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## Glossary

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<td>CRM</td>
<td>Customer Relation Management</td>
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<td>GIS</td>
<td>Geographical Information System</td>
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<td>PSI</td>
<td>Public Sector Information</td>
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1 Executive Summary

This deliverable, D3.5 Final Hackathon Report, focuses on the core activity of the project: the hackathon activities in the pilot contexts and is referred to the work carried out in WP3 by each pilot especially in relation to tasks 3.3, 3.4, 3.5, 3.6 and 3.7; also it reports exclusively the work carried out during the second hackathon cycle.

It is divided into 8 sections:

- the first one is this one, the executive summary;
- the second one describes the main aims and goals of the deliverable in coherence with the DoA and also shows the coherence of the pilots’ work with the O4C hackathon general framework;
- the sections 3rd-7th describe and detail the work carried out in each pilot; and
- the last eighth section drives some conclusions on the first cycle.

The 5 sections describing the work carried out for the second cycle of the O4C Hackathon model report the three main steps of the process: pre-hack, hack event, and post-hack activities. In these sections activities are reported in a critical manner and focusses on the different aspects of the process activities:

- the creation and role of the challenges and the search for potentially related open data, the alignment between the available open data and the depth of the challenge description, the engagement of relevant stakeholder, and the role of public institutions in the pre-hack step;
- the agenda, the available data, the communication activities, the team creation, the use/role of the O4C tool kit and platform, and the outputs of the Hackathon event;
- the perspective of urban service creation, the completion of the coding, the rooting of the hackathon ecosystem, and the early activation of local open data labs in the post-hack work.

Finally, section 8 is focussed on a closing assessment work aimed at clarifying specific dimensions of the hackathon work across the O4C project.
2 Introduction

Deliverable 3.5 follows D3.4 (being the second document with the same aim) and is delivered in coherence with the DoA (month 30), focuses on the core activity of the project: the hackathon activities in the pilot contexts and is referred to the work carried out in WP3 by each pilot especially in relation to tasks 3.3, 3.4, 3.5, 3.6 and 3.7; also it reports exclusively the work carried out during the second hackathon cycle also considering the changes adopted with respect to the first cycle.

Figure 1: The second hackathon cycle activities in WP3 (O4C Hackathons)

Most of the contents presented and discussed in this deliverable have been collected while the hackathons were taking place in the pilots contexts and has been used as a relevant repository for information and data.

1.1 Structure of the document

Following the O4C hackathon model, and in coherence with the need to report the work carried out together with the reflections deriving from the second hackathon cycle, this deliverable is structured as follow:

1) a first short executive summary of the deliverable itself (chapter 1);
2) an introductory chapter explaining the aim of the deliverable, its structure and its interplay with other O4C deliverables and tasks (chapter 2, the present one);
3) 5 different chapters reporting the work carried out in each pilot throughout the second hackathon process, i.e. in/for the pre-hack phase, the hackathon event, and the post-hack
phase; in each of these chapters pilots also describe state the current states of the Open Data Lab implementation (chapter 3-7);
4) a final chapter (Chapter 8) where a closing analysis is carried out considering the learning process carried out along the first and the second cycle which is to be considered additional and enriching evaluation work carried out for project evaluation (D. 4.2).

1.2 **Objective of deliverable 3.5**

As already said, his deliverable is the second of a deliverables couple planned for reporting the work carried out in the pilots throughout the hackathon processes. The second and final one is planned at the end of the project.

The present deliverable has a threefold aim:

- reporting the work of the second hackathon cycle carried out by the pilots and
- reflect on some basic elements of the hackathon processes throughout the O4C project
- supplying the current advancement state of Open Data Labs implementation in each pilot context.

By so doing the present deliverable is oriented to present the reflective process in which the O4C partners are involved to enter the second hackathon cycle where the O4C hackathon model will be finalized within an Open Data Lab general framework.

1.3 **Relation to other O4C tasks and deliverables**

In order to achieve a clear workflow of the project especially referring to its numerous deliverables and tasks and not to lose some relevant contents and reflections interdependencies, the O4C partners have developed and agreed on the following schema relating many deliverables and tasks to each other.

![Figure 2: O4C deliverables interdependency](image-url)
The figure above shows the interdependency network of deliverable 3.5 which is highlighted by red lines with respect to the assessment work and the last closing deliverables of the project (the bottom right group). The reporting work represents an additional data and information provider to the data and information gathering activity of Task 4.2 (associated to Deliverable 4.2). Finally, coherently with the fact that this deliverable is the final one reporting pilot’s activity its contents include part of the project assessment work.
3 Barcelona

3.1 Preamble: three hackathons by the Barcelona team

Between March 2017 and February 2018, the Barcelona Open Data Lab pilot team has carried out three hackathon processes. The first was the Smart City Casablanca hack, in the city of Casablanca (Morocco), carried out in May 2017. The second was the Transparency in Public Procurement hack in Barcelona in July 2017. And finally, the Barcelona Urban Challenges hack, which was conducted in January 2018. The contents of this report will reflect the insights gained in all three processes. When relevant, the answers will be provided in three sections, one for each hack.

3.1.1 The Casablanca Green Mobility Creathon: an experiment in social impact and sustainability (19th May 2017)

On the 19th of May 2017, the Open4Citizens project co-organised the first Open Data Hackathon for citizens in Morocco. The event was labelled a Creathon, since it was shorter in duration than a standard Hackathon, and was focused on the non-technical development of attractive open data based concepts. The aim was to invite citizens who had registered in advance on an open Internet platform to reflect on the Open Data in order to address some of the city's problems and challenges in the fields of global environment, mobility and health. The goal of the event was to arrive at a set of proposals and solutions that would improve the quality of life of Casablancans.

Participants in the event analysed the different challenges proposed, exchanged with fellow citizens and proposed solutions that aimed to have a clear impact on the needs of the citizens. Citizens and organizations involved in the project had access to city data and data experts, which supported participants in exploring how open-data-driven applications can help them respond to their needs. A team of student researchers from the Green Tic-TICDev research center was trained to accompany the various groups on the data visualization side, inviting citizens to analyse them and propose solutions to improve the quality of services and quality of the data.

