected indicators, the desired outcomes i.e. impacts in relation to the project's objectives. To put it more straightforwadly, our research should evolve around these 4 central questions:

- Did the citizen users of the system felt empowered?
- Did there emerged any new businesses and jobs?
- Did the citizens feel that the service made public administration more transparent, trustful and of higher quality?
- How was the openness of the system?

Based on the results of the assessment for the Pilot Phase I, relating to D5.4., and the progress made, we should then develop and implement new engagement, exploitation techniques to enhance the results, and what is more important to secure the sustainability as well as further self-vitality even **after the project's ending date**. Collecting feedback and development ideas is immensely valuable, as well as rewarding mechanisms and about the value of the WeLive from the democracy point of view. (i.e. do citizens feel that this kind of services are needed to strengthen peoples possibilities to have impact on the decisions made on the public service providing), which will be especially important as the project progresses into the Pilot Phase II. This has been further addressed in WeLive Pilot Phase I execution and monitoring procedure document, stating that in case "basic" social and welfare services are to be developed on the WeLive platform during the pilots, special attention should be paid to the governance and pricing models of these services in the future. Further, this kind of services should be reviewed by the Public sector as part of the open innovation process. Public sector should have strong role during the pilots, especially when piloting the Analytics Dashboard and Open Innovation Area in helping PA to carry its political responsibility in service providing.

6.1 BILBAO TASK FORCE

Bilbao, like most major cities, promotes social innovation projects. Often, these initiatives are linked to technological development processes and are aimed at addressing diverse social challenges: mobility, citizen security, environment, sustainability, inequality, inclusion, etc. The proposal of work that WeLive contributes is focused on generating an advantage of the great amount of innovation processes that are developed in the framework of the city of Bilbao. WeLive must act as a compiler of these initiatives linked to citizen participation, social innovation and technological development to act in a joint framework of support, visibility and narrative of the action of the municipal government.
To promote WeLive's future work, it is necessary to build a relational map of the city's social innovation that allows:
Visibility: The dissemination of projects through the social networks of the City Council will be accompanied by the creation of a narrative of the initiatives that link the character of the same with the objectives of the public policies of the City.**Support:** The creation of the relational map will allow each of the initiatives to be focused with the corresponding department or area, in order to encourage a direct dialogue between agents (drivers and AAPPs) and thus place them around the objectives (technical and political) Of each department. In this way, for example, open data can be provided that can be useful for each of the innovation processes.**Continuity:** The most obvious void of the initiatives of social innovation that are celebrated in the city is its continuity; Through WeLive will be able to guide the proposals that arise from these initiatives and that fit with the technical and political will to turn them into pilot projects that could even consider a hiring, as public innovation.

6.1.1. SOCIAL IMPACTS ASSESSMENT

Value assessment sector: SOCIAL	
Data Sources	Citizens, public administration, developers ,SMEs ,researchers Primary: ● Citizens in their threefold dimension: As proponents of ideas and solutions on how to improve municipal services; As users of the services, source of information in the design processes; As end users of the solutions ● Entities in the social field, an associative movement that collaborates in the search for solution and as a key informant when it comes to providing content and context to technological processes. Secondary: Academic entities, a sector with which you can maintain collaborations to document the processes and connect the transfer of knowledge to the processes of participation in Public Services
Data Collection Method	Interviews, number of active WeLive users, availability of several public services
Techniques/Methods of Calculation	Estimate , comparisons, expert opinion , calculation of measurable results
Selected Indicators	Social Indicators: Requests for data received through interaction channels Datasets published in the Participation portal Workshops with citizen and social entities. Number of Editions, Number of Participants Channels of Communication with Citizens
Desired Outcomes	The We Live project is proposed as a platform that offers a series of infrastructure resources that allow citizens to develop services and products that improve the efficiency and efficiency of municipal public services. Promote a form of Crowdsourcing, with proposals generated by the citizens in an ecosystem of open innovation that can help the local government to face the challenges of the future: ● Collecting transversal knowledge of the different profiles of citizens and

	organizations. • Providing a space for project development with special emphasis on inter-phase transactions and links between municipal staff and teams. • Learning as it is done, implementing pilots to test new solutions • Sharing information and working in a collaborative way overcoming barriers of authority and administrative boundaries.
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	• M25 – end of Pilot Phase I: Useful • Activity with Public Administration: With respect to the Public Administration has developed information and presentation actions of the WeLive platform and the 3 Developed Services with the directors and management teams of the City's main departments such as Mayor's Office, Economic Development, Citizen Participation and Attention, Mobility, Management Of Works and Public Space, Tourism, among others. General results of the work with Public Administration: The main result of this activity has been the formulation of different Challenges expressed by the majority of the Areas around which they propose to promote a process of collaboration to the citizens and interest groups and the 2 Contests of Ideas celebrated with the collaboration of 2 of the Areas within the framework of this pilot. Although the 2nd Ideas Competition is being held at these dates and outside the strict deadlines of the 1st Pilot (ends on February 8) Experience with Challenges: From these Challenges, those formulated by the Economic Development and Youth and Sport Areas have been selected as the most suitable for this pilot because they are stable relations with specific groups of representatives of groups with vitality and initiatives in March and that at these dates had scheduled initiatives coinciding with the project WeLive. M 36 – end of Pilot Phase II (D5.5)
Results of the assessment: Direct benefits (if any)	
Results of the assessment: Indirect benefits (if any)	Increase the knowledge and practice of the co-creation process in several departments of the City Council The purpose of social innovation initiatives is to contribute to the improvement and innovation of municipal services provided in a fundamental aspect: • In the redesign of services, putting the citizens in the center as users and taxpayers. Working with the available data can be promoted processes to generate challenges that go to the center of the needs of users and support citizen solutions that can have their implementation • Promoting innovation, stimulating creative processes that facilitate access

	to knowledge, integrating different perspectives, attracting new talent and connecting productive units that generate economic activity. • In administrative efficiency, not only understood as a better functioning of the public services but also the mobilization of own resources and others (collective) to respond to social needs.
Key Boundary partners groups	Involving citizens (youth, entrepreneurs , developers ,..) should be the basis of WeLive for two fundamental reasons: • Because they are the proponents of the ideas and co-creators of the solutions. Administrations must assume the changing role of citizens: from recipients of services to collaborators. • Because solutions will be effective if those who are affected by public policies take part. Public Administration • The involvement and complicity of public workers that has to do with compliance with the procedure. The generation of an area of "early-adopters" of the pilots of the area that has to do with tolerance to the error of the public.
Recommendations	Opening the data is necessary, but not enough if we want to capture the actual value of the data. Once the data is released you need developments and actions that actually realize their potential value. Thus, the objectives in this axis are: • Visibility of data in citizen and user code • Achieving citizen participation in reuse activities • Raise the level of training and data training • Encourage data journalism If we want to put citizens at the center of politics and achieve their participation, we must open channels to inform and communicate with them. They also need to address their doubts, opinions, comments or suggestions. Also, in order to encourage participation, it is important to carry out training activities for citizens' organizations and to encourage data reuse activities. Push approach, rather than pull: go where people are instead of assuming they will come to you. To involve people, and in particular specific demographic groups, cities need to go where the people are. Traditional consultations assume that the people will go the assigned place assigned (either physically or virtually), city projects need to go where the people are really. These may be unusual locations where public administration rarely goes. Online – Offline balanced interventions | Understand benefits and limits of different settings. Online apps and platforms can be immensely useful to engage citizens and collect input. Face-to-face and group interaction is likewise valuable for driving

<table>
<tr><td></td><td colspan="4">discussion and co-creating solutions, particularly with no digitally savvy groups. Online and offline approaches also come with different expectations that must be considered. There are many examples of both used for diverse ends.

