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(just one possible option)

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Glossary

Acronym	Definition
API	Application Programming Interface
Application	Any kind of meaningful use of open data. <i>(As-of "application areas of open data")</i>
[Mobile or Web] App	A self-contained program or piece of software, especially designed to be downloaded by a user on a mobile device or personal computer.
Challenge	A widespread call to action to participate in an open contest (like a Hackathon) for improving or renovating an existing situation.
Citizen	An inhabitant of a particular town or city.
Citizen initiative	An initiative proposed by a (collective of) citizen(s), which ideally is informing the challenges for the hackathon process.
Common	Often used in phrases such as "a new common" or a "global common", the term refers to a new form of a common good, typically created by people through collective action and shared by the community (T de Moor, "From common pastures to global commons: a historical perspective on interdisciplinary approaches to commons", 2011).
Fablab	A physical place where anyone can make an idea concrete by transferring and fabricating those ideas through the use of 3D printers and other (complex) technological devices. The staff and peers at Fablabs support people to build their ideas, but not to do the work instead of them.
Hackathon	Generally understood to be a collaborative event, usually made up almost exclusively of software developers, which typically lasts two-three days and is intended to result in the production of one or more apps. In the Open4Citizens project, the hackathons include a range of participants with different areas of expertise and solutions being developed are not limited to apps.
Maker culture	A global trend of consumers becoming co-creators of new products and services (MD Gross and E Li-luen Do, in "Educating the New Makers: Cross-Disciplinary Creativity", 2009), encompassing democratization of digital production technologies (among others, FabLabs), and open source and other informal styles of software development (among others, hackathons).
Mock-up	A sample, or a low-definition, non-functional prototype of an app or a service resulting from the co-creation work in the hackathon event
Non-expert user Non-IT savvy user	A person without professional or specialized knowledge in a particular subject (usually computer programming in the context of the Open4Citizens

	project).
O4C approach	A workflow based on three consecutive phases: 1) Pre-hackathon; 2) Hackathon; 3) Post-hackathon.
O4C platform	The online digital platform supporting the hackathon process with technological resources, methodological suggestions and data.
Open Data	Data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and share alike. Source: http://opendatahandbook.org/guide/en/what-is-open-data/
OpenDataLab	The physical infrastructure the Open4Citizens project intends to conceive, in order to support citizens' participation to co-creation with open data.
Persona (also: Stakeholder Persona)	An archetypal description of the likely role that individuals from each key stakeholder group will play in the proposed Scenarios (for the OpenDataLab implementation)
Public service	A service provided by a government body to people living within its jurisdiction, either directly (through the public sector) or through financing a third party (agency or subcontractor).
Scenario	A structured description envisioning a possible, achievable and desirable future (for the implementation of the OpenDataLab)
Social impact	The effect induced [by a certain project or initiative] on the well-being of a community (and/or a less integrated group of people).
Social sustainability	The ability of a community to develop processes and structures which do not only meet the needs of its current members but also support the ability of future generations to maintain a healthy community. Source: http://www.businessdictionary.com/definition/social-sustainability.html#ixzz2y75dJTij
Urban services	Services at the urban scale, aimed at creating public utility. They are not necessarily initiated by the local government.
User Journey	A series of steps (typically 4-8) which represent the typical way in which a Persona might interact with the Scenario one is designing to accomplish the full set of key activities assigned to them

1 Executive Summary

The purpose of Deliverable D4.3, Open4Citizens Scenarios, is to document the social impact of the applications and services developed in the hackathons, illustrating the context of use and the future perspective for the exploitation of such applications/services. This objective, described here as stated in the Description of Action of the O4C project, is realised in the shape of a preliminary scenario building process to explore the range of possible implementations of the Open Data Labs concept, as well as in the first draft results of the first exercise to define the specific scenarios that can be foreseen at each of the pilot locations.

Based on a review of extant academic literature and a process of debate and co-creation involving all consortium partners, the Open4Citizens methodology has been structured in the interplay of three key constitutive elements: the scenarios, the stakeholder personas, and the user journeys. The scenarios are structured description envisioning a possible, achievable and desirable future for the implementation of the ODL concept, and are defined at two levels of abstraction: high-level scenario categories, and pilot-specific local scenarios. The stakeholder personas are the archetypal descriptions of the likely roles that individuals from the key stakeholder groups will play in these scenarios. And finally, the user journeys are a series of steps which represent the typical way in which a persona might interact with the scenario to accomplish the full set of key activities assigned to them.

Therefore, the aim of this document is a practical one: to formulate a tailored scenario building methodology for the Open4Citizens project, and apply this methodology to provide a first iteration of the Open4Citizens scenarios. The scenarios developed in the framework of this document are intended to be useful tools to engage relevant local stakeholders at each pilot. As such, the aim is to provide a shared basis for starting fruitful discussions with relevant stakeholders on possible, desirable and optimal courses of action to implement concept of the Open Data Lab at each of the project's pilot locations.

2 Introduction

This deliverable is the first of a cycle of deliverables that will define the methodology of analysis, the features and the future perspectives of the scenarios of implementation of the OpenDataLabs (ODL) in the pilots of the O4C project. The deliverable derives its considerations from the work done in the first hackathon cycle, documented in D3.4, and on the insights about the ODL concept as documented in D1.4. This deliverable is also developed in close coordination with the definition of the Open4Citizens sustainability and business models, reported in D4.9 and D4.10. The second and final document for the definition of the O4C scenarios, D4.4, is due after the closure of the second hackathon cycle, on M29.

This deliverable is structured in two main sections. After a short introduction to the purpose and features of the document, Section 3 introduces the scenario building methodology followed to devise the O4C scenarios of implementation of the Open Data Labs, and presents the building blocks (scenarios, stakeholder personas & user journeys) of such methodology. This is followed by Section 4, which then presents the O4C generic scenario categories and local pilot scenarios, making explicit the user journeys for each key persona and per each scenario in the final set as a means to provide more fleshed-out, fine-grained descriptions of the scenarios. The document is finished with some concluding remarks and an exploration of the next steps to be followed.

3 Methodology for Scenario Building

This section introduces the methodology and presents its building blocks (scenarios, stakeholder personas & user journeys).

3.1 Towards an Open4Citizens Scenario Building Methodology

The notion of scenario building, scenario planning or scenario analysis is well known in the scientific literature. Especially in the areas of business and policy planning, concepts, methodologies and techniques have been developed since the 70's, and have produced a rich corpus of knowledge on how, why and when to apply scenarios as analytical instruments to inform the decision making process (Ringland, 1998). Although definitions of what exactly a scenario is abound, and there is no strong consensus on a "canonical" definition, most scholars and practitioners may agree that, at its bare minimum, a scenario is a structured description or story which illustrates aspects of an imagined future (Inayatullah, 2009). In short, scenarios are tools or ways to think about future possibilities in a standardized manner (Van der Heijden, 1996).

The purpose of scenario building is, therefore, to help players "think out of the box", to open the scope of whatever could happen, and cover the whole palette of future possible situations that result from a potential action in the framework of a regimented process. If properly used, scenarios can guide strategic action, and inform the decisions of the key players in the implementation of any given plan, policy or model (Godet, 1996).