Figure 3: Creathon participants being briefed on the goals and structure of the event
The overarching topic of the hackathon was decided to be citizen sensitization and education to the environment. The hack event tried to build upon the momentum generated by the 2016 Marrakesh climate conference, to help empower the citizens of Morocco as digital social innovation leaders in the field of environment protection.

The representatives of Casablanca Services, SDL in charge of the city's digital plans and services, did not miss this momentum of solidarity and offered themselves and distributed to the different groups to help them answer the different questions of Citizens participating on the availability or not at the level of the city of Casablanca of certain services that the groups thought to propose. This was a valuable help and avoided the participants to rely on ideas of projects or e-services already deployed or being deployed in Casablanca. Students from the TICDev research center at Hassan II University were also very active in helping citizens, especially on the technical level, by presenting the data requested by each group according to the chosen topic on a computer medium.

Figure 4: Open4Citizens consortium expert explaining the hackathon methodology to the participants

Four specific challenges were presented to the participants:

- How can we use open data for better information on public transportation?
- How can we reduce pollution and waste with usage of open data?
- How can we use open data to educate and increase the public’s awareness of climate change?
- How can we use open data to make the city more sustainable and attractive?

The participants worked on these challenges with an abridged implementation of the O4C methodology, adapted to fit the 3 hour timeframe of the event. The Creathon took place all afternoon in an excellent international atmosphere and very studious of the participants and very responsible of the onlookers who passed and stopped to take pictures or ask questions. We also had spontaneous testimonies of Casablanicans and tourists who greatly appreciated the initiative including a Jordanian tourist who gave us a good testimony on his appreciation of this initiative.
Six projects were presented by the hackathon participants. These were reviewed and evaluated by a jury panel composed of four local experts:

- Ms. Joundi Meryem (GreenTIC & TICDev research centres)
- Mr Mezzyane Amine (Start-up entrepreneur in Casablanca in the field of multimedia)
- Mr Ghabari Youssef (Casablanca City Council, Casa benefits)
- Mr Amrani Omar (Journalist, hacker activist and blogger of Casablanca - Chronicles of the Future)

After the presentations and withdrawal of the jury for evaluation, three projects were declared as winners:

- 1st prize, 5000 MAD: Casa Library, on promoting the heritage of Casablanca
- 2nd prize, 3000 MAD: We Green Move, on intelligent and green mobility
- 3rd prize, 2000MAD: Casa We Clean, on a waste management solution
Figure 6: CasaLibrary – first prize – an app which increases the value of stigmatized urban areas by crowdsourcing tangible and intangible cultural heritage items, thus creating a virtual citizen ethnographic museum.

Figure 7: WeGreenMove – second prize – an app which recommends personalized smart city movements based on carbon footprint reduction strategies.
The implementation of the prized projects was considered in the next coming months, as two departments of the Casablanca municipality (Education for the Environment and Smart City) were considering to secure funding to implement some of the top rated ideas.

From an Open4Citizens project perspective, this exciting experiment provided a window to generalize the methodology- The Casablanca creathon can therefore be considered as a proof of concept, that the OpenDataLab methodology can be successful in empowering citizens in other cultural and socioeconomic contexts.

Thus, a new line for research for the OpenDataLab concept was opened, as such experiences can play a role in innovating development projects, unlocking the potential of open data for the benefit of the citizens of developing countries.

A short video on the experience can be watched by following the link below:

https://youtu.be/ONR4b78BOQI

3.1.2 Public Procurement Ideathon (7th-8th July 2017): co-creating open data solutions for a fair, transparent and efficient public procurement

The next step for Open4Citizens was to organize a Public Procurement Open Data Ideathon in Barcelona. This event was carried out in partnership with the Catalan Government’s Secretariat of Transparency and Open Government for the next days July 7 and 8, in collaboration with the i2CAT Foundation, and within the Open4Citizens framework.

This event consisted of a participatory dynamic where solutions to society's challenges were explored, and aimed to mobilize various social agents to co-create digital tools that use open data of the Catalan Government. The objective was to empower citizens with regards to public procurement, so that their government’s expenditures could move towards an ideal of being legally and ethically impeccable, socially responsible and economically efficient.

The outcomes of the hackathon would become the modules or functionalities of the public procurement dashboard, a set of digital tools co-created with the collaboration of all the involved
actors that the Secretariat of Transparency and Open Government wants to make available to the public to contribute to better public procurement.

The introduction to the Ideathon was given by M. Raül Romeva, Minister for Foreign Affairs, Institutional Relations and Transparency, and the presentation of prizes was be attended by Mr. Jordi Graells, General Director of Citizen Services.

The preparation of the challenges included a process of ethnography and analysis of the existing context. This process was materialized in carrying out a series of interviews with people and relevant institutional representatives of the world of open data and public procurement. The objective was to acquire a suitable degree of understanding of the problems and realities of public procurement, in order to co-define with the maximum participation of the community the challenges to address in the framework of the hackathon.

Finally, the challenges that were defined to be posed to the participants were the following:

- Challenge 1. Improve the visualization of the contracting information for the citizens: How to better communicate the public procurement data to the public in order to make them more understandable?
- Challenge 2. Implement a system of public procurement alerts: How do we design a system of alerts (red flags) that, based on a set of relevant parameters, makes a pre-detection of the risks of bad practices in public procurement?
- Challenge 3. Provide citizens with innovative user-friendly tools to analyse public procurement: How do we facilitate the work of journalists of data, activists and citizens, with tools that allow the analysis and exploration of the data by providing contextual information of other sets of relevant data
- Challenge 4. Increase public procurement efficiency: How do we determine if government contracts are economically efficient and socially sustainable throughout the lifetime of the contract, from bidding to execution and closing?
The two best proposals of the total of projects were rewarded in two ways:

- Two prize nominal ticket prizes of € 1500 and € 900 for the first and second prizes respectively, with a maximum of € 250 for each member of the winning work group.

- The impulse from the Secretary of Transparency and Open Government for the two winning ideas, as open source projects to Github with a GPL2 license. The Generalitat committed itself to invest in the beginning of its development, via open tender, prior study of technical feasibility.