Participative, balanced with representative | Understand benefits and limits of approaches Though citizen engagement is about encouraging participation, not every citizen can be involved in every decision. A participative approach must be reconciled with a representative one. There are several considerations for when and how to do so.

Reciprocal | ‘Give for getting’ to create fair and lasting relationships. Reciprocity is about giving for getting. Whether quality content, energy bill savings, profit, data or attention – citizens must be incentivized with concrete benefits in exchange for their time, effort, money or behavioural change.</td></tr>
<tr><td>POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes)

In addition, please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points:

0 = Not really

1 = A little bit

2 = Significantly

3 = Very much</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td></tr>
<tr><td></td><td></td><td><u>Data collection methods</u>

KPI 1.4 Number of ideas from apps submitted in ideas contests: 25 approx.

KPI 2.3 Requests for data received through interaction channels
@Datasets published in the Participation portal

KPI 5.6 Number of Workshops with citizen and social entities. Number of Editions, Number of Participants

• Number of Editions: 15
• Number de Participants: 100 approx..

Self-assessment:

WeLive has created a change in social environment in Bilbao city in Pilot Phase I (scale 0-3)

1= A little bit</td><td></td><td></td></tr>
</table>

6.1.2 TRANSPARENCY IMPACT ASSESSMENT

Value assessment sector: TRANSPARENCY	
Data Sources	Citizens , public administration Primary: ● Citizens who receive and demand information and data on the management of public services and can value their functioning better, thus increasing the legitimacy of public administrations ● Social entities in the area of transparency and accountability, which give legitimacy to the processes of opening and participation. Secondary: Academic entities, a sector with which you can maintain collaborations to document the processes and connect the transfer of knowledge to the processes of participation in Public Services
Data Collection Method	Interviews, questionnaires, available datasets and apps usage, number of active WeLive users
Techniques/Methods of Calculation	Estimate , comparisons , expert opinion, calculation of measurable results
Selected Indicators	Use of data to deliver better public services Number of datasets in different sectors Number of Request for access to information
Desired Outcomes	For transparency: Opening data provides raw material for transparency. For the City Council, the data are the basis of accountability and evaluation of public policies. Civil society allows it to exercise a social audit function. By themselves, the data are often difficult to interpret by the final recipient, so it is important to have a broad base of information intermediaries – or infomediarios – among which play a prominent role and journalists, professionals and amateurs , Through the practice of so-called “data journalism”. Open design for open government: Technology allows us to connect with a more active and autonomous citizenship in their social performance. That does not mean that administrations have less to worry about. On the contrary, it demands more information, more transparency, more openness and more collaboration. A very interesting fact is that the cities that foster and incorporate innovation are cities in which the collaborative economy – the prosumer – is penetrating more.

	The Open Government is the natural setting for these policies as it promotes access to information, collaboration and participation of the public, contributing to the improvement of public management, transparency and increased confidence in their administrations. Accountability is an act by which public officials in an institution detail activities to meet their objectives. It is a concept closely linked to citizen participation, transparency and access to information. These elements, taken together, contribute to raising legitimacy and confidence in institutions.
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	*M25 – end of Pilot Phase I* –Useful
Results of the assessment: Direct benefits (if any)	The main result of this activity has been the formulation of different Challenges in the Agenda in the short term expressed by the majority of the Areas around which they propose to promote a process of collaboration to the citizens and interest groups and the Ideas obtained in The 2 Contests of Ideas celebrated
Results of the assessment: Indirect benefits (if any)	The main result of this activity has been the formulation of different Challenges in the Agenda in the short term expressed by the majority of the Areas around which they propose to promote a process of collaboration to the citizens and interest groups and the Ideas obtained in The 2 Contests of Ideas celebrated
Key Boundary partners groups	Youth , Associations , citizens
Recommendations	the project team engaged in D5.4 & D5.5 can put the progress markers in order, so they advance in degree from the minimum the project implementing team would expect to see (relatively easy to achieve), to what they would like to see them doing (activities that require more active learning or engagement), to what they would love to see (truly transformative milestones) Depending on the state of thinking at city offices, education among stakeholders may be necessary in order to gain buy-in and support from the city. This may be the natural result of early project development or a dedicated initiative. Additionally, working closely with different stakeholders, including public private partnerships can help achieve engagement goals. At the same time, it is important to keep in

	mind that a municipality is not homogeneous: while the majority of city officials might stick to conventional approaches, there are always change-makers and people with innovative thinking among city officials. Thus, an important task for a participatory project is to identify such people and to connect with them, as they will become internal change agents in municipality, defending and promoting citizens' interests within their organizations, challenging the common mindsets of their colleagues with new examples, and changing the existing routines towards more innovation and participation. To have the maximum impact in this area it is necessary: 1. Work with the maximum of transparency, opening all the public information around the Public Services of the City. 2. Systematize the accountability exercise, providing evidence of compliance with the objectives of the participation processes 3. Responsibility, identifying the responsibilities assigned in the processes and distributing the commitments adopted by the different area Engagement: the communication that is sought with the citizenship is bidirectional so that the management of participation channels is key-

POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much	2015	2016	2017	2018
		Data Collection Methods: KPI 2.1 Number of datasets working exported through the OD Toolset:174 We Live has created a change in transparency environment in Bilbao in Pilot Phase I (SCALE 0-3) 1 = A little bit		

6.1.3. ECONOMIC IMPACT ASSESSMENT

Value assessment sector: ECONOMY	
Data Sources	Developers, SME´s , academia Primary: ● Developers: the infomediary sector is key in developing technology-based solutions in urban innovation ● Entrepreneurs and startups: The entrepreneurship ecosystem is a key source of proposal and development of innovative solutions Secondary: ● Suppliers who may be interested in proposing solutions on their own Services and redesigning processes in collaboration with users and administration ● Other municipal areas, as the processes of urban innovation are transversal and affect several competences that are already redistributed in the municipal organization chart
Data Collection Method	Interviews, expert opinion
Techniques/Methods of Calculation	Estimate
Selected Indicators	Number of Ideas Contest Nº Open Data training workshops Advice on Open Data in Entrepreneurship Support Programs Nº Open Data Business Meeting Nº Open Data Training Materials
Desired Outcomes	Bilbao Innovative City, Leader in Technology and Knowledge Management: WeLive seeks to generate economic and social value in the city of Bilbao through the use of open data and co-creation projects. WeLive seeks innovation through technology, entrepreneurship and transversality of all areas. It is only innovated in an interaction context. A creative process is required that involves all the actors of society and in which cooperation and networks are a key element.