Based on these notions, the O4C consortium set forth to develop a workable, useful and cost-effective methodology. The first notions and the positioning of the common framework for the task were debated and agreed upon in a first face-to-face session, carried out during a consortium meeting in Milano in March 2017. After this initial effort, three more dedicated workshop sessions were conducted on the issue during the next two months, to advance on the details and find a consensus on the methodology. This collective effort coalesced in a technically streamlined but conceptually consistent procedure, the O4C scenario building methodology, composed of three building blocks:

- The **scenario** – a structured description envisioning a possible, achievable and desirable future for the implementation of the ODL concept (as delineated in in a pilot location)
- The **stakeholder personas** – the archetypal descriptions of the likely roles that individuals from the key stakeholder groups will play in these scenarios
- The **user journeys** – a series of steps which represent the typical way in which a persona might interact with the scenario you are designing to accomplish the full set of key activities assigned to them

Stakeholder personas, their user journeys and the expected impacts of the scenario are generalisations, which are used to provide more details on the scenario categories. The specifics of each building block are described in more detail in the following subsections.

3.2 *The Scenarios*

Scenario analysis is a process of assessing possible future events by considering alternative possible outcomes (sometimes called "alternative worlds"). Thus, scenario analysis, which is one of the main forms of projection, does not try to show one exact picture of the future. Instead, it presents several alternative future developments. In short, scenarios are analytical devices that assist in thinking about possible future outcomes, thus allowing the designer to weight different alternative courses of action.¹

In the methodology devised for this deliverable, two levels of scenario building are defined:

- **Scenario categories:** these are very generic descriptions, at a high-level, representing abstractions of empirically-based local pilot scenarios, grounded on solid data generated in the first hackathon cycle
- **Local pilot scenarios** (or simply "scenarios"): these are very focused and detail-oriented descriptions, with specific actors in mind, thinking of possible courses of action in each pilot, and are meant to be regarded as a useful tool for engaging stakeholders

These scenarios are described in a standardized template, such as the one that can be seen below in Table 1. The template draws on the concept of the SWOT analysis, but extends and goes beyond the traditional logic of SWOT by placing a heavier emphasis on the exploration of future possibilities.

¹ https://en.wikipedia.org/wiki/Scenario_analysis

[Scenario title]	
Description	<i>[high-level description of the scenario; you can use sentences starting with “The ODL would...”]</i>
Owner	<i>[public/private, and which entity or kind of entity is hosting the ODL?]</i>
Strength	<i>[what are the most positive points of this particular way of implementing an ODL for the host entity? which resources and assets could you mobilize?]</i>
Weaknesses	<i>[how can the implementation of this scenario be problematic for the host entity? which foreseeable issues you might have to focus your attention to?]</i>
Opportunities	<i>[what are the biggest rewards? which external conditions/factors can you capitalize in this scenario?]</i>
Threats	<i>[what are the biggest risks? which external conditions/factors may lead to its failure?]</i>

Table 1 Scenario building template

3.3 The Stakeholder Personas

A user persona is a representation of the goals and behaviour of a hypothetical group of users. In most cases, personas are synthesized from data collected from user research. They are captured in descriptions that include behaviour patterns, goals, skills, attitudes, and the environment, with a few fictional personal details to make the persona a realistic character.²

Five key stakeholder profiles have been identified for the ODL, as stated in D1.4, the Concept definition. These are reproduced in Table 2 below for convenience:

² [https://en.wikipedia.org/wiki/Persona_\(user_experience\)](https://en.wikipedia.org/wiki/Persona_(user_experience))

Stakeholder	Needs	Knowledge/Skills
Citizens	Understanding the potential of Open Data, Visualising Open Data, Redesigning public services by using Open Data	Personal/Tacit knowledge about their own needs
Interest groups	Addressing emerging problems in the community by generating new solutions	Domain experts, issue experts, institutional dialogue abilities
IT experts/hackers/makers	Finding new, meaningful opportunities for innovative solutions	Technical knowledge
Public authorities	Redesigning urban services to effectively support citizens and improve cities	Institutional knowledge (regulations, public policies), service suppliers, data owners
Entrepreneurs	Identifying new business opportunities related to the use of Open Data in public services	Business knowledge, service suppliers, data owners

Table 2 The Open4Citizens stakeholders

From these stakeholder groups, we can derive personas that help us in better visualizing and communicating the value of the ODL model (see Table 3):

Stakeholder	Persona	Description
Citizens	Matt, citizen	<p>Matt is a concerned citizen. He's 42 years old, is married, and is father to two children.</p> <p>He never went beyond his high school diploma, but thanks to his honesty and good work ethics he made it to branch manager at the local grocer where he's been employed for the last eight years.</p> <p>He's been living in the same local neighbourhood by the seaside where he's been since his childhood, a place where he's well known and regarded by the community. He enjoys living there, but lately there have been lots of changes around. Fancy shops have been popping around, posh people starting to come to his shop asking for organic stuff and exotic grains, and</p>

Stakeholder	Persona	Description
		<p>there are tourists everywhere. Granted his shop's sales are booming, but his salary doesn't seem to be keeping up with his bills.</p> <p>Sometimes he's afraid of the future, for him and his family, and wonders what's going to be of them. He's never been a nostalgic bloke, but he can't help it remember the times of his youth, which seem somewhat simpler and less crazy.</p> <p>Although a little bit confused with the pace of change in digital gizmos and such, he's not a technophobe either, and is willing to give it a try if technology could solve some of his problems</p>
Interest groups	María, activist	<p>Maria is an activist. She's 60 years old, has half of that figure in experience as a legal counselor, and has been active in social struggles since her teens.</p> <p>Maria is an associate in a respected labour law firm, and devotes a lot of her time to activism on various human rights issues. Lately, she's been deeply touched by the plight of refugees, which resonates deeply with the experiences her own grandmother told her about during World War II, where her family had to flee her country. She's spent a lot of time and effort advocating for their rights, trying to raise awareness, and finding ways to ease their problems.</p> <p>María is and has always been a keen learner, is enthusiastic about digital technology, and is very active on social media. She's always ready to see if technology can help her better accomplish her goals, although sometimes she might need a "for dummies" explanation for technically complex matters.</p>
IT experts/hackers/makers	Leila, hacker	<p>Leila is a hacker. She's 21, has just moved out from her parents' house, and is finishing the last year of her undergraduate studies in software engineering.</p> <p>Leila is very excited about the possibilities that her studies are opening up in front of her. She was always a bright kid, very good with math and numbers. It</p>