The jury of ideathon was composed of the following people, professionals with extensive experience and renowned prestige in the field of open data innovation:

- Mercè Corretja, General Director of Public Contracts in the Generalitat de Catalunya
- Jordi Graells, General Director of Citizen Services in the Generalitat de Catalunya
- Xabier Barandiarán, Director of Democratic Innovation in the City Council of Barcelona
- Eli Vivas, data journalist in El Periódico and co-founder of HacksHackersBCN
- Eva Belmonte, Project Manager at the Civio Civic Foundation
The quality of all the ideas raised was high. Finally, the jury granted the distinction of the first and second prize to the two following projects.

The first prize was taken by the Open Frau project, presented by Aleix Sanchís, Quim de la Cruz, Roger Pujolar, Mario Muñoz, Esther Viñeta and Roger Folguera. Open Frau is a digital tool that aims to help detect, prevent and denounce the bad practices in public procurement, based on open data and the knowledge of citizens. The application is based on algorithms for the detection of risk patterns in the public contracts, applied to the massive and dynamic treatment of the data. In this way, the system automatically detects contract files where there is more risk, and alert the technicians responsible for investigating the case.

The second prize was awarded to the Contraktació project, presented by Mònica Moya, Mercè Farré, Josep Romero and Marc Celeiro. The platform implements a system that helps the people in charge of the contract, together with the participation of the citizen, in monitoring the implementation of the contract in question. The application makes the citizen participate in the assessment of the degree of quality and compliance with the contracts, and channels this information to the responsible technician. The citizen crowdsourced information allows public officers to go beyond a legalistic approach to contract validation, and incorporate in their assessment factors such as quality of delivery or citizen satisfaction. The awards were given by the Secretary of Transparency and Open Government, Jordi Foz, in accordance with the verdict of the jury.

An audiovisual record of the hackathon can be accessed here:
https://www.youtube.com/watch?v=Q57zl7pm3Ls

3.1.3 Barcelona Urban Challenges Hack (11th-12th January) – establishing partnerships with creative communities to tackle urban challenges with innovative open data solutions

On the 11th January 2018, the Department of Innovation, Knowledge and Visual Arts of the Institute of Culture of Barcelona launched a series of calls for community grants for innovation projects, with the aim of promoting collaboration between the creative communities and the City Council of Barcelona to utilize open data to solve the concrete challenges faced by the city residents. The Open4Citizens project partnered with the City Council for this event, by offering on the 12th of January a project preparation workshop based on the O4C hackathon methodology, with the aim of co-creating open data based proposals to these calls with community groups.

One of the main features of these programs is to offer the possibility for social, cultural, scientific and
creative communities to participate in the generation and implementation of city projects. The projects will work on the research strategies - in the field of innovation in creative companies in techno-politics, urban planning and community action, among others - that characterize the work of the Barcelona Laboratory.

The City Council of Barcelona, through its different areas, facilitates the implementation of the winning projects of these calls through programs of their own. Besides the economic contribution associated with the calls, a group of experts and mentors accompany and advise the different projects in their implementation.

As defined in the several calls for innovation projects launched by the city council, there are several challenge tracks. The challenges of the hackathon event mirrored the Therefore, the proposals had to be submitted to one or more thematic vectors, where the transversality of the proposals was a valued factor to be assessed:

- **Techno-politics**: Empowerment, Digital Inclusion, Distributed and Direct Democracy, Sovereignty, Collective decision-making, among others.

- **Urbanism**: Mobility, Tourism, Gentrification, Air Quality, Climate Change, Management of Urban Empty Spaces, Community Management, Recycling, Circularity and Sustainability, among others.


The event also included an introductory open data training workshop, in the format of an Open Data Jam. In this participatory learning-by-doing workshop, carried out on the evening of the 11th, the O4C
platform developed by the Open4Citizens project (https://test.opendatalab.eu/) was used to explore, process and visualise two datasets relevant for the local community: one containing the more than 10,000 citizen proposals contributed to the Decidim.Barcelona citizen participation platform, and the other with the full set of AirBnB short-term rental properties for tourists curated by the Inside Airbnb data hacking collective.

**Figure 16:** At the Mini Data Jam, participants were brought up to speed on basic data analysis skills

The team projects were presented publicly at the end of the event, in an open session where each group disclosed a succinct abstract of their project idea, and how open data played a role in the solution. Also, each group provided feedback to co-create the calls for projects – that is, to reflect on what they required from these calls from projects so that their projects could be accommodated.

These presentations yielded rich recommendations on the usage of open data and the scope and shape of the several calls for projects to be launched throughout 2018, thus allowing citizens to co-create not only the specific projects to be funded, but also the public policies supporting these calls for projects.
The hackathon event was closed with an extended presentation of the next steps to be followed for the participant teams. In the coming months after the hack, the participants to the hackathon can be supported to prepare projects for the several calls for innovation projects launched by the city council, which have substantial prizes of its own. The best projects, selected by a jury in accordance with the legislation which regulates the calls for projects, will be awarded with:

- A cash prize per team, to be used in developing the project. This amount will be reduced by the corresponding taxes according to current regulations
- Incubation of up to five members of each team for three months at the Canòdrom Creative Research Park, accompanied by a team of mentors proposed by the Jury, in order to develop the winning project, plus residence of three months at the end the incubation period, to refine the prototype with the participation of the community and explore sustainability and upscaling options.
- A public presentation of the project to the creative community and prospective investors within the framework of urban large-scale cultural events (such as the 2018 edition of SONAR + D), after the incubation period and before the residence period.
- A live public demonstration of the project with citizens during urban large-scale citizen events (such as the La Mercè 2018 street festival), at the end of the residence period.

An audiovisual report on the event can be accessed here:
https://www.youtube.com/watch?v=LBH-XV8dPYw
3.2 The pre-hack activities

3.2.1 Meeting and Workshops to define the challenge

The partnerships we established for each hackathon were a pact between equals, in which important decisions were reached by consensual agreement. Ranking high among these important decisions lays the choice of theme and challenge for the hackathon. In all three cases, there was a period at the beginning of the pre-hack phase where different options for theme and challenge were considered, evaluated and discarded. The agreement on the decision on the high-level themes chosen was reached usually within 2 or 3 weeks of the initial consideration of options. The challenges, on the other hand, were thoroughly researched, with extensive desk research, field work and analysis, a process which took between 1 and 3 months. In the case of the Transparency in Public Procurement hackathon, this pre-hack challenge scoping included 18 documented interviews with stakeholders.