	An innovative city is a city where investments in human and social capital and communication infrastructure actively promote sustainable economic development and a high quality of life, with an informed management of natural resources through a participatory government. For this, the data is a key resource. Free access to information can generate innovative business models and create much more useful tools and products for the world in which we live. Used from this perspective, data is a catalyst for innovation in the public sector and also in the private sector, supporting the creation of new business and employment markets. The objectives in this axis are: • Activate the collaboration of citizens, entities and companies in the generation of public value through the open data service. • Explore spaces for innovation with other Open Data initiatives. • Encourage experimentation. • Establish sectorial areas of innovation with other municipal entities.
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	Activity with sectors of the Citizenship: collectives of Start ups, digital creators, youngsters. Focus on collectives: The focus on the pilot has been developed with a sample of groups of Entrepreneurs, Social Innovators, digital creators and so on, with a general profile of young people and with a broad relationship with technology and innovation processes, very people Valid for the next months to continue work and specifically for the 2nd pilot in 2017. Experience with Ideas Contests: With regard to Citizens, 2 Ideas Contests have been promoted and developed mainly for Entrepreneurs, digital creation groups and youth in relation to 2 of the Challenges selected and of special interest for the city, such as promoting The communication between these sectors of entrepreneurs, digital creators, start-ups and among them for the search of synergies, collaboration, and secondly to promote the communication between these groups and the administration to promote a more innovative, creative and oriented city to attract the talent. Preparation of Events: Competitions have been launched from very relevant events in their activity: congresses, etc., and in centers and equipment associated with the activity of these groups. Ideas: The number of ideas presented has been relevant and it is in the process of 35analysing their transformation into future new public services *M 36 – end of Pilot Phase II (D5.5)*
Results of the assessment: Direct benefits (if any)	Ideas for new public services

Results of the assessment: Indirect benefits (if any)	To increase the efficiency in the processes of relation with interest groups and in the promotion of co-creation processes
Key Boundary partners groups	Youth , Professional associations
Recommendations	Entrepreneurs, research centers and companies are not yet in the key of reusing public data. Policies are needed to promote reuse in order to capture the value of the data. So, it is needed: • Actions that seek effective collaboration between public and private entities, through the establishment of a relationship framework that contributes to putting more dynamics to the reuse of data. • Activities to promote the reuse of data to boost the economic activity of the city and its area of influence • Actions to raise the level of training and capacity of society to reduce the digital divide in the definition and management of Public Services • Activities to promote reuse to create new initiatives and businesses

POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much	2015	2016	2017	2018
		Data Collection Methods: 1. Number of participant to the Idea Contest 2. Number of ideas for new services presented Number of (insert the number of selected indicators) 1. : 50 approx. 2. : 25 approx. Self-assessment: WeLive has created a change in economy environment in Bilbao in Pilot Phase I (scale 0-3) 1 = A little bit		

6.2 HELSINKI REGION TASK FORCE

6.2.1 SOCIAL IMPACTS ASSESSMENT

Value assessment sector: SOCIAL	
Data Sources	Citizens, Public administration, Developers, Companies
Data Collection Method	Questionnaire, Interview
Techniques/Methods of Calculation	Affinity diagram, statistical analysis
Selected Indicators	Number of Ideas on the WeLive platform CVG
Desired Outcomes	50 new service ideas
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	In the pilot phase 1, 25 new service ideas were suggested using the WeLive platform
Results of the assessment: Direct benefits	Developers and companies get new ideas
Results of the assessment: Indirect benefits	Increased efficiency in public services thanks to the developed apps
Key Boundary partners groups	Citizens
Recommendations	Cities should use multichannel ways to involve citizens and other stakeholders

POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much	2015	2016	2017	2018
		Data Collection Methods: **KPI 1.4** Number of ideas submitted in the ideas contest : **24** **KPI 5.6** Number of Workshops with citizen and social entities: • Number of Editions: **27 (**3 inform me - 1 guide me and support me, and evaluation 9 events) • Number of Participants: 207 Self-assessment: We Live has created a change in social environment in Trento in Pilot Phase I (scale 0-3) 1 = A little bit		

6.2.2 TRANSPARENCY IMPACT ASSESSMENT

Value assessment sector: TRANSPARENCY	
Data Sources	Citizens
Data Collection Method	Questionnaire
Techniques/Methods of Calculation	Affinity diagram, statistical analysis
Selected Indicators	Users understand the whole open innovation process and indicate that in evaluation sessions

Desired Outcomes	• Users can understand different phases of the open innovation process orchestrated by city. • Open data supports active citizenship, research and journalism by increasing transparency. For example, it facilitates discussions in social media by making it easier to reference to government information. • More data assets is possible to get through WeLive environment More data applications related to cities policy-making are available for citizen
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	Based in questionnaire users think that WeLive environment is relatively transparent.
Results of the assessment: Direct benefits	Citizens understand better what kind of decisions the city is going to make.
Results of the assessment: Indirect benefits	Increased efficiency in public services
Key Boundary partners groups	Citizens, Cities
Recommendations	It is needed to develop the WeLive open innovation process together with users and cities in order to improve open innovations process transparency.

POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic)	2015	2016	2017	2018
		Data Collection Methods: (KPI2.1 about Open Data Stack) Current Datasets Number of (insert the number of selected indicators)		

environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much		KPI2.1: 15 Self-assessment: We Live has created a change in transparency environment in Helsinki region in Pilot Phase I (scale 0-3) 1 = A little bit		

6.2.3 ECONOMIC IMPACT ASSESSMENT

Value assessment sector: ECONOMY	
Data Sources	Developers, SME's
Data Collection Method	Interviews
Techniques/Methods of Calculation	Affinity diagram, statistical analysis
Selected Indicators	Developers and companies that were interested to participate
Desired Outcomes	• Activate the collaboration of developers and SME's in the generation of public value through the open data service. • Amount of developers and SME's that want to create new building blocks, develop services and finally publish apps in WeLive environment. Companies have more opportunities to utilize government data for free is. Open data has noticed to breed new markets and supports innovation. For example, new ways to use information have many times been found by people who have a different educational background compared to the usual users.

Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	The platform provides new data assets that companies and developers can utilise. It also provides target groups possibility to use building block created by consortium.
Results of the assessment: Direct benefits	Ideas for new public services
Results of the assessment: Indirect benefits	To increase the efficiency in the processes of relation with interest groups and in the promotion of co-creation processes
Key Boundary partners groups	Developers and companies
Recommendations	WeLive platform should design together with users and other stakeholders so that it reflects their needs. This will ensure that different target groups will get information in specific points during the open service design process. As a result of the study it can be concluded that the developers have a huge variety of needs and requirements of the new innovation platform, as well as the user interface. The main needs and requirements are related to the general development, motivation, as well as technical issues. According to the results the innovation platform should be versatile and usable for all developers regardless of technical skills. The innovation platform should be an enabler of development and innovation which aims to improve co-development. The platform should be standardized or at least predetermined by its technical specifications. It should provide community for the users and strive to motivate the developers and citizens in many different ways. Originally it was assumed that the developer's point of view is focused on the technology and its requirements. Later when research was advanced it became clear that the main results do not consist only of technical needs and requirements. Results also consist of the needs and requirements of the general operation and motivation of the developers. These needs and requirements allow developers to do their job with pleasure. Technical needs and requirements are also relevant but not as important as motivation and general operation.

POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much	2015	2016	2017	2018
		Data Collection Methods: 1. Number of Challenges launched in the Idea Contest : 5 2. Number of Ideas presented in the Idea Contest : 24 Self-assessment: WeLive has created a change in economy environment in Helsinki region in Pilot Phase I (scale 0-3) 1 = A little bit		

6.3 TRENTO TASK FORCE

6.3.1 SOCIAL IMPACTS ASSESSMENT

Value assessment sector: SOCIAL	
Data Sources	Citizens, researchers, developers, academia, public administration Mainly: ● citizens in their threefold dimension: As proponents of ideas and solutions on how to improve municipal services; As users of the services, source of information in the design processes; As end users of the solutions ● Academic entities, a sector with which you can maintain collaborations to document the processes and connect the transfer of knowledge to the processes of participation in Public Services
Data Collection Method	Online questionnaires, available datasets and apps usage, number of active WeLive users

Techniques/Methods of Calculation	Estimate, comparisons, calculation of measurable results
Selected Indicators	Building new democratic spaces for citizens, social inclusion evidence
Desired Outcomes	Democratize creation of novel public services, sharing information and working in collaborative way in overcoming administrative boundaries of public authority.
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	**M25 – end of Pilot Phase I – useful** ● **Activity with Public Administration:** With respect to the Public Administration has developed information and presentation actions of the WeLive platform and the 3 Developed Services with the directors and the management teams of the City's main departments such as ICT, Mobility, Youth, Tourism, Communication, among others. **General results of the work with Public Administration:** The main result of this activity has been the test of the platform and the formulation of seven (7) different Challenges to promote a process of collaboration to the citizens with the Contests of Ideas celebrated ending at the deadline of the 1st Pilot (31 of January)
Results of the assessment: Direct benefits	
Results of the assessment: Indirect benefits	Increased knowledge and practice of the co-creation process in several departments of the city administration, citizens, IT sector, companies; increased efficiency in public services thanks to the developed welive apps
Key Boundary partners groups	**Citizens,** youth, entrepreneurs, developers, etc. are the basis of WeLive. **Public Administration:** it is really important the involvement and complicity of public workers that has to do with compliance with the procedure. It is important working in compliance to the Smart City guidelines to find topic for the services and to generate an area of "early-adopters" for the new services.
Recommendations	Open useful data for mobile services (real time data) Create open services to integrate PA's backoffice procedure

POINTS (insert only quantifiable &	2015	2016	2017	2018

measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition, please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much		Data Collection Methods: **KPI 1.4** Number of ideas submitted in the ideas contest : **37** **KPI 5.6** Number of Workshops with citizen and social entities: • Number of Editions: **27 (**7 inform me events - 20 guide me events) • Number of Participants: **1107** Self-assessment: We Live has created a change in social environment in Trento in Pilot Phase I (scale 0-3) 1 = A little bit		

6.3.2 TRANSPARENCY IMPACTS ASSESSMENT

Value assessment sector: TRANSPARENCY	
Data Sources	Citizens as active stakeholders in smart idea generation, as users of open public services, sources of information in the design process, also as the end users of the available solutions, public administration as an enabler and facilitator
Data Collection Method	Online questionnaires, available datasets and apps usage, number of active WeLive users
Techniques/Methods of Calculation	Estimate, comparisons, calculation of measurable results
Selected Indicators	Use of data to deliver better public services Number of datasets in different sectors Number of Request for access to information

Desired Outcomes	Use of data to deliver better public services; increasing state of institutional responsiveness; monitor government activities, such as tracking public procurements; boosting confidence and trust in the public authority activities through new datasets and apps; transparent monitoring of the process of creation of new public services				
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	M25-end of Pilot Phase I – useful				
Results of the assessment: Direct benefits					
Results of the assessment: Indirect benefits	The main result of this activity has been the formulation of seven different challenges to promote a process of collaboration to the citizens and interest groups and the Ideas obtained in the Contest of Ideas celebrated				
Key Boundary partners groups	Youth, citizens				
Recommendations	Try to have a deal with the others local body (Region, Local transport Company to open useful real time data Engagement: the communication that is sought with the citizenship is bidirectional so that the management of participation channels is the real key				
POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social		2015	2016	2017	2018
			Data Collection Methods: (KPI2.1 about Open Data Stack) Current Datasets Number of (insert the number of selected indicators) KPI2.1: 15		

(transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much		Self-assessment: We Live has created a change in transparency environment in Trento in Pilot Phase I (scale 0-3) 1 = A little bit		

6.3.3 ECONOMIC IMPACT ASSESSMENTS

Value assessment sector: ECONOMIC	
Data Sources	Developers, SMEs, academia Primary: ● Developers: The infomediary sector is key in developing technology-based solutions in urban innovation ● Entrepreneurs and startups: The entrepreneurship ecosystem is a key source of proposal and development of innovative solutions Secondary: ● Suppliers who may be interested in proposing solutions on their own Services and redesigning processes in collaboration with users and administration Other municipal areas, as the processes of urban innovation are transversal and affect several competences that are already redistributed in the municipal organization chart
Data Collection Method	Interviews
Techniques/Methods of Calculation	Estimate
Selected Indicators	Number of Challenges launched in the Idea Contest Number of Ideas presented in the Idea Contest Numbers of Hackathon realized

	Hackathon participation
Desired Outcomes	Easier and less costly governments reducing acquisition costs, redundancy and overhead; creation of business opportunities through WeLive market place; increased number of new services registered with WeLive which enable monitoring of public processes
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	M25 – end of Pilot Phase I – not very useful (self-assessment) We tried to introduce WeLive to companies during Smart City Week and we launched a specific Hackathon, but the platform was still immature without the visual composer or specific information about the building blocks, so developers have to use just local open services and open data to realize new applications. The Idea Contest started at the end of December 2016 for months with great results: 37 ideas, but we have to find a new way to engage companies, start-up and developers to have a help in building new services.
Results of the assessment: Direct benefits	Ideas for new public services New services: 1 new app thanks to the hackathon
Results of the assessment: Indirect benefits	To increase efficiency in public services thanks to the developed new app
Key Boundary partners groups	Youth, university, Academia (FBK), Associations (Open Data Trentino), others body, local partner for Smart City project (HIT)
Recommendations	Entrepreneurs, research centres and companies are not yet in the key of reusing public data. Policies are needed to promote reuse in order to capture the value of the data. So, it is needed: • Actions that seek effective collaboration between public and private entities, through the establishment of a relationship framework that contributes to the make more dynamic the reuse of data • Activities to promote the reuse of data to boost the economic activity of the city and its area of influence • Activities to promote reuse to create new initiatives and businesses

POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much	2015	2016	2017	2018
		Data Collection Methods: 1. Number of participant to the Hackathon: 15 2. Number of new services presented during the Hackathon: 6 3. Number of Challenges launched in the Idea Contest : 7 4. Number of Ideas presented in the Idea Contest : 37 Self-assessment: WeLive has created a change in economy environment in Trento in Pilot Phase I (scale 0-3) 1 = A little bit		

6.4 NOVI SAD TASK FORCE

6.4.1 SOCIAL IMPACTS ASSESSMENT

Value assessment sector: SOCIAL	
Data Sources	Citizens as active stakeholders in smart idea generation, as users of open public services, sources of information in the design process, also as the end users of the available solutions; researchers, developers, academia, public administration – all important entities that are composing WeLive ecosystem
Data Collection Method	Surveys, online questionnaires, available datasets and apps usage, number of active WeLive users
Techniques/Methods of Calculation	Estimate, comparisons, calculation of measurable results
Selected Indicators	Building of new democratic spaces for citizens, social inclusion evidence

Desired Outcomes	Democratization of creation of novel public services, sharing information and working in collaborative way in overcoming administrative boundaries of public authority.
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	In comparison to the desired outcomes, the progress made by M25 is *weak* (self-assessment). WeLive agenda has proved to be novel and has initiated lots of administrative work for the public administration since domestic policies on open data are not harmonized with the EU regulations. The Idea Contest, which was planned for December 2016, also led us to influence the amendments of the local self-government Decree and it had to be postponed. In turn, although we have implemented aggressive engagement campaign, WeLive is still not visible to many people and entities. On the other hand, we are using WeLive to tackle the importance of opening up of data in Serbia, building partnerships with different stakeholders at national level, NGO's, IT hubs and universities. This is an impact not envisaged by DoW but ever so important. The Idea Contest should have been the focal point of making an impact across variety of sectors as it is envisaged as the one to populate the platform with ideas, thus becoming more visible, interesting, useful and profitable not just to citizens, but also for economic entities and PA. This milestone has been postponed until February 2017. Coupled with hackathon during Pilot Phase II and our engagement campaign it is realistic to plan to achieve comparably more intense impact during Pilot Phase II.
Results of the assessment: Direct benefits	
Results of the assessment: Indirect benefits	Increased knowledge and practice of the co-creation process in several departments of the city administration, citizens, IT sector, companies; increased efficiency in public services thanks to the developed WeLive apps.
Key Boundary partners groups	Citizens are at the focal point as a group in our assessment. More rounded groups involve public administration, companies, but also journalists, media, think tanks, civil society organizations, public officials. Since we are using WeLive to tackle the importance of opening up of data in Serbia, we are also building partnerships with different stakeholders at national level, NGO's, IT hubs (SEEICT), universities (UNS), organizations (UNDP).
Recommendations	In addition to opening of data, we must put effort into adding more visibility of data not just for citizens, but also for companies and developers as well as public administration departments. Hence, we must open more channels to inform and communicate with them.

POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much	2015	2016	2017	2018
		Data Collection Methods: KPI 1.4. ideas contest will be launched in February KPI 5.6 Number of Workshops with citizen and social entities =5 Number of Participants =132. Self-assessment: WeLive has created a change in social environment in Novi Sad city in Pilot Phase I (scale 0-3) 1= A little bit		

6.4.2 TRANSPARENCY IMPACT ASSESSMENT

Value assessment sector: TRANSPARENCY	
Data Sources	Citizens as active stakeholders in smart idea generation, as users of open public services, sources of information in the design process, also as the end users of the available solutions, public administration as an enabler and facilitator
Data Collection Method	Surveys, on line questionnaires, available datasets and apps usage, number of active WeLive users
Techniques/Methods of Calculation	Estimate, comparisons, calculation of measurable results
Selected Indicators	Increased state of institutional responsiveness; use of data to deliver better public services
Desired Outcomes	use of data to deliver better public services; increasing state of institutional responsiveness; monitor government activities, such as tracking public procurements; boosting confidence and trust in the public authority activities

	through new datasets and apps; transparent monitoring of the process of creation of new public services
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	In comparison to the desired outcomes, the progress made by M25 is *weak* (self-assessment). WeLive agenda has proved to be novel and has initiated lots of administrative work for the public administration since domestic policies on open data are not harmonized with the EU regulations. The Idea Contest, which was planned for December 2016, also led us to influence the amendments of the local self-government Decree and it had to be postponed. In turn, although we have implemented aggressive engagement campaign, WeLive is still not visible to many people and entities. On the other hand, we are using WeLive to tackle the importance of opening up of data in Serbia, building partnerships with different stakeholders at national level, NGO's, IT hubs and universities. This is an impact not envisaged by DoW but ever so important. The Idea Contest should have been the focal point of making an impact across variety of sectors as it is envisaged as the one to populate the platform with ideas, thus becoming more visible, interesting, useful and profitable not just to citizens, but also for economic entities and PA. This milestone has been postponed until February 2017. Coupled with hackathon during Pilot Phase II and our engagement campaign it is realistic to plan to achieve comparably more intense impact during Pilot Phase II.
Results of the assessment: Direct benefits	
Results of the assessment: Indirect benefits	Increased transparency of public services and responsiveness of the public authorities due to the Open Innovation Area platform and developed apps within the pilot
Key Boundary partners groups	Citizens are at the focal point as a group in our assessment. More rounded groups involve public administration, companies, but also journalists, media, think tanks, civil society organizations, public officials. Since we are using WeLive to tackle the importance of opening up of data in Serbia, we are also building partnerships with different stakeholders at national level, NGO's, IT hubs (SEEICT) , universities (UNS), organizations (UNDP).
Recommendations	In addition to opening of data, we must put effort into adding more visibility of data not just for citizens, but also for companies and developers as well as public administration departments. Hence, we must open more channels to inform and communicate with them. Likewise, an important task of WeLive as the participatory project is identify people with innovative thinking within the public government and connect with them, since presumably public authorities are not prone to the change

	and innovation by default and are not homogenous in nature and challenging the common mindsets and existing routines should involve more i.e. as many as possible as to influence the change of thinking among the city officials and defend the citizen's interest through WeLive.			
POINTS(insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much	2015	2016	2017	2018
		Data Collection Methods: (KPI2.1 about Open Data Stack) Current Datasets Number of (insert the number of selected indicators) KPI2.1: 25 Self-assessment: WeLive has created a change in transparency environment in Novi Sad in Pilot Phase I (scale 0-3) 1 = A little bit		