Stakeholder	Persona	Description
		<p>inspires her to tackle complex challenges while demonstrating technical shortcuts and new smarter ways of doing things.</p> <p>She is a strong believer in the transformative power of digital technology, and is a follower of the ethos of the hacker. For this reason, she likes putting her skills at the service of a good cause, and is a regular of socially-oriented hackathons and other likeminded events. However, she is also suspicious of attempts to manipulate her skills, and is always mistrustful of governments and corporations.</p>
Public authorities	Chen, public officer	<p>Chen is a public officer. He's 54 years old, and has an engineering background, even though he started working young for the municipality.</p> <p>In his three decades of service, he's filled several positions in the IT department, until eight years ago he was moved to his current position, as Undersecretary of the Open Data and Transparency office.</p> <p>Chen is attuned to emerging research concepts and ideas, and is a regular at local (and even some international) meetings and conferences. He's proud to have been the leading force behind a few successful innovation projects in the municipality. He understands that government should be responsive to the people, and that it is his duty to try to improve the municipality. However, his years in the public administration have taught him to be cautious, and he knows fully well that policy can shift radically after each election.</p>
Entrepreneurs	Dominique, entrepreneur	<p>Dominique is a digital entrepreneur. He's 36 years old, has a data analyst degree and an MBA, and is currently serving as CEO of a digital consultancy firm he founded three years ago with two college friends.</p> <p>Dominique came into contact with open data in his freshman year, and has been building open data apps and services ever since. He has created five apps so</p>

Stakeholder	Persona	Description
		<p>far, of which two have been fairly successful.</p> <p>He's attended his fair share of hackathons in his lifetime, and has a somewhat mixed opinion. Some were great (in fact, one of his successes came out of a hackathon), some others were a waste of time. As an entrepreneur, he's become good at making useful ideas sustainable, and is always on the lookout for opportunities.</p>

Table 3 The Open4Citizens personas

3.4 The User Journeys

A user journey is a series of steps which represent a scenario in which a user might interact with the thing you are designing. They can be used for 2 main things: Demonstrating the way users **currently** interact with any given system, and demonstrating the way users **could** interact with any given system³.

In short, user journeys are a tool to describe in a structured manner, and at a potentially high level of detail, exactly what steps different users take to complete a specific task within a system, application or website⁴ Therefore, they are generally regarded as useful elements to describe a system or model in a more comprehensive and accurate way, providing details that otherwise would remain obscured.

In the context of this document, user journeys are used to provide additional layers of detail on the O4C scenarios (see Table 4).

Persona: [ADD name, stakeholder]	
Scenario: [ADD title of scenario]	
1.	Description of step 1
2.	Description of step 2
N	Description of step N

Table 4 User journey template

4 The Open4Citizens Scenarios

In this section, the building blocks of the O4C methodology are related to each other. Both scenario categories and pilot scenarios are presented, and the user journeys for each key persona per each scenario in the final set are provided.

³ <http://theuxreview.co.uk/user-journeys-beginners-guide/>

⁴ https://en.wikipedia.org/wiki/User_journey

For convenience, Table 5 with the summary of all scenarios is provided below:

Scenario A: The OpenDataLab as a Service offered by a FabLab-like Infrastructure
Barcelona – as part of Barcelona Fab Lab
Scenario B: The OpenDataLab as an Independent Incubator
Milano – the Open Data NGO
Karlstad – the Independent Incubator OpenDataLab
Rotterdam – the Co-located, Co-owned OpenDataLab
Scenario C: The OpenDataLab as a Centre in a University or Public Institution
Milano – the OpenDataLab at Polimi
Barcelona – the OpenDataLab as part of a Citizen Innovation Laboratory
Milano – the Municipal OpenDataLab
Copenhagen – the Data-Driven Design Lab
Copenhagen – OpenDataLab as a National Open Data Partnership

Table 5 The Open4Citizens scenarios summary

4.1 Scenario A: The OpenDataLab as a Service offered by a FabLab-like Infrastructure

Description

This scenario describes the generation of an ODL as an additional service/infrastructure offered by an existing FabLab-like infrastructure, such as a maker space or a community or bottom-up associations.

The OpenDataLab could be part of the operations of an existing FabLab. In this case, the FabLab would include a space and facilities for hackathon development according to the O4C model. It would additionally host data training courses.

Although many of these types of spaces are often connected to other institutional infrastructure or organisations (Universities, schools or research centres) the case considered in this scenario refers to FabLabs or maker spaces as independent administrative units, which offer the local community a number of services and infrastructure for digital fabrication (Table 6).

Service offered by a FabLab-like Infrastructure	
Description	<i>The ODL could be part of the operations of an existing FabLab The FabLab would include a space and facilities for hackathon development It would host data training courses</i>
Owner	<i>Private: FabLab, possibly local community, supported by data owners, IT experts</i>
Strength	<i>It relies on an existing infrastructure It is already familiar to the local community The OpenDataLab mission is consistent with the FabLab mission Matches different competences and human resources available in the community</i>
Weaknesses	<i>It could suffer for the same financial uncertainty as the Fablabs The OpenDataLab mission may not be clear enough to the FabLab community Create a consistent service out of the integration between FabLabs and OpenDataLab</i>
Opportunities	<i>Links FabLab's mission (a place to use the infrastructure) to the activities of consultancy and promotion It could integrate the FabLab services It could make the FabLab more relevant also for public authorities</i>
Threats	<i>The FabLab may not have or be linked to an existing community of data experts, data owners or programmers</i>

Table 6 Scenario A: Service offered by a FabLab-like Infrastructure

User journeys

Persona: Matt, citizen	
Scenario: ODL as a Service offered by a FabLab-like Infrastructure	
1.	Matt finds out about the local digital fabrication lab, when his younger son tells him about a workshop they did at school
2.	Matt goes to a digital fabrication open doors day, and finds out about the Open Data Lab project there, where he is invited to a hackathon to promote the wellbeing of the elderly.
3.	He is very sensitized to this problem, as he has an 83 year old father who is scared of leaving home for fear of falling on the street and getting badly hurt. In the run-up to the hackathon, he checks the O4C platform, and finds out about interesting and inspiring solutions from other countries. This makes him even more eager to collaborate!
4.	At the hackathon, he contributes his contextual and experiential knowledge about the problems faced by elderly people to design a user-friendly system for “Safe Trip”, his team’s project.
5.	During the post-hackathon piloting phase, he convinces his father to be part of the user testing panel – with the assistance of the app, he soon loses fear of being left stranded in an unfamiliar street, and goes out more often.

Table 7 Scenario A: A citizen's journey

Persona: María, activist	
Scenario: ODL as a Service offered by a FabLab-like Infrastructure	
1.	María has heard sometimes of open data, she thinks it may help her in her activities, but she’s never found a good way to introduce herself to this world.
2.	One day, she is invited to a round table at the local digital fabrication lab, on 3D printing as a tool for social integration. On the way out, she sees a poster showcasing the launch of a new ODL project there. She takes the opportunity and joins the first hackathon.
3.	Her group works on a concept of an app to make it easier for older people to move confidently in the city, “Safe Trip”. Even though the focus of this first prototype is elderly people, she thinks the system could also be useful to assist newly arrived refugees with health problems in their day-to-day activities.
4.	As part of her participation in the post-hackathon, she contributes by enlisting a group of elderly refugees that are taking part in projects in her organization.
5.	María feels the whole process has been very exciting and enriching. Not only she’s been part of the development of a digital tool which is creating for social good; in the process she’s also learned the basics on how to use open data, a useful skill in her activities as activist
6.	Thus, in her next project as an activist, she knows how to pull updated daily figures on the actual number of refugees coming using the O4C platform, and can show how meager the number is compared to the total city population.