The mission and high-level theme of each of the three hacks was subject to a negotiation between the Open4Citizens local team and the partnering organisations. However, it is fair to say that during these initial talks, we were open to adjust to the mission and theme preferred by the partnering organisation, if this flexibility would mean that the partner entity could contribute more resources to the hack. For example, at the beginning of the discussions with the Catalan government’s Secretariat of Transparency and Open Government, our initial idea was to focus the hack on co-creating better visualisations of government expenditures’ datasets. When they proposed the more ambitious topic of transparency in public procurement, suggesting that if this topic was selected, then more of their resources that were already earmarked for this topic could be mobilised, we were happy to oblige.

Smart City Casablanca hack

The topic of the event was citizen sensitization and education to the environment. The hack event tried to build upon the momentum generated by the 2016 Marrakesh climate conference to help position Morocco as a leader in environment protection. A number of specific challenges were presented to the hack participants:

- How can we use open data for better information on public transportation?
- How can we reduce pollution and waste with usage of open data?
- How can we use open data to educate and increase the public’s awareness of climate change?
- How can we use open data to make the city more sustainable and attractive?

Transparency in Public Procurement hack

The objective was to empower citizens with regards to public procurement, so that their government’s expenditures could move towards an ideal of being legally and ethically impeccable, socially responsible and economically efficient.

The outcomes of the hackathon would become the modules or functionalities of the public procurement dashboard, a set of digital tools co-created with the collaboration of all the involved actors that the Secretariat of Transparency and Open Government wants to make available to the public to contribute to better public procurement.

The preparation of the challenges included a process of ethnography and analysis of the existing context. This process was materialized in carrying out a series of interviews with people and relevant institutional representatives of the world of open data and public procurement. The objective was to acquire a suitable degree of understanding of the problems and realities of public procurement, in
order to co-define with the maximum participation of the community the challenges to address in the framework of the hackathon.

Finally, the challenges that were defined to be posed to the participants were the following:

- **Challenge 1.** Improve the visualization of the contracting information for the citizens: How to better communicate the public procurement data to the public in order to make them more understandable?

- **Challenge 2.** Implement a system of public procurement alerts: How do we design a system of alerts (red flags) that, based on a set of relevant parameters, makes a pre-detection of the risks of bad practices in public procurement?

- **Challenge 3.** Provide citizens with innovative user-friendly tools to analyse public procurement: How do we facilitate the work of journalists of data, activists and citizens, with tools that allow the analysis and exploration of the data by providing contextual information of other sets of relevant data

- **Challenge 4.** Increase public procurement efficiency: How do we determine if government contracts are economically efficient and socially sustainable throughout the lifetime of the contract, from bidding to execution and closing?

**Barcelona Urban Challenges hack**

The topic of the event was to co-create digital innovation to address interdisciplinary urban challenges. As defined in the several calls for innovation projects to be launched by the city council, there were several challenge tracks. The proposals had to be submitted to one or more thematic vectors, where the transversality of the proposals will be valued:

- **Techno-politics:** Empowerment, Digital Inclusion, Distributed and Direct Democracy, Sovereignty, Collective decision-making, among others.

- **Urbanism:** Mobility, Tourism, Gentrification, Air Quality, Climate Change, Management of Urban Empty Spaces, Community Management, Recycling, Circularity and Sustainability, among others.

- **Community Action:** Crowdsourcing Platforms (Time Banks, Resource Exchanges), Citizen Challenge Platforms, Networking Tools for Civil Society, P2P Training Platforms, Platforms to Dynamise Local Economy, among others.

- **Creative Industries:** Technology supporting the Performing Arts, Digital Cultural Heritage, Valorisation of Tangible and Intangible Cultural Heritage, Recovery of Historic Memory, Proposals deploying Design and the Arts for Social Good, Innovative Approaches to Education, among others.

**3.2.2 Identified Data Set**

In all three cases the datasets were already open prior to the start of the hackathon processes. Efforts during the pre-hack phase were directed at ensuring that the datasets would be fully operational during the hackathons, and that technical support would be available in case of difficulties. In the case of the Transparency hack, we were able to push forward an update of the datasets so that they would be newly available for the hack. Also, at the Transparency in Public Procurement hack and the Barcelona Urban Challenges hack we were successful in securing the attendance of the dataset owners at the introduction of the events, so that they could explain first-hand the features and possibilities of their datasets to the participants.
Smart City Casablanca hack

The participants were provided with a list of open data repositories and portals with a preselection of relevant sections where they could start exploring for relevant datasets. The data was downloaded by the participants directly from the Internet.

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Data Format</th>
<th>Data Source</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Development Indicators - Morocco</td>
<td>Portal with more than 1,000 time series indicators from the World Development Indicators</td>
<td>CSV, XML, XLS</td>
<td>World Bank</td>
<td><a href="http://data.worldbank.org/country/morocco">http://data.worldbank.org/country/morocco</a></td>
</tr>
<tr>
<td>Open Map of Morocco</td>
<td>Geolocalised terrain and urbanistic features</td>
<td>XML, API</td>
<td>OpenStreetMap</td>
<td><a href="http://wiki.openstreetmap.org/wiki/WikiProject_Morocco">http://wiki.openstreetmap.org/wiki/WikiProject_Morocco</a></td>
</tr>
<tr>
<td>Climate Change Knowledge Portal - Morocco</td>
<td>Historical climate data (i.e. temperature, maximum temperature, minimum temperature, and precipitation) for Morocco during the time period 1901-2015</td>
<td>XML</td>
<td>World Bank</td>
<td><a href="http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&amp;T">http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&amp;T</a> hisCCode=MAR</td>
</tr>
<tr>
<td>Casablanca City Council Open Data Portal</td>
<td>Open data portal of the Casablanca City Council</td>
<td>CSV, JSON, XML</td>
<td>Casablanca City Council</td>
<td><a href="http://casaopendata.org/">http://casaopendata.org/</a></td>
</tr>
</tbody>
</table>

Table 1: Data list of the Smart City Casablanca Hack

In this hack we had to adjust the O4C process to the 5h 30min time slot available, so an abridged hackathon methodology was used. Given the strict time frame, and the fact that three money prizes were at stake, a decision was made to steer the participants to focus on developing the scenarios of usage of open data to tackle green and sustainable development challenges. This way we wanted to maximize the likelihood for each team to deliver an idea solid enough to have chances win a prize. For this reason, the datasets were used mainly as inspiration, in an exploratory manner, and little or no coding occurred during the hack.