6.4.3 ECONOMIC IMPACT ASSESSMENT

Value assessment sector: ECONOMY	
Data Sources	Developers, academia
Data Collection Method	Interviews, emails
Techniques/Methods of Calculation	Estimate
Selected Indicators	Spreading knowledge and best practice abut open data and open services that raise efficiency in public authorities; sharing of benchmarks between companies that raise productivity and create new business opportunities for developers/ academia

Desired Outcomes	Easier and less costly governments reducing acquisition costs, redundancy and overhead; creation of business opportunities through WeLive market place; increased number of datasets, increased number of new services registered with WeLive which enable monitoring of public processes
Progress Made: Milestones *What is the progress made for this period? Give your personal qualitative opinion/estimate based on the provided project progress and results achieved so far*	Progress made in the Pilot Phase I is *weak* (self-assessment). It was very short time for the companies and developers to get them introduced with WeLive. It is quite novel concept for our pilot and the whole of Serbia. It will take time for them to familiarize with it allocate the time, resources and confidence, above all, that local self-government can also act as a generator of fresh and innovative ideas and approaches. Besides this, all we could offer them is to gain knowledge and brainstorm the several business models that were presented during workshops, while the platform has not been populated with ideas. The Idea Contest which was planned for December 2016 also led us to influence the amendments of the local self-government Decree and it had to be postponed. In turn, although we have implemented aggressive engagement campaign, WeLive is still not visible to many people and entities. On the other hand, we are using WeLive to tackle the importance of opening up of data in Serbia, building partnerships with different stakeholders at national level, NGO's, IT hubs and universities. This is an impact not envisaged by DoW but ever so important.
Results of the assessment: Direct benefits	
Results of the assessment: Indirect benefits	New goods and services, time savings for users of applications using Open Data, knowledge economy growth, increased efficiency in public services
Key Boundary partners groups	Companies, businesses, public administration are at focal point of our assessment, but as any other, they are co-dependent from active role played by all other identified entities, in the first place: citizens. Since we are also using WeLive to tackle the importance of opening up of data in Serbia, we are building partnerships with different stakeholders at national level, NGO's, IT hubs (SEEICT), universities (UNS), organizations (UNDP).
Recommendations	On general level companies and developers estimated WeLive as an interesting concept, they liked the idea of gathering of open data and making them available at one place as well as the existence of a kind of intermediary between companies (developers), and that the City that facilitates communication and ensures better cooperation between the City and the Company. However, what is especially important in our case is marketing which will let developers know that there are open data available which will also greatly help WeLive project to gain its

	momentum, since it turned out that large number of programmers do not even know that there are open data that can be exploited. In addition, networking with stakeholders at national level is important since it is of crucial important to have this kind of support when pushing opening up of new data in different institutions when they are not required doing so by our law. It is a pioneering task.			
POINTS (insert only quantifiable & measurable results for applicable years, as to monitor/demonstrate and assess the progress achieved – across different indicators and desired outcomes) In addition please rate the impact obtained (self-assessment) by quantifying How much has WeLive created a change in social (transparency, economic) environment in your city (region) at present stage by awarding following points: 0 = Not really 1 = A little bit 2 = Significantly 3 = Very much	2015	2016	2017	2018
		Data Collection Methods: 1. Number of new services presented Number of (insert the number of) 1. = 3 new services Self-assessment: WeLive has created a change in economy environment in Novi Sad in Pilot Phase I (scale 0-3) 1 = A little bit		

7. RECOMMENDATIONS

Our research shows early evidence of the social, transparency and economic outcomes achieved by WeLive and potential benefits of open data beyond the existing environment. Following the assessment by partners in D5.4 it is of crucial importance to pursue the recommendations generated by quantifiable & measurable results in Pilot Phase I, across different indicators and desired outcomes as well as self-report results issued in relation to the progress made by month 25 of the project.

In relation to this, the partners detected the following improvement objectives in the different areas:

- Technical and improvements in platform usability;
- Involving citizens;
- Attracting companies to reinforce the offer in the Marketplace;
- Incorporation of new agents to the ecosystem of the city: Universities, Technological Centers, other Institutions;
- Incorporating features and tools for developers.

Likewise, when summarizing by grouping some of the recommendations that have been suggested by the pilot cities and one region, as lines of work to reinforce during the Pilot Phase II and for the rest of the project, the following conclusions may be drawn:

- In addition to opening of data, we must put effort into adding more visibility of data not just for citizens, but also for companies and developers as well as public administration departments. Hence, we must open more channels to inform and communicate with them;
- Actions that seek effective collaboration between public and private entities, through the establishment of a relationship framework that contributes to making more dynamic the reuse of data;
- Entrepreneurs, research centers and companies are not yet in the key of reusing public data. Policies are needed to promote reuse in order to capture the value of the data;
- WeLive platform should design together with users and other stakeholders so that it reflects their needs. This will ensure that different target groups will get information in specific points during the open service design process;
- Activities to promote the reuse of data to boost the economic activity of the city and its area of influence;
- Actions to raise the level of training and capacity of society to reduce the digital divide in the definition and management of Public Services;
- We also concluded that **strong political leadership on open data** is needed for WeLive or any similar initiative to realize its potential, thus it is necessary for governments to have their commitments (re)-affirmed to open data as raw material for innovation, and sought to put in place policies that help government, businesses and people realise its benefits. Hence, we recommend that government continue to release as open data while it should tackle the issues of accuracy, quality and reliable access to data.

The stakeholders identified in Pilot Phase I, are the first movers in a growing ecosystem. As the utility of available open data grows, and as its potential is recognised, we expect these biases to break down further and not only enhance the results of WeLive, but to ensure its sustainability.

Our future research will aim to deepen our understanding of the nature and scale of the value created by WeLive and usage of open data by qualifying and quantifying the benefits that are being felt by citizens, public administrations, academia, developers and open data companies and their customers. We will examine more

of the ways to work with open data, learning about the barriers we face on the way and how the adoption of open data through WeLive initiative might be accelerated.

8. ABBREVIATIONS

SO	Societal Objectives
TO	Technological Objectives
IO	Impact Objectives
BCM	Business Canvas Model
SaaS	Software as a Service
DaaS	Data as a Service
AaaS	Algorithms as a Service
PA	Public Administration