Table 8 Scenario A: an activist's journey

Persona: Leila, hacker	
Scenario: ODL as a Service offered by a FabLab-like Infrastructure	
1.	Leila has been part of the local digital fabrication lab for six months already.
2.	In one of her visits, she finds out about a hackathon on improving the wellbeing of senior citizens, organized by the ODL department of the entity. She learns that one of the assets opened up at the hackathon is a LORA network, a technology to connect open-data generating sensors which she's very interested in.
3.	At the hackathon, her team develops a concept of "Safe Trip", an app to support the autonomous mobility of elderly people with a wearable app that monitors the user's health data and provides personalized information on the selected route. Leila grounds this idea with an open architecture, where LORA connects the several distributed sensors of the system. During the hackathon, she gets close support from Fab Lab LORA experts, and learns how it can support user-generated open datasets created with distributed sensors.
4.	At a later course assignment in college, Leila gets an A+ thanks to the skills that she learned at the hackathon.

Table 9 Scenario A: a hacker's Journey

Persona: Chen, public officer	
Scenario: ODL as a Service offered by a FabLab-like Infrastructure	
1.	Chen learns about the hackathon in a coffee break time conversation with a colleague from another department at the city council.
2.	Being the launch of a new innovation initiative in the city, the ODL, he wants to check it out, and registers for the next hackathon
3.	During the hackathon, Chen contributes his experience as seasoned public officer, guiding the group on available open data and public assets that can help the project.
4.	After the hackathon, he presents the idea to the innovation projects team at his department, who take the idea and include it in the piloting part of a proposal for an European project they're currently working in.

Table 10 Scenario A: a public officer's journey

Persona: Dominique, entrepreneur	
Scenario: ODL as a Service offered by a FabLab-like Infrastructure	
1.	Dominique is a regular at the local digital fabrication lab, where he's collaborated with one of his companies in a number of proposals and funded projects.
2.	He finds out about the launching hackathon of the new ODL, and registers. He usually makes time for himself to take part in such events every three or four months, and is willing to give the ODL approach a try.
3.	His group develops "Safe Trip". Dominique sees the opportunity to deploy a prototype he built some years ago, of a low-yield battery which works with the bioelectricity, as part of the solution. He patented the idea, but could never get funding to commercialize it because investors were missing interesting use cases that could prove the worth of the technology.
4.	With the support of the post-hackathon prototyping package, the endorsement of the ODL and the participation of digital fabrication lab experts, he successfully closes a licensing agreement with a large firm to launch a real-life pilot in the ODL and exploit the idea

Table 11 Scenario A: an entrepreneur's Journey

4.1.1 Barcelona – as part of Barcelona Fab Lab

As part of Barcelona Fab Lab	
Description	<i>The OpenDataLab would operate as a dedicated program of the Barcelona Fab Lab It would complement the activities of the BCN FabLab, by providing training on open data, and supporting digital fabrication projects with an open data angle</i>
Owner	<i>Private: The ODL would be organically linked to the BCN FabLab, which is wholly owned by the IAAC (Institute of Advanced Architecture of Catalonia), a private educational institution</i>
Strength	<i>The ODL can rely on an established infrastructure, a network of institutional contacts, and a strong community of digital fabrication enthusiasts and entrepreneurs.</i>
Weaknesses	<i>Initially, the ODL may create a financial burden, which may not be well understood or might be perceived as lacking a justification for such an expense, by other areas of the FabLab which have already proven its worth within the institution. The ODL may push into lines or research and innovation which are outside the comfort zone of an established Fab Lab, thus creating dissonances and loss of strategic focus for the Fab Lab.</i>
Opportunities	<i>It links the nascent ODL to a very successful institution that can provide a needed initial push It can tap into the opportunities generated by the BCN FabLab (in terms of generating projects with associated budget, accessing student talent, and benefitting from academic talent)</i>
Threats	<i>The ODL's activities may end up being disconnected from the mainstream FabLab, thus subtracting legitimacy for the ODL in the eyes of the rest of the community. Alternatively, the ODL's activities may end up being "coopted" by more traditional FabLab projects, and be "diluted" to the point where the original ODL vision and mission is no longer holding up. The ODL would be perceived as a different flavour of FabLab, with no model of its own.</i>

Table 12 Scenario A: the ODL as part of the Barcelona FabLab

4.2 Scenario B: The OpenDataLab as an Independent Incubator

Description

In this scenario, the ODL would be an autonomous infrastructure where hackathons could be hosted. It would include a space and facilities for hackathon development and it would offer data training courses. The ODL could emerge as a new, independent infrastructure if there is convergence of the interests of relevant stakeholders in the area to support this.

As an Independent Incubator	
Description	<p><i>The ODL would be an autonomous infrastructure where hackathons could be hosted</i></p> <p><i>It would include a space and facilities for hackathon development</i></p> <p><i>It would offer data training courses</i></p> <p><i>Can admit a great degree of operational flexibility and institutional variation, from minimum viable ODL to full-fledged autonomous entity</i></p>
Owner	<p><i>Private or Public: owned by the local council or a variety of actors in the local community</i></p>
Strength	<p><i>Its mission would clearly stand out</i></p> <p><i>It would support local start-ups and innovation within the community</i></p> <p><i>Matches different competences and human resources available in the community</i></p>
Weaknesses	<p><i>The revenues from the activities (hackathons, data training) may not cover the costs (long break-even)</i></p> <p><i>Need to be heavily supported in the first period</i></p>
Opportunities	<p><i>Integrate data-consultancy activities</i></p> <p><i>Incubates concepts from hackathons</i></p> <p><i>Offer test-bed for start-ups</i></p>
Threats	<p><i>The community may not understand the ODL's value proposition</i></p>

Table 13 Scenario B: the ODL as an independent incubator

User journeys

Persona: Matt, citizen	
Scenario: ODL as an Independent Incubator	
1.	Matt finds out about the ODL via a poster in his local library – it’s only a two minutes walk from there, so he checks it out just out of curiosity.
2.	He talks to one of the ODL facilitators, who explains in a plain but insightful manner “what’s in it for him” in open data.
	Later on, at home, he takes some time to check out the O4C platform, especially the inspiration card examples and the beginners crash course– he finds it interesting.
	Three weeks later, Matt receives an invitation to a hackathon, on the topic of reducing waste, circular economy and increasing sustainability. As a local manager of a food store, he feels he might find a solution there to his long-standing problem with fast-spoiling groceries (‘what a waste of money!’).
	Matt attends the hackathon, where his group designs an app (Fresh Meals) which allows local restaurants and groceries to donate unused fresh foods directly to registered local families in need at the end of each day, and in exchange the businesses can receive tax breaks and a sustainable economy certification.
	Matt’s idea catches the attention of a councilman attending the hackathon, who pledges some funding to develop the digital tool and pilot it in Matt’s shop.

Table 14 Scenario B: the citizen's journey

Persona: María, activist	
Scenario: ODL as an Independent Incubator	
1.	María finds out about the ODL project via a data journalist colleague.
2.	She’s currently working on a project on raising awareness about hidden urban poverty, so she comes to the ODL looking for data. She’s informed that there’s soon a hackathon coming up, and she registers.
	In the run-up to the hackathon, she spends time often exploring and analysing data on the O4C platform – she finds it useful to have a “one-stop shop” which combines the tools she needs to extract, transform, analyse and visualize the data.
	At the hackathon, she partners with a group which devises “Fresh Meals”, a solution to help families in need with fresh food.
	During the post-hackathon phase, María’s organization takes part in the pilot, serving as the liaison between the pilot project and the families she made contact with during her enquiries.