Note: To maintain consistency, I'm using this table from the previous iteration of this document in the last cycle (see https://3.basecamp.com/3198537/buckets/266836/uploads/455490095)
Transparency in Public Procurement hack

The participants were directed and trained to explore the datasets that were available directly on the Socrata platform, which offers some robust built-in analysis and visualization capabilities (see https://analisi.transparenciaca.cat/Sector-P-blic/Contractaci-de-la-Generalitat-de-Catalunya/hb6v-jcbf). The option to download the CSV from the open data portal was also demonstrated. For participants with advanced technical skills, the API capability was also mentioned.

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Data Format</th>
<th>Data Source</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public contracts registry</td>
<td>Dataset with all public procurement contracts made by the Catalan Regional Government and dependent entities, 2012-2017</td>
<td>Socrata platform</td>
<td>Catalan Regional Government – Transparency and Open Data Department</td>
<td><a href="https://analisi.transparenciaca.cat/Sector-P-blic/Contractaci-de-la-Generalitat-de-Catalunya/hb6v-jcbf">https://analisi.transparenciaca.cat/Sector-P-blic/Contractaci-de-la-Generalitat-de-Catalunya/hb6v-jcbf</a></td>
</tr>
</tbody>
</table>

Table 2: Data list of the Transparency in Public Procurement Hack

This hack saw heavy dataset usage, with the teams deeply engaging with the main public procurement dataset, and looking beyond that to find other complementary datasets that could enrich their idea. In two cases, the teams developed some code to interact with the dataset APIs, and demonstrated their prototypes during the final presentations. Two factors helped in deepening the participants’ interaction with data. First, the fact that demonstrating that value was extracted from the data was a prime criteria for the jury to award the prizes. And second, the availability of a dataset of an extraordinary nature (large, with many interesting variables, and well structured), which had on top the possibilities offered by the Socrata platform.

Barcelona Urban Challenges hack

The datasets were uploaded to the OpenDataLab platform (https://test.opendatalab.eu/), which the participants at the Mini Data Jam could access to download or explore the data.

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Data Format</th>
<th>Data Source</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>InsideAirBnB – Barcelona listings – April 2017 – Clean Data</td>
<td>Dataset with 18.000+ listings of AirBnB properties in Barcelona as of April 2017 (transformed and cleaned data)</td>
<td>XLS</td>
<td>InsideAirBnB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dataset with 10.800+</td>
<td>XLS</td>
<td>Decidim.Barcelona</td>
<td></td>
</tr>
</tbody>
</table>
This last hack in the series had a data usage pattern similar to the Casablanca hack. The open datasets were used to strengthen and enrich the scenarios of solution to the urban challenges each team worked upon, in a process by which each team tried to find ways to use any existing dataset that could be a part of their proposed app or service.

### 3.2.3 Key Actors

One of the key takeouts of the first cycle in the Barcelona pilot was that establishing partnerships with key public and private institutions for the development of the Open Data Labs could maximise the impact of the project activities, facilitate the organisation effort of the hackathons, and leverage the uptake of both the individual solutions developed and the Open Data Lab model. For this reason, establishing and securing such relationships focused our effort in the run-up to the second cycle. These agreements (with the Smart City Expo Casablanca, the Catalan Government and the Barcelona City Council), in turn, had an influence in the scope of the themes and the challenges of the upcoming hackathons.

### 3.3 The second hackathon events

#### 3.3.1 The process framework of the hackathon event

All three events shared a common allegiance and commitment to the OpenDataLab model espoused by the O4C project. The minor differences between the hackathons are due to the slightly different focus placed on the kinds of outputs expected from the event, which were reflected in differences in the particular naming for the events used in communication materials.

At the Smart City Casablanca hack, the event was dubbed a “creathon”, a co-creation activity in which the focus lays in defining new scenarios of usage of open data. The participants interacted with the provided open data to understand the opportunities that it allowed, and might design mock-ups, but there was no programming required to submit a project. This co-creation activity was carried out in the framework of an Open Data Spring School, in which there were seminars before the event and a 2-day open data hackathon after the creathon, events that were related but not affiliated with the Open4Citizens project.

In the Transparency in Public Procurement hack, the event consisted of a participatory co-creation dynamic where solutions to society’s challenges were explored, and aimed to mobilize various social agents to co-create digital tools that use open data of the Catalan Government. The objective was to empower citizens with regards to public procurement, so that their government’s expenditures could move towards an ideal of being legally and ethically impeccable, socially responsible and economically efficient. It was expected that the scenarios of application of open data to the challenges of public procurement, the outcomes of the hackathon, would become the modules or

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**Table 3: Data list of the Barcelona Urban Challenges Hack**

|---------------------------|-----------------------------------------------|----------------|-------------------------------------------------------------|----------------------------------------------------------------------------------|

Citizen proposals for urban projects made through the Decidim.Barcelona online democracy platform as of December 2016 (transformed and cleaned data)
functionalities of an envisioned “public procurement dashboard”, a set of digital tools co-created with the collaboration of all the involved actors that the Secretariat of Transparency and Open Government wants to make available to the public to contribute to better public procurement.

Finally, in the Barcelona Urban Challenges hack, the goal of the event was to explore scenarios for web services, apps, data analytics or visualisations that generate social value by reusing open data to empower the citizens to tackle urban challenges, with the aim that these ideas for digital tools could be submitted to the 2018 edition of the several calls for innovation projects launched by the city council, and thus obtain funding, support and mentoring for the post-hack phase.

the partnerships that were established for each hackathon with relevant institutions were a pact between equals. As such, credit and burden were allocated in a fair and roughly equal manner, albeit with minor differences between hacks (see question A1 below for further details). In terms of public communication, both the Open4Citizen project and the partnering entity were ranked as co-organisers (plus the European Commission as main supporter of the event), allowing of course for issues of etiquette and precedence that are relevant when dealing with public institutions.