9. REFERENCES

[1]	http://www.mckinsey.com/business-functions/business-technology/our-insights/open-data-unlocking-innovation-and-performance-with-liquid-information
[2]	Charles Wilson (2008). "adverse selection," The New Palgrave Dictionary of Economics 2nd Edition. Abstract.
[3]	Markovits, Richard (2008). Truth or Economics. New Haven: Yale University Press. ISBN 978-0-300-11459-1.
[4]	McKinsey found potential benefits amounting to 4.1% of global GDP: http://rufuspollock.org/papers/economics_of_psi.pdf
[5]	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198905/bis-13-743-market-assessment-of-public-sector-information.pdf
[6]	http://theodi.org/news/citymapper-government-open-data-improve-cities
[7]	http://www.pewinternet.org/files/2015/04/PI_OpenData_042115.pdf
[8]	Retrieved from WeLive Description of Work
[9]	http://opendatatoolkit.worldbank.org/en/starting.htm
[10]	In 2016, there will be 75,000 Open Data jobs within the EU 28+ private sector. By 2020, this number is forecasted to increase to just under **100,000 Open Data jobs**. This represents a **32% growth** over a 5-year period. Thus, in the period 2016-2020, almost 25,000 new direct Open Data jobs will be created. https://www.europeandataportal.eu/en/content/creating-value-through-open-data
[11]	http://www.mckinsey.com/business-functions/business-technology/our-insights/open-data-unlocking-innovation-and-performance-with-liquid-information
[12]	World Wide Web Foundation. (2015) Retrieved from http:www.opendatabarometer.org/assets/downloads…
[13]	World Wide Web Foundation. (2015) Retrieved from http:www.opendatabarometer.org/assets/downloads
[14]	Shakespeare review: an independent review of public sector information https://www.gov.uk/government/publications/shakespeare-review-of-public-sector-information
[15]	Spanish Open Data Portal Annual Report, "Characterization Study of the Infomediary Sector", July 2012 via Cap-Gemini https://www.capgemini.com/resource-file-access/resource/pdf/the_open_data_economy_unlocking_economic_value_by_opening_government_and_public_data.pdf

[16]	http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf
[17]	http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf
[18]	http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf
[19]	Retrieved from WeLive Description of Work
[20]	http://inspire.ec.europa.eu/reports/Study_reports/catalonia_impact_study_report.pdf
[21]	http://www.hri.fi/fi/sovellukset/
[22]	Final report of the Finnish Open Data Programme
[23]	http://vm.fi/en/open-data-programme
[24]	http://opendataresearch.org/sites/default/files/posts/Common%20Assessment%20Workshop%20Report.pdf
	General reference of the research: McGee, R. & Gaventa J. (2010) Sythesis Report n Review of Impact of Effectiveness of Transparency and Accountability Initiatives, Institutte of Development Studies, Retrieved from https://www.ids.ac.uk/files/dmfile/IETASynthesisReportMcGeeGaventaFinal28Oct2010.pdf

10. COMMENTS FROM EXTERNAL REVIEWERS

10.1. FBK

1/02/2017

Issue	Yes	No	Score (1=low to 5=high)	Comments
Is the architecture of the document correct?	X		5	
Does the architecture of the document meet the objectives of the work done?	X		5	
Does the index of the document collect precisely the tasks and issues that need to be reported?	X		5	
Is the content of the document clear and well described?	X		4	From section 6 onwards, it is definitely ok. In previous sections, the rationale behind the layout of contents is not always clear.
Does the content of each section describe the advance done during the task development?	X		5	
Does the content have sufficient technical description to make clear the research and development performed?	X		4	
Are all the figures and tables numerated and described?		X	3	Figures and tables do not comply to the WeLive template
Are the indexes correct?		X	3	The list of figures and tables is not compiled.
Is the written English correct?	X		5	
Main technical terms are correctly referenced?	X		4	
Glossary present in the document?	X		4	

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10.2. BILBAO

31/01/2016

Issue	Yes	No	Score (1=low to 5=high)	Comments
Is the architecture of the document correct?	x		5	
Does the architecture of the document meet the objectives of the work done?	x		5	
Does the index of the document collect precisely the tasks and issues that need to be reported?	x		5	
Is the content of the document clear and well described?	x		4	It is complex to synthesize experiences of public administrations and cities with different levels of maturity, legislation and practices in areas of innovation in the emerging phase
Does the content of each section describe the advance done during the task development?	x		5	
Does the content have sufficient technical description to make clear the research and development performed?	x		4	Some concepts and ideas can be developed at the end of pilot 2
Are all the figures and tables numerated and described?	x		5	
Are the indexes correct?	x		5	
Is the written English correct?	x		5	
Main technical terms are correctly referenced?	x		5	
Glossary present in the document?	x		5	

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11. ANNEX A – OVERVIEW OF THE ASSESSMENT – APPLICABLE SOCIAL AND TRANSPARENCY QUESTIONNARIES AND INTERVIEWS (QUANTITATIVE AND QUALITATIVE)-

All participants (identified beta testers/stakeholders/end-users) must be informed about the objectives of the exercise undertaken for obtaining their feedback on social and transparency issues (Information sheet and Data consent form). It is also essential that the responses are kept confidential and anonymous and that participants are assured of this in advance. Files should be kept in a secure location and locked according to the adopted security and ethics standards of WeLive. After the study is completed and after a reasonable amount of time, as defined by WeLive, the files should be destroyed to ensure no breaches of confidentiality take place. The stakeholders in question should sign WeLive Consent Form which is a standard procedure for any type of research involving human subjects. This Consent Form acknowledges the confidentiality of the interviews and ensures that the interviewee is aware that he or she is not obliged to answer any question (s). Equally important is that question must be posed in a non-threatening manner. The aim of this exercise undertaken in D5.4 is to determine economic/social/transparency outcomes and impact of WeLive so that appropriate follow-up action can be taken by all WeLive ecosystem stakeholders to possibly improve its performance in the Pilot Phase II as well as to secure the appropriate tools which will ensure the sustainability of the project.

The semi-structured interviews will generate data that are qualitative as well as quantitative. The questions in the questionnaires deal with structural and process indicators and the extent to which each interviewee is aware of the existence and application of these indicators. Some other questions capture his/her perception regarding the transparency/social outcomes and so some of the replies will be subjective.

Assessment instrument: four methods have crystalized that actually may be deployed to determine the level of the aforementioned outcomes/impacts.

11.1. Method 1

In order to minimize the subjective interpretation of the respondents' answers, the first method consists of a series of questions that require a binary answer (yes/no). Further, interviewers must request evidence from identified stakeholder in order to validate positive responses. In this methodology, a "yes" (existence of evidence – measurable output) is given a value of 1 and a "no" (evidence/measurable output does not exist) is given a value is given a value of 0.

Example:

"WeLive allows me to enhance open and collaborative government"

Yes /No

In summary:

When the stakeholder responds "yes" and the evidence is found, the score is 1

When the stakeholder responds "no" and the evidence is found, the score is 0

When the stakeholder responds "yes" and the evidence is not found, the score is 0

When the stakeholder responds "no" and the evidence is not found, the score is 0

11.2. Method 2

This method involves question and a series of sub-questions or criteria. Each of these criteria is formulated to require a binary answer (yes/no). As with method 1, each "yes" is given a 1, and each "no" a 0. If the stakeholder does not know the answer, there is the option of assigning "D.K." (Do not know). The total "yes" answers are counted and divided by the total valid answers. The total of "D.K." answers are subtracted from the total of criteria available for each indicator, which will give the total of valid answers. The final rating for the indicator is the total of "yes" responses divided by the total number of valid answers.