Table 15 Scenario B: the activist's journey

Persona: Leila, hacker	
Scenario: ODL as an Independent Incubator	
1.	Leila finds out about the ODL in a presentation at an unconference organized by the local Fab Lab
2.	As an apps developer who works often with open data, she is intrigued, so signs up for the next hackathon.
	She participates in a group tackling fresh food waste and urban poverty. She likes the , but also the technical challenge. In particular, she enjoys pushing the possibilities offered by the O4C platform, to work with data form many sources in a single environment
	Leila volunteers enthusiastically to develop a first prototype of the app during the post-hackathon phase – and when the project finds funding, she lands a five-month part-time contract in the development team!

Table 16 Scenario B: the hacker's journey

Persona: Chen, public officer	
Scenario: ODL as an Independent Incubator	
1.	Chen receives a call from a former colleague and friend who now works at the ODL, and accepts his invitation to the next hackathon, on sustainability and the circular economy.
2.	At the opening of the hackathon, he gives a short presentation on the resources made available by the municipality to launch open data innovation projects.
	Then he joins one of the groups, which ends up developing a concept of an app to allow families to take advantage of fresh food in risk of expiration.
	He is happy to facilitate digital innovation which benefits the citizens, and puts the group in contact with a colleague in the city council, in charge of social services innovation.
	With a small grant of 4000€ to cover direct costs and travel allowances from both departments, Chen's and his social services colleague's, the project can start a small pilot for the post-hackathon phase.

Table 17 Scenario B: the public officer's journey

Persona: Dominique, entrepreneur	
Scenario: ODL as an Independent Incubator	
1.	Dominique is subscribed to several newsletters and bulletins sent by innovation entities – via one of these, he becomes acquainted with the ODL
2.	He goes directly to the website. He is especially impressed by the quantity and quality of project proposals from past hackathons in the Showcase page, and decides to sign up for the next – “Perhaps I’ll find there my next killer app?”
	At the hackathon, he provides his expertise to develop the business model for his group’s exciting idea, Fresh Meals. He’s been to many hackathons and service design events, but he really likes the ODL approach – very mixed profiles and ideas grounded on data, makes for very interesting and implementable ideas.
	During the pilot phase, facilitated by the ODL, Dominique spends some weeks fundraising for the project - and finally, he secures a 16000€ loan from a local ethical bank which allows the project to come into being.

Table 18 Scenario B: the entrepreneur's journey

4.2.1 Milano – the Open Data NGO

The Open Data NGO	
Description	<p><i>The ODL would be an organization devoted to promoting the use of OD for public purposes. It would function as a radar for challenges and data among public communities and data owners. It would promote events and projects to create collaboration platforms between different engaged stakeholders</i></p> <p><i>The ODL would be in charge of a NGO acting at national level as promoter of data based initiatives for public purposes.</i></p> <ul style="list-style-type: none"> • <i>an advocate for data opening and using</i> • <i>a radar for challenges</i> • <i>data discloser</i> • <i>events organizer</i> • <i>services placement</i> • <i>services maintenance</i> • <i>services update</i> • <i>services marketing</i> <p><i>Three stages of development</i></p> <ol style="list-style-type: none"> 1. <i>Task force: the ODL gathers competences from different fields of knowledge and environments and creates the condition for solving a problem defined by a specific community of interest by creating a dedicated multidisciplinary team</i> 2. <i>A laboratory /factory: teams can consolidate and decide to create a space dedicated to the enhancement of their collaboration with a certain local community. It could be an autonomous location or adjoined to an existing service (a FabLab, an incubator...)</i> 3. <i>A Network of ODL s: different experiments of ODL in different location can create a consortium aimed at lobbying for OD awareness and availability at the local, national and international level.</i>
Owner	<p><i>Owned by a private association but in close partnership with both public and private institutions and organizations, which can eventually join in as formal partners. It would be funded with EU fund and public grants as well as with revenues coming from events fees, training courses or counseling.</i></p>
Strength	<p><i>Independent but in close relationship to data owners, local governments and communities.</i></p>

	<p><i>Clear mission and flexible organization. Able to mobilize an ad-hoc “task force” in response to different demands.</i></p> <p><i>It could be an umbrella for different operations, interest groups and communities, professionals that can come together due to a common interest / challenge.</i></p> <p><i>It could be easily mobilized “on demand” from the early stage.</i></p> <p><i>It can adapt to different situations and engage on different tasks:</i></p> <ul style="list-style-type: none"> • <i>Organize events /hackathons</i> • <i>Data disclosure and processing</i> • <i>Research</i> • <i>Challenges definition</i> • <i>App incubation</i>
Weaknesses	<p><i>Granting the continuity of funding, specially of tasks unrelated to events (e.g. independent research on data, challenges survey,...).</i></p> <p><i>Dependent on mostly outsourced competences which need to be “educated” to the ODL “way of” dealing with OD related issues.</i></p>
Opportunities	<p><i>Existence in Milano for an ecosystem manager able to create synergies between different stakeholders (public and private).</i></p> <p><i>Current existence of a political commitment on open-data and on the activation of open-data related ecosystem</i></p>
Threats	<p><i>Long-term commitment of the involved actors</i></p> <p><i>Financial survival without public funding</i></p> <p><i>To be considered just as Hackathon organizers</i></p>

Table 19 Scenario B: Milano, the Open Data NGO

4.2.2 Karlstad – the Independent Incubator OpenDataLab

<i>The Independent incubator OpenDataLab</i>	
Description	<i>The ODL would be an independent actor that facilitates data accumulation, tests and development of user-centric data-driven services and products in a co-creating method. This by using variations of the pre-hackathon, hackathon and post-hackathon methodology</i>
Owner	<i>Two working scenarios</i> <ol style="list-style-type: none"> 1) <i>Owned by actor within the innovation system</i> 2) <i>Independent actor funded by providing services and/or public funds</i>
Strength	<i>Addresses a need among public sectors and big companies to better understand challenges, expectations and networks on community and local level.</i>
Weaknesses	<i>The structure is highly depended of personal relations between actors in academia, innovation system and civic sector.</i>
Opportunities	<i>Offer test-environment for public agencies</i> <i>Offer test-environments for start-ups</i> <i>Offer a pool of partnerships and opportunities for civic sector</i>
Threats	<i>Changes in personnel within one or more of the key actors could affect the relationships that the ODL is built on.</i>