3.3.2 Hackathon event data and information

Given the interests of the partnering entities, all three proposed events shared the requirement for a co-creation format that could combine the following features: strong stakeholder input to scope the event, effective collaboration between dissimilar agents, citizen participation, an emphasis on open data exploration and usage, and a guaranteed output of plausible and useful citizen-centred scenarios for valorisation of open data for tackling societal needs.

After a review of existing alternatives (i.e. a service design jam, an open call for projects, a working group, a scenario co-creation workshop, etc.), an open data hackathon in the framework proposed by the Open4Citizens model was deemed to be the most appropriate co-creation format. The existing alternatives reviewed were all lacking in several of the required aspects (i.e. a service design jam could not accommodate well enough the requirement for open data exploration and prototyping, an open call for projects did not include citizens properly, etc.). A hackathon can combine all the aforementioned elements in a practical and operative format, and from a communication point of view it is an established type of event, which is easily understood by the target audiences. In the light of the project’s experience, the O4C hackathon has proven to be the right choice.

At all three hacks, there were some minor changes to the “vanilla” Open4Citizens methodological toolbox, to accommodate the specificities of each event. At the Smart City Casablanca hack, the original process was compressed to a 4-hour hack process, and a number of steps were shortened (namely, those having to do with mock-ups and prototyping). At the Transparency in Public Procurement hack, the original 2-day full-length methodology was preserved, but the prototype planning template was replaced by an Agile-inspired “scenario planning” template. Finally, at the Barcelona Urban Challenges hack, a 2.5 hour long Mini Data Jam was added after the hack presentation, to support participants with little or no technical expertise in gaining the initial skills required to manipulate open datasets.

**Smart City Casablanca hack**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start of day 1. Participant registration and welcome</td>
<td>Friday 19th 2017</td>
<td>8:45</td>
</tr>
<tr>
<td>Formal opening of event by local public authorities</td>
<td></td>
<td>9:00</td>
</tr>
<tr>
<td>Invited experts’ presentations</td>
<td></td>
<td>9:15</td>
</tr>
<tr>
<td>Lunch break</td>
<td></td>
<td>13:00</td>
</tr>
</tbody>
</table>
Table 4: Agenda of the Smart City Casablanca Hack

<table>
<thead>
<tr>
<th>Activity</th>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration and welcome</td>
<td>Friday 7 July 2017</td>
<td>15:00</td>
</tr>
<tr>
<td>Institutional opening of the event (by MH Raül Romeva, Minister of Foreign Affairs, Institutional Relations and Transparency)</td>
<td></td>
<td>15:15</td>
</tr>
<tr>
<td>Presentation of the hack, agenda, resources, etc.</td>
<td></td>
<td>15:30</td>
</tr>
<tr>
<td>Micro-presentations experts open data</td>
<td></td>
<td>15:45</td>
</tr>
<tr>
<td>Formalization of groups</td>
<td></td>
<td>16:45</td>
</tr>
<tr>
<td>Start of group work</td>
<td>5:00 PM</td>
<td></td>
</tr>
<tr>
<td>Closing of the day</td>
<td>21:00</td>
<td></td>
</tr>
<tr>
<td>Opening of doors</td>
<td>Saturday, July 8, 2017</td>
<td>9:00 a.m.</td>
</tr>
<tr>
<td>Work of the groups</td>
<td></td>
<td>9:15</td>
</tr>
<tr>
<td>Lunch</td>
<td></td>
<td>13:00</td>
</tr>
<tr>
<td>Work of the groups</td>
<td></td>
<td>2:00 PM</td>
</tr>
<tr>
<td>Public presentation of proposals</td>
<td></td>
<td>6:00 p.m.</td>
</tr>
<tr>
<td>Deliberation of the jury</td>
<td></td>
<td>7:00 p.m.</td>
</tr>
<tr>
<td>Delivery of prizes (by Mr. Jordi Graells, Director General of Citizen Services)</td>
<td></td>
<td>7:30 PM</td>
</tr>
<tr>
<td>Closing party</td>
<td></td>
<td>19:45</td>
</tr>
<tr>
<td>Closure of the act</td>
<td></td>
<td>21:00</td>
</tr>
</tbody>
</table>

Table 5: Agenda of the Transparency in Public Procurement Hack

Barcelona Urban Challenges hack

<table>
<thead>
<tr>
<th>Activity</th>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start of day 1. Participant registration and welcome</td>
<td></td>
<td>16:45</td>
</tr>
<tr>
<td>Repte Canòdrom challenge – introduction and infoday</td>
<td></td>
<td>17:00</td>
</tr>
<tr>
<td>Presentation of the Barcelona City Council’s culture innovation grant programs - lines of work, areas and general aspects (Óscar Abril, ICUB / Víctor Jiménez, Barcelona Laboratory Coordinator)</td>
<td></td>
<td>17:10</td>
</tr>
<tr>
<td>The context of the Barcelona City Council’s culture innovation grant programs • LiD: the public laboratory for democratic innovation in Barcelona (Pau Adelantado, LiD) • Digital Transformation Plan: the digital strategy of Barcelona (Pau Balcells, IMI) • The Open Data Barcelona portal: digital assets open to the</td>
<td></td>
<td>17:40</td>
</tr>
</tbody>
</table>
Table 6: Agenda of the Barcelona Urban Challenges Hack