For example, WeLive indicator "**To increase transparency and trust in public administrations"** includes several criteria for evaluation. Assuming that based on the answers given by the stakeholder/research participant, the interviewer will fill in the box containing the criteria as follows:

	No	Yes	DK
new datasets available		1	
datasets and apps in usage publicly accessible		1	
use of data to deliver better public services		1	
increasing state of institutional responsiveness	0		
monitor government activities, such as tracking public budget expenditures and impacts, public procurements	0		
Describe the process to follow in search of government – specific data as WeLive user	0		
Mention data to be submitted	0		
Mention criteria for registration	0		
Total			

Table 5: Evaluation criteria box for Method 2

The scoring of the indicator will then be calculated as follows:

Total yes 3

Total valid answers 8

Scoring (total yes/valid answers) 0.375

However, if a stakeholder/research participant answers "DK" for the majority of the criteria, then the whole response for that particular indicator and that particular stakeholder/research participant will be counted as invalid and will not be taken into account in the final scoring, since a majority of "DK" may give a completely distorted picture of reality.

11.3. Method 3

These are subjective questions, which probe the interviewees' perceptions. Asking for their perception provides valuable insight into the transparency level of each of the functions. This method is used as a cross-

triangulation technique to verify or refute the data collected with methods 1 and 2. The questions, using the Likert Scale[3], begin with a statement and the research participant is then asked whether they strongly agree – agree – is undecided – disagree or strongly disagree. For example, indicator: "WeLive allows me to enhance open and collaborative government" asks the research participant to what extent he/she agrees with the statement. The interviewer then ticks the answer given research participant in the box on the questionnaire.

For example, after interviewing 15 participants the following results are obtained:

Answers	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	N.A.	D.K.
Total	1	1	3	6	2	0	0

Table 6: Likert Scale assessment for Method 3

One way to present this information is to determine the range of the results from the research participants – it can be concluded that 10 out of the 15 people interviewed (or 67%) agreed or strongly agreed with the statement, and that in general there was a positive perception of WeLive as a tool in government transparency. Additional information obtained during the interviews with research participants who disagreed with the same statement can be added in the narrative text in order to present all points of view.

11.4. Method 4

These questions are open questions, and give research participants the opportunity to provide additional input. These contributions are valuable for the interviewers particularly at the time of writing the report and in order to make recommendations for further action. The answers to these questions are not usually taken into account in the calculation of the quantitative assessments, but are important qualitative information, as they can be taken into account in the narrative part of the report of and can help confirm findings from methods 1 and 2, for instance.

11.5. Scoring

Once all of the interviews are completed, a score will be calculated for each indicator. The final score can be calculated from only those indicators using methods 1 and 2. This can be done by adding al the rates for indicator and dividing the total by the number of valid answers (remember to always disregard the non-valid answers such as "don't know" or "not applicable"). The average rating for each indicator has a possible range between 0 and 1. Then the sum of all the average ratings (for all indicators using methods 1 and 2) is divided by the number of indicators in a given function to obtain the percentage of indicators rated as 1. The resulting percentage is then converted to a 0 to 10 scale by multiplying the resulting percentage by 10, as shown in the example below.

[3] A Likert scale is a psychometric scale commonly involved in research that employs questionnaires. The scale is named after its inventor, psychologist Rensis Likert http://www.business.com/management/management-theory-of-rensis-likert/

Example: There are 12 indicators related to government transparency using methods 1 and 2. If the total of the average ratings amounts to 8.60, then scoring for registration will be calculated as follows:

1.8.60/12 = 0.716

2. This would then be converted into the 10-point rating system by multiplying 0.716 by a possible rating of 10:0.716 x10= 7.16 (Corresponding to “Very transparent”).

The 10-point rating system is used to indicate the following degrees of the government transparency:

0.0-2.0	2.1-4.0	4.1-6.0	6.1 -8.0	8.1 – 10.0
Minimally transparent	Marginally transparent	Moderately transparent	Very transparent	Extremely transparent

Table 7: Calculated Scores of the assessment - Scale

This quantitative information is usually supported in the narrative report together with additional qualitative information related to indicators using methods 1 and 2 that may be shared by interviewees during discussions. The qualitative information collected with the indicators using methods 3and 4 is also included. It is important to keep in mind the value of the qualitative information collected using this methodology, the focus is learning from the end users’ personal feedback rather than concentrating too much on accurate quantification.

11.6. Cross-comparison of indicators

A critical part of the analysis is to compare the results of indicators assessing the same information but with different methods. For example, for indicator “WeLive allows me to enhance open and collaborative government” – the question utilized may be “Are the government datasets and apps in usage publicly accessible?” (Method 2), when the same indicator is again probed against “to what extent do you agree with the following statement: the government datasets and apps are publicly available” (method 3) which actually asks for the interviewees’ perception of the application of transparency criteria.

This methodology may be complemented with others, as discussed in the D5.4 document, such as surveys, focus groups discussions, and many other research methods tailored to the field. What is important to remember, nevertheless, that the findings from these interviews are triangulated with empirical evidence where possible using different methodological approaches, such as objective, outcome-based data to help corroborate or reject findings.

12. ETHICAL COMPLIANCE CHECK TABLE

1) How should we take into account the WeLive Code of Conduct? Does our work support the WeLive Innovation model? Should the WeliveCode of Conduct and/or Innovation model to be developed based on our work? (>see the WeLive Code of Conduct)	• This document focused on first pilot phase evaluation from citizens' & stakeholders perspective and experience exchange. Ethical issues are needed to take into account when people are involved to the research. See below how these issues need to be taken into account
2) What requirements does the new Data Protection Act sets for our work? Consent forms? Access to data and right to be forgotten? Transfer to third countries? Privacy by Design? The use of data for public purposes? The governance model and responsibilities? Hackering issues? (> see WeLive Data protection document, the New Data Protection Act and D8.6)	• The first pilot happened and ended on January 2017 and therefore there is no need to take into account new Data Protection Act.
3) How should we take into account WeLive Terms of Use in our development work? Should they be developed based on what we will do? (>see WeLive Terms of Use and D8.6)	• This document does not concentrate on development work.
4) How should we take into account Consent Forms, data protection and authorizations in our research? Is it necessary to collect personal information? How is our data management? (>see the D5.3, current templates for the Consent forms, D8.1 and D8.6)	• Each area need has got approval from the competent local/national ethical/legal bodies. • Each partner collected free and fully informed consent of the persons participating in the evaluation events. • All the research data has been anonymized and will be destroyed when the project finished.
5) Is accuracy and precision of WeLive personal/other data an issue to be taken into our development work? (see the D5.3)	• This document does not concentrate on development work.
6) How should we make it possible for vulnerable people to also take part into development work? How are the Consent forms? Are the participating methods suitable? How about	• During the first pilot these user groups was not included, since the usability of the system (beta-version) is not yet in a sufficient level.

marketing material? (see the D5.3)	
7) Does the local data protection set requirements for our work? Does our work deal with data transfer to third countries? Do we need authorizations for the use of external data? (>see local data protection act (and after 2018 the new Data Protection Act), D8.42 and D8.4)	• Each area got approval from the competent local/national ethical/legal bodies.
8) Is there any other issues which are relevant from the viewpoint of our work? If yes, discuss the situation with the Ethics Board before starting the work.	• No other issues