Table 20 Scenario B: Karlstad – the Independent Incubator OpenDataLab

4.2.3 Rotterdam – the Co-located, Co-owned OpenDataLab

<i>The Co-located, co-owned OpenDataLab</i>	
Description	<p><i>“The OpenDataLab visited our neighbourhood...”</i></p> <p><i>The ODL would be a co-located, co-owned network embedded in the active civic community of the city, with the primary aim to support civic initiatives to flourish towards their visions.</i></p>
Owner	<p><i>A co-owned ODL would mean a fully transparent organization owned by its members.</i></p> <p><i>Each members of the network are equally represented, and in an organizational structure that can organically change over time.</i></p>
Strength	<p><i>A co-located, co-owned ODL's primary strength is its embeddedness of in the social infrastructure, supporting the shared vision of its members, fostering collaboration by bearing successes and failures equally.</i></p> <p><i>This structure would steer the various "city-makers" under the same platform</i></p>
Weaknesses	<p><i>A co-located, co-owned ODL, existing at the locations of the stakeholders has weak visibility unless major, shared efforts are put into PR itself.</i></p>
Opportunities	<p><i>A co-located and co-owned ODL would ensure a democratic co-creation process, empowered by the diversity of various stakeholders in city-making.</i></p> <p><i>Such a network organization can react quickly to the organic, real life challenges in the urban space, and also provide value as a network.</i></p>
Threats	<p><i>A co-located, co-owned ODL at the moment is driven by the momentum of the O4C project, but this can flatten.</i></p> <p><i>Changing ways of city-making (e.g., based on political changes) can largely impact the collaboration between top and bottom innovators.</i></p>

Table 21 Scenario B: Rotterdam – the Co-located, Co-owned OpenDataLab

4.3 Scenario C: The OpenDataLab as a Centre in a University or Public Institution

Description

The ODL would be an infrastructure managed by a university or a municipal centre. It would use the university space or a public space. If part of the university the ODL would offer services mainly to the university community (academic, researchers, students, alumni). When deriving from a public initiative, the ODL would address the needs of local communities and local business. The aim of the ODL would be to support a strategic focus area (e.g. the development of urban services) or supplement selected study programs and research activities. When placed in a university, the ODL would work closely across disciplines with other “sister labs” within the university and in other universities and research institutions.

Although the focus would be on teaching and research activities, the university may be interested in supporting the ODL as an investment to improve its role and position in the local community and with the local administration, therefore extending its offering outside its usual range of stakeholders - students, teachers, researchers and alumni - to include also educational, inspirational and co-design activities open to members of the local communities, local businesses and public administration. For this reason it is also possible to think of an initiative promoted by both academic institutions and public administrations.

Owned by a university/public institution	
Description	<p><i>The ODL would be an infrastructure managed by a university, using the university space and offering services mainly to the university community (academic, researchers, students, alumni)</i></p> <p><i>It would offer data training courses</i></p> <p><i>Consultancies for external partners</i></p>
Owner	<p><i>Public - the ODL would be part of the university's or public institutions' services and infrastructures</i></p>
Strength	<p><i>It would promote the university or public institution as an innovation centre for the local community</i></p> <p><i>It would use the university's or public institution's infrastructures</i></p> <p><i>It would refer to the existing community of experts/students/businesses/employees</i></p> <p><i>Boosts what the university or public institution can do well, providing a supporting function to the owning entity's main role</i></p>
Weaknesses	<p><i>The accessibility may be harder for "external" actors (start-ups)</i></p> <p><i>It may not be critical for the university's or public institution's mission</i></p>
Opportunities	<p><i>The university or public institution could use it as an incubator for spin-offs from its members' activities</i></p> <p><i>Offer test-bed for experts/students/businesses/employees</i></p> <p><i>It may be used for the university or public institution to offer external consultancies on data</i></p> <p><i>Data training courses could be offered to the local community</i></p> <p><i>Showcase for experts/students/businesses/employees' skills</i></p>
Threats	<p><i>It may not be visible enough as a resource for the local community or public authorities</i></p> <p><i>Project is highly dependent on shifting political or institutional priorities</i></p>

Table 22. Scenario C: the ODL Owned by a university/public institution

User journeys

Persona: Matt, citizen	
Scenario: ODL as a Centre in a University or Public Institution	
1.	Matt comes to learn about the OpenDataLab thanks to a friend, who tells him that his son has shown him some cool visualisations of sports data that he developed in some event at some “thing in school” called OpenDataLab.
2.	He goes to the O4C platform, and decides to take an online beginners crash course on open data, which was developed at the ODL thanks to a grant from the national-level “The University with and for Society” initiative.
3.	Towards the end of the course, he receives an invitation to an open data hackathon, centered on the challenge of using open data to promote democratic participation. Matt thinks it’ll be a great way to put to test the skills he’s learned throughout the course.
4.	At the hackathon, his group focuses on the concept of a citizen-driven predictive policymaking platform they dub “Decide!”, which can take available open data, process it, and relate the several variables relevant for any given urban problem so that citizens can get an evidence-based understanding of how different policies can impact the city.
5.	With his rudimentary knowledge of open data analytics, Matt does not fully grasp “how the heck” the platform is working, but he can well see its merits when, as part of their project presentation, the group creates a use case on real estate prices: if built as planned, the platform will accurately predict how much rental prices will fluctuate as a function of democratic neighbourhood-level decisions on the number of tourist apartments and hotels allowed.
6.	Matt is excited about the potential of the project, and collaborates in its development, being one of the first beta testers: he uses the platform to analyse the impact in the groceries market of current trends in the increase of tourism, convincing his superiors that an investment in upgrading his local grocery branch are needed.

Table 23 Scenario C: the citizen's journey

Persona: María, activist	
Scenario: ODL as a Centre in a University or Public Institution	
1.	Being a known activist, María is glad when the ODL team contacts her to collaborate in the organization of a hackathon on citizen participation.
2.	In the course of the pre-hackathon, the ODL and María hold several meetings to understand how this event can best serve the needs of activists like her.
3.	At the hackathon, María serves as a mentor during the co-creation activity. Her experience helps many groups, who incorporate her insights into the development of their projects.
4.	Later on during the hackathon, she is part of the panel of judges, who decide which projects will get the three prizes: a small cash prize, and a small paid advisory role during the city council-funded implementation of the project. One of the projects calls powerfully her attention: the “Decide!” platform. Thanks to her support and that of the rest of the judges, the platform gets the second prize.
5.	A beta version of the “Decidim!” platform is successfully produced during the post-hackathon implementation of the project; version which she uses to demonstrate the social and economic benefits of the policies to empower migrants to be self-employed that her association promotes.

Table 24 Scenario C: the activist's journey

Persona: Leila, hacker	
Scenario: ODL as a Centre in a University or Public Institution	
1.	Leila is enrolled at the local university in a software engineering degree.
2.	One day, one of her professors tells the class about a new initiative being launched, the OpenDataLab.
3.	She goes to the O4C platform, and signs up for a hackathon currently being organized, on fostering citizen participation in politics
4.	Her group works on an idea of a citizen-driven predictive policymaking platform, called “Decide!”. She contributes her skills to the design of the architecture of the platform.
5.	Leila likes her group’s idea so much that she decides to take the “Decide!” platform as her undergraduate thesis project, developing a functional prototype of the proposed predictive engine of the platform, which combines 24 known archetypal mathematical models that relate several variables to propose the best fitting model which explains any given social phenomenon.
6.	Leila’s work attracts the attention of one of the top research groups at the university, which offer her a PhD candidate position.