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>18:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>18:45</td>
<td>Open data training welcome and introduction</td>
</tr>
<tr>
<td>19:00</td>
<td>Open data training workshop – Mini Data Jam (for novice participants)</td>
</tr>
<tr>
<td>20:00</td>
<td>End of day 1</td>
</tr>
<tr>
<td>9:30</td>
<td>Start of day 2. Hackathon participant registration and welcome</td>
</tr>
<tr>
<td>9:45</td>
<td>Formal opening of event by local public authorities</td>
</tr>
<tr>
<td>10:00</td>
<td>Inspiration - last year winner projects’ presentation</td>
</tr>
<tr>
<td>10:30</td>
<td>Matchmaking, assembling of groups, selection of call topics</td>
</tr>
<tr>
<td>11:00</td>
<td>Co-creation methodology – warmup, brainstorming, concept definition</td>
</tr>
<tr>
<td></td>
<td>(coffee break available in next room)</td>
</tr>
<tr>
<td>14:00</td>
<td>Lunch break (catering in next room)</td>
</tr>
<tr>
<td>14:45</td>
<td>Co-creation methodology – open data exploration, mock-up generation</td>
</tr>
<tr>
<td></td>
<td>open call proposal preparation, idea pitch preparation</td>
</tr>
<tr>
<td>18:45</td>
<td>Project submission and idea pitch</td>
</tr>
<tr>
<td>19:30</td>
<td>Next steps for teams, swag gifts and final party</td>
</tr>
<tr>
<td>20:30</td>
<td>End of day 2</td>
</tr>
</tbody>
</table>

3.3.3 Hackathon event output and results

The three hackathon events resulted in a number of concepts, mock-ups and prototypes being created by the participant groups:

Smart City Casablanca hack

Clean 7ouma

The application proposes a partnership between the local public authorities and the community to take effective action to clean suburban areas of Casablanca which are not served well enough by current schemes. Citizens are empowered to point out urban development problems to the authorities, by flagging, geolocalising and voting for citizen-contributed solutions to neighbourhood issues (such as pollution, lack of infrastructure, etc.). At the same time, an open dataset containing this information is generated.

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For the purposes of this report, these terms are defined as follows. A concept is an elaborated scenario for a proposed application using open data, with a sufficient description of users, functionalities and open data usage. A mock-up is a concept in which user interfaces and the interaction of open data with the several elements of the proposed application has been worked upon, usually with paper and/or digital wireframes. And a prototype is a digital elaboration of a mock-up, allowing a certain degree of interactivity, and including some code or digital process which meaningfully makes use of real open data to demonstrate functionalities. Note that the terms are incremental: a mock-up implies a concept, and a prototype requires a previous concept and some mock-ups.
**We Green Move**

This app directs citizens towards more sustainable forms of urban transportation, by allowing the user to check all available forms of transportation between two city addresses, and giving her accurate information on travel time, carbon footprint and pollution impact. Thus, users gain awareness of such problems, and are steered towards the optimal eco-friendly choices.

**Move Safely**

The Move Safely digital tool combines open data from several streams to generate a model which can forecast the risk of accidents associated with urban mobility in all given locations, weather conditions and contexts. Thus, it gives citizens useful information to avoid the most dangerous spots at the worst moments, and city planners a tool to predict demand for emergency services and the need for preventive measures.

**CasaWeClean**

CasaWeClean harnesses the collective intelligence of citizens to crowdsourcing the path of garbage collection municipal services, thus optimizing scarce resources. Users can mark garbage bins, cans and other unplanned locations where trash is piling up, and vote them up. On the basis of this real-life open dataset of ‘trash mountains’, a routing algorithm prioritises the worst locations in an optimal manner.
CasaLibrary
CasaLibrary is an app which increases the value of stigmatized urban areas by crowdsourcing tangible and intangible cultural heritage items, thus creating a virtual citizen ethnographic museum. The app allows residents of impoverished but fastly modernizing areas of Casablanca to upload their craft designs, folklore, songs and traditions, now at risk of being lost.

Smart Planting
The app combines several weather, climatologic and urban factors, with data sourced from existing open datasets, to suggest to the user the optimal plants to be grown in any location of the city, according to their water needs, sunlight requirements and biological features. As such, the app promotes a greener, healthier and more pleasant city.
Transparency in Public Procurement hack

**ConCat**

With ConCat – public procurement at your side! - citizens can set up a profile with the public services and locations they care about, and be notified when any new public expenditure is proposed, carried out and paid within their parameters of interest. At any point, users can evaluate the public project according to their local knowledge, rating the fairness of price, quality of service, and other relevant parameters.

**Contraktació**

The application places its emphasis on the oft-overlooked post-licitation period, and allows users to rate the quality of publicly procured services as they go. Their feedback is processed and sent to the public officer responsible for overseeing that particular contract, giving her detailed information on the contractor’s quality and thus allowing underperforming contracts to be corrected on the go.

**Cont(r)actes Públics**

This app gamifies public procurement open data analytics, by proposing an interactive scheme (based on the playful notion of uncovering “indecent contacts” in a Tinder-like app consisting of public contracting entities and private providers) which entices uninterested users to explore procurement data and help detect irregular practices.
**Preu de Mercat**

Preu de Mercat enhances existing open data on public procurement by incorporating parameters of social and green efficiency, thus providing a framework by which public contracts can promote wide societal value and not just focus on the lowest possible bid.

**Vull Saber Avisa’m!**

This application proposes a system to close the gap between the complexity of procurement practices and specialized language and the citizens’ ability to understand this complexity, by launching a self-actualising, AI-based translation engine which displays technical-legal terms related to procurement as plain-language, easy to understand everyday descriptions.

**Open Frau**

Open Frau is built upon a powerful algorithm which models and incorporates 42 patterns which could be indicative of a particular corruption risk (single bidder, higher than market price, etc.). These patterns can be detected in the existing real-time public procurement open data automatically by the system. The user can adjust the threshold of corruption risk and explore the data, or set a combination of alarms and be notified when any contract which raises those red flags is entered in the public procurement open dataset.
Barcelona Urban Challenges hack

Social Coin for Decidim
This software module proposes to extend the functionalities of Decidim.Barcelona, an open source citizen participation platform implemented by the City of Barcelona, by adding a digital social cryptocurrency which can be used to crowdfund the platform’s citizen contributed proposals. Every citizen would get a portion of her taxes returned in form of this Social Coin, which then she would use to fund the social projects of her choice.

Silent Maps
Silent Maps is a platform and public policy tool which allows citizen and urban planners to monitor noise levels across the city in real time. Citizens can become aware of noise pollution levels and reliably report those the authorities, while public officers can analyse the results, detect patterns and intervene in those areas where noise levels consistently exceed legally mandated limits.