Table 25 Scenario C: the hacker's journey

Persona: Chen, public officer	
Scenario: ODL as a Centre in a University or Public Institution	
1.	As part of his job, Chen has good relations with many local researchers and professors. In an informal break after a meeting, a professor teaching a few courses in a software engineering degree comments casually on an open data laboratory just being launched at the university.
2.	Since open data is a priority of the current government, Chen arranges a meeting with the ODL team to explore possibilities to organise joint activities.
3.	At the meeting, a space of collaboration is found, in the form of a hackathon on promoting civic participation. The local government feels innovative digital tools are needed to make citizen participation in democratic policymaking, and thinks their own open data could be meaningfully used as parts of these solutions. Therefore, they are willing to fund a hackathon on this topic.
4.	Chen also convinces his department's director to fund some prizes for the hackathon, so that the best ideas can be developed into a prototype. During the hackathon, he serves as part of the panel of judges, in representation of the city council.
5.	In the post-hackathon phase, the three ideas are developed with the support of the municipality, and showcased in public events and conferences where the city council takes part.

Table 26 Scenario C: the public officer's journey

Persona: Dominique, entrepreneur	
Scenario: ODL as a Centre in a University or Public Institution	
1.	Dominique is teaching some sessions as an external expert in an innovation-related MsC at the university. In one of his sessions, a student mentions having gone to a cool open data training workshop at the university's OpenDataLab.
2.	As an entrepreneur, Dominique is interested in methodologies to facilitate exciting innovative solutions to challenges. Furthermore, many of his successful apps and services have used open data to a greater or lesser degree. Seeing on the O4C platform that a hackathon is upcoming, he registers.
3.	Dominique's team works on the "Decidim!" concept - using open data to promote an evidence-based democratic deliberation process for better public policies.
4.	The project is successful, getting the second prize and a spot in the city council-sponsored and funded post-hackathon process to develop a functional prototype.
5.	After the post-hackathon, he partners with some of his hackathon team members to offer an "implementation package" to public administrations, associations and civil society entities for the Decidim! open source platform: the tech-savvy group components can develop any required code for custom implementations, and he can coordinate the user-centred piloting process within the organization.

Table 27 Scenario C: the entrepreneur's journey

4.3.1 Barcelona – the OpenDataLab as part of a Citizen Innovation Laboratory

<i>The OpenDataLab as part of a citizen innovation laboratory</i>	
Description	<p><i>The OpenDataLab would be a key program of a publicly-owned citizen innovation laboratory, a place where citizens are empowered to innovate, which is currently being planned by the Barcelona’s Institute of Culture, a wholly owned entity of the Barcelona City Council.</i></p> <p><i>It would enhance the citizens’ data literacy and engage them in co-creating solutions to urban challenges.</i></p> <p><i>It would become a municipal structure akin to a library or an unemployment office, something citizens come to expect from their municipal government as an urban service.</i></p>
Owner	<p><i>Owned, hosted physically and funded publicly mostly by the Barcelona municipality, but with an open and participatory governance structure (perhaps formalized as a consortium of quadruple helix entities)</i></p>
Strength	<p><i>Normalised public funding for structure and projects reduces budgetary stress.</i></p> <p><i>Easier to find synergies with other city council departments’ projects (e.g. in social services, education, culture, etc.) and promote internal innovations.</i></p> <p><i>Physical location and access to shared municipal services (communication, IT systems, company creation, public fab labs, etc.).</i></p>
Weaknesses	<p><i>If too embedded within public administration, bureaucratic inefficiencies make running agile projects impossible.</i></p> <p><i>Organic dependency of public officials may lead to undue interference and attempts at shaping outcomes</i></p>
Opportunities	<p><i>Endorsement of city council gives prestige to the ODL task and makes mobilizing citizens and facilitates obtaining additional funding.</i></p> <p><i>Open governance structure fosters collaboration between dissimilar actors and increases social impact.</i></p>
Threats	<p><i>Political considerations unrelated to performance may lead to program cancellation.</i></p> <p><i>Too close perceived association with city council may disengage actors which are critical with its policies.</i></p>

Table 28 Scenario C: Barcelona – the OpenDataLab as part of a Citizen Innovation Laboratory

4.3.2 Milano – the OpenDataLab at Polimi

The OpenDataLab at Polimi	
Description	<p><i>The ODL would an operational Lab of POLIMI (like PoliHub).</i></p> <p><i>The ODL as an ACTIVE ORGANIZATION that acts:</i></p> <ul style="list-style-type: none"> - <i>as an advocate for data opening and using</i> - <i>as a radar for challenges</i> - <i>as a data discloser</i> - <i>as events organizer</i> - <i>as expert in OpenData, Hackathon and Service Design</i>
Owner	<p><i>Independent agency of POLIMI in close partnership with both public and private local and/or national actors.</i></p>
Strength	<p><i>Able to mobilize an ad-hoc “task force” in response to different demands.</i></p> <p><i>Owner of know-how on OD and related technologies.</i></p> <p><i>Good collector of high number of hackers (students).</i></p> <p><i>It could be easily mobilized “on demand” from the early stage.</i></p> <p><i>It can adapt to different situations and engage on different tasks:</i></p> <ul style="list-style-type: none"> • <i>Organize events /hackathons</i> • <i>Research</i> • <i>Challenges identification and setting</i> • <i>Support to service co-design.</i>
Weaknesses	<p><i>Financial self-sustainability.</i></p> <p><i>Similar POLIMI initiatives already active.</i></p> <p><i>Limited bureaucratic ability.</i></p>
Opportunities	<p><i>Already owner of several spaces, so the ODL could have a spatial reference.</i></p> <p><i>Current existence of a local political commitment on open-data and on the activation of open-data related ecosystem.</i></p> <p><i>Large experience in hackathons-like events.</i></p> <p><i>Students collaboration and engagement.</i></p> <p><i>Good connection with local operators and data owners.</i></p>
Threats	<p><i>Political influence of academic forces in case of success.</i></p> <p><i>Difficult agreement among different departments</i></p>

Table 29 Scenario C: Milano – the OpenDataLab at Polimi

4.3.3 Milano – the Municipal OpenDataLab

The Municipal OpenDataLab	
Description	<p><i>The ODL would be in charge of the public administration integrated inside an existing public agency.</i></p> <p><i>The ODL as an ACTIVE ORGANIZATION that acts:</i></p> <ul style="list-style-type: none"> - <i>as an advocate for data opening and using at the local scale</i> - <i>as a radar for challenges</i> - <i>as a data discloser</i> - <i>as events organizer</i> - <i>for services placement</i> - <i>for service incubation</i>
Owner	<p><i>Owned by a public agency (in our mind could be FabriQ a social business incubator) in close partnership with both public and private local actors.</i></p>
Strength	<p><i>Already in close relationship to local actors and sensitive to local needs.</i></p> <p><i>It could relate the ODL to other urban social innovation initiatives so adding value to DOL perspectives and creating opportunities for it.</i></p> <p><i>Large vision of innovative initiatives in the local environment.</i></p> <p><i>It can adapt to different situations and engage on different tasks:</i></p> <ul style="list-style-type: none"> • <i>Negotiations with data owners</i> • <i>Initiatives for Data Disclosure</i> • <i>Service placement</i> • <i>Service production incubation</i>
Weaknesses	<p><i>Being connected to a public authority, scarce autonomy and heavy bureaucracy.</i></p> <p><i>Scarce ability in autonomous funding search and acquisition.</i></p> <p><i>Dependent on mostly outsourced competences which need to be “educated” to the ODL “way of” dealing with OD related issues.</i></p> <p><i>No evident know-how on OD and related technologies.</i></p>
Opportunities	<p><i>Already owned reputation</i></p> <p><i>Already acting in the local context.</i></p> <p><i>Already owner of dedicated spaces, so the ODL could have a spatial reference.</i></p> <p><i>Strong communication capacity.</i></p> <p><i>Good relation with public data owner.</i></p>
Threats	<p><i>Heavy bureaucratization of initiatives.</i></p> <p><i>Strict dependency from public funding.</i></p> <p><i>The existing image of the organization can hide the new activities/functions</i></p>

Table 30 Scenario C: Milano – the Municipal OpenDataLab

4.3.4 Copenhagen – the Data-Driven Design Lab

<i>“Data Driven Design Lab” – lab connected to particular research group(s) at University</i>	
Description	<p><i>The ODL is hosted by Aalborg University CPH and used as part of the activities to promote innovation among students and support start-ups coming from AAU students.</i></p> <p><i>The ODL would not focus strictly on ‘open data’ – but aim to explore and develop various methods for working with multiple types of data in design practices.</i></p> <p><i>It would work closely with external business or public authorities/bodies on specific challenges in various set-ups: Short workshop activities, hackathons, sprints, etc.</i></p> <p><i>It would be a resource for the university, because it would promote spin-offs from students’ work and activities for the local community</i></p>
Owner	<p>Owned by the University – it should be connected closely with particular BA/Master programs – and work as a strategic focus area/supplement to selected study programs and research activities. E.g. also working closely across disciplines with other ‘sister-labs’ at other universities.</p> <p>It could be supported by local administrations, especially for initiatives that are relevant for the local community</p>
Strength	<p><i>Become a hub promoting the data-design skills to potential employers (students) – as well as help propose concrete challenges between business, public authorities and research – as well as bottom-up citizen movements on various topics.</i></p> <p><i>Access to university infrastructure</i></p>
Weaknesses	<p><i>That data driven design isn’t fully realized/developed e.g. at Service Systems Design, AAU.</i></p> <p><i>Big task to start from scratch this focus area – e.g. would require hiring in also personal to drive courses/activities tied into the study program(s).</i></p> <p><i>Investigations need to be made in terms of how it would fit AAU strategic priorities</i></p>
Opportunities	<p><i>+ entity to tie in particular students as ‘junior scholars’ / ‘lab volunteers’ - - e.g. make it work also embracing the initiative of the students (bottom up student space for designing with data)</i></p> <p><i>It may be a reference centre for activities for the local community (e.g. the community in the area of Sydhavn), thus promoting the university as a community innovation centre</i></p>
Threats	<p><i>Dependent on demonstrating usefulness and interest from external entities (businesses, public authorities, etc.).E.g. demonstrating quickly the added value of close collaboration – and the service offered by the hub of researchers and students.</i></p>

Table 31 Scenario C: Copenhagen – the Data-Driven Design Lab

4.3.5 Copenhagen – OpenDataLab as a National Open Data Partnership

Open Data Lab as part of national level priority of an Open Data Partnership “Open Data Room”	
Description	<p><i>The ODL would integrate with/supplement the national level partnership aimed to promote and generate ideal frameworks for the publication and relevant use of open data.</i></p> <p><i>It would work as a hub for companies, authorities, researchers and citizens to gain overview, improved access to and increased use of open data.</i></p> <p><i>As part of National digitization strategies, the partnership exists already between Open Data DK, KL, Danish Regions and the Business Authority.</i></p> <p><i>The ODL might work as part of what is described as a ‘Data-Room’ in the recent national digitization strategy</i></p>
Owner	<p><i>Public-private - owned by the Partnership for open data.</i></p> <p><i>It would be a public supported entity – however ideally receiving ‘consultancy payment’ for engaging on tasks – or in the shape of financing by its users (as specified in the for the document of agreement for the current partnership)⁵</i></p>
Strength	<p><i>Already foundational funding is set aside for launch of such hub (in the version of the ‘Data Room’); as part of the priority given to the promotion of open data in the digitization strategy 2016.</i></p> <p><i>Bringing together all entities eager to play a role promoting open data – within municipalities, regions, business level and research.</i></p>
Weaknesses	<p><i>Not yet clear how would be funded in the longer run.</i></p> <p><i>Major players already working on this idea – maybe O4C efforts and experiences might not provide much newness...</i></p> <p><i>Citizens and bottom-up data-literacy may not figure as prominently in the partnership focus as it does in O4C / ODL visions. E.g. focus might be mainly on dialogue and networks between municipalities and businesses.</i></p>
Opportunities	<p><i>Good use of a current strategic priority national level – both in terms of collaboration between municipalities and businesses – bot also citizen movements/interest groups.</i></p> <p><i>ODL/O4C supplement to national strategies may strengthen citizen perspectives in important ways.</i></p>
Threats	<p><i>Strong focus on business and business opportunities – not necessarily on bottom-up citizen initiative.</i></p> <p><i>Uncertainty on the priority given to the concept of the ‘Data Room’.</i></p>

Table 32 Scenario C: Copenhagen – OpenDataLab as a National Open Data Partnership

⁵ <https://www.digst.dk/Strategier/Initiativer/Gode-vilkaar-for-vaekst/Fokusomraade-5>

5 Conclusions and Outlook

This document has attempted to devise a tailored scenario building methodology for the Open4Citizens project, and apply this methodology to provide a first iteration of the Open4Citizens scenarios. As stated in the opening pages of this report, the purpose of this exercise has been an eminently practical one. The scenarios developed in the framework of D4.3 are intended to be useful tools to engage relevant local stakeholders at each pilot, and provide a to start a fruitful discussion with these stakeholders on possible, desirable and optimal courses of action to implement the concept of the Open Data Lab at each of the project's pilot locations.

Thus, we envision deliverable D4.3 to play an important role in the next steps undertaken by the O4C consortium. On the short term, within the next weeks after publication, the document feeds into the analysis of the sustainability and business concepts for the Open Data Labs scenarios, which has been worked upon concurrently with the effort undertaken for the present document and is contained in D4.9. In the course of the coming months, the local scenarios will empower each of the consortium's partners with an analytical element, tailored to their specific local context, which can prove invaluable to engage local stakeholders and bring them on board for the task of deploying and prototyping the first implementation of a full-fledged Open Data Lab in their city. Finally, on the longer-term, half-year perspective, this methodology and preliminary scenario analysis will provide the basis for the work to be done on the final iteration of this document, D4.4, which will contain refined contents and further elaboration after analysing the lessons learned during the second hackathon cycle of the Open4Citizens project.

6 Bibliography

van der Heijden, Kees (1996). *Scenarios: The Art of Strategic Conversation*. Wiley & Sons.

Ringland, Gil (1998). *Scenario Planning: Managing for the Future*. Wiley & Sons.

Godet, Michel (1996), and Fabrice Roubelat. "Creating the Future: The Use and Misuse of Scenarios." *Long Range Planning* 29 2: 164-71.

Inayatullah, Soheil (2009). "Questioning Scenarios". *Journal of Futures Studies*, February, 13(3): 75 - 80