CREA Espai
This app aspires to become a meeting point for the local creative community, generating collaborative mechanisms to activate creative citizens and entities with the power of open data. The digital tool would allow underused private and public assets (spaces, equipment, skills and knowledge) to be listed and combined into an interactive, real-time open dataset, thus making possible win-win connections between entities.
Redefinim Veïnat

Redefinim Veïnat is a digitally-enabled methodology for dynamising neighbourhood associations to take responsibility for addressing community issues. Starting from existing datasets on citizen challenges, neighbourhood entities and municipal participation processes, the tool allows interested communities to proceed from challenge detection, solution brainstorming, to prototyping the solution.

LinkedIn de Proyectos

This solution proposes a platform to search and generate collaborative digital social innovation projects, built upon an intelligent matching algorithm which automatically connects personal and institutional profiles with those entities in the local quadruple-helix innovation ecosystem which can provide those resources needed to implement innovative solutions that tackle societal challenges.

3.4 The post-hack activities

3.4.1 From Hackathon event’s achievements to post Hackathon activities

The main differential factor between the hackathon of the first cycle and those in the second lays in the strategic objectives they were meant to contribute towards. In the first cycle, the Open4Citizens hackathon was still an untested proposition, and our main goal was to establish a proof of concept that such events were feasible and valuable. Thus, we were able to capitalise on the success of our first hack by creating three partnerships with relevant public and private entities. These alliances allowed us to co-organise a sequence of three hackathons in the second cycle, each with its own specificities, but with the shared purpose of exploring avenues for the sustainability and uptake of the Open Data Lab model.

3.4.2 Towards the OpenDataLab

Each hackathon has been a step forward in our quest for a sustainable and effective Open Data Lab. The Smart City Casablanca hack was an experiment in social impact and sustainability, providing a window to upscale and generalize the Open Data Labs methodology. The Casablanca creathon can
therefore be considered as a proof of concept, that the OpenDataLab methodology can be successful in empowering citizens in other cultural and socioeconomic contexts. Thus, a new line for research for the OpenDataLab concept was opened, as such experiences can play a role in innovating development projects, unlocking the potential of open data for the benefit of the citizens of developing countries.

In the Transparency in Public Procurement hack we prototyped co-created open data solutions for a fair, transparent and efficient public procurement, establishing a strong partnership with the Catalan Government’s Secretariat of Transparency and Open Government. The hackathon was arguably our biggest impact in the Barcelona pilot, with several key policymakers attending the event (including a cabinet minister) and two scenarios for open data based digital tools slated to be developed as open source projects.

Finally, in the Barcelona Urban Challenges hack, we launched a strategic collaboration to explore mechanisms to inoculate open data into urban innovation policies, investigating through a practical experiment how can open data valorisation become mandatory to prepare projects for the several calls for innovation projects launched by the city council, which have substantial prizes of its own. Thus, the hack did not only succeed in allowing citizens to co-create with open data the specific proposals for projects to be presented for funding, but also co-create with open data the public policies supporting these calls for projects.
4 Aalborg & Copenhagen

4.1 Preamble: a new challenge for the hackathon experience

4.1.1 The new challenge

Moving on from the 1st cycle hackathon process in the Danish pilot, a key priority was to continue to extend our network and we prioritized to seek out synergy with public administration entities directly. We wanted to add value supporting the existing and ongoing efforts around publication and use of open data on Danish ground.

Our experience in the 1st cycle was as the “single owner” of events, which continued to feel as a challenge as we strived to motivate engagement and commitment from the stakeholders we were keen to involve around the topic of migration; for both ensuring a coherent pre-hack phase leading to the hackathon - as well as ensuring the likelihood of a strong post-hack-phase.

Into the second cycle, we aimed to find collaboration and establish a shared ownership with relevant actors beyond the narrow timeframe of a single 2-day event of the hackathon. We wanted to weave the activities and resources offered through O4C into the existing efforts - for the benefit of all involved. While it definitely was an option to continue our focus on migration, if we had been able to find good matches for interested organisations eager to join our efforts, we nevertheless prioritized mapping synergy and collaboration over sticking to the fixed topic and was open to change thematical direction.

Another key motivation for seeking equal partners to collaborate with, was also the acknowledgement that in the Danish pilot team we were stronger on skills relating to communication, facilitation and networking; building interesting temporary eco-systems - than within more hardcore data-competence. One year into the project, it had become clear to us, that we would not have the support we had initially hoped and envisioned from the technically strong partner Dataproces, as their focus and understanding was on the task of building the platform - not on curating or assisting the research process of tools, software and facilitation and actual “doing with data” - as well as engaging the dialogue and mapping exercise of providing relevant data.

A relevant context for us between 1st and 2nd cycle processes in Denmark, was the fact that towards the end of 2016, the “National partnership for open public data” was established as an outcome of a new digitization strategy between the Danish Business Authority, the organisation for the Danish Regions, the national association of municipalities (KL) and Open Data DK. We therefore reached out to KL, had a dialogue with the Danish Business Authority and most productively continued to talk to representatives from OpenData Dk. This played out as a series of meetings and dialogues with different stakeholders in this network during Spring 2017.

We had initial meetings with the national innovation network for IT: InfinIT (a contact that grew out of post-hack activities of the 1st cycle through the active work of Antropologerne’s consultant Janice S. Pedersen). We spoke with open data “advocates” at the Danish Business Authorities (behind a site such as: https://data.virk.dk ) and part of the Danish National Partnership for open data (formed out of digitization strategy of late 2016 – 5.1: https://www.digst.dk/Strategier/Initiativer).

While we have had continuous helpful but rather sporadic dialogue with Frans La Cour at the Copenhagen open data ‘anchor point’: Copenhagen Solutions Lab (https://cphsolutionslab.dk/en), contacts in Aarhus and Vejle seemed more able to prioritize and think along with us in terms of mapping synergy and networking with us. We therefor understood that in Aalborg Municipality they were just starting off the project management of a 2 year initiative to actively support the whole
region and the 11 municipalities in the Region of North Denmark, to get off to a good start on publishing data openly through the portal www.OpenData.dk. The concrete project manager - a newly graduated woman, knew that on an earlier occasion the municipality of Aalborg had been involved in the organisation of a hackathon - which they had had to cancel due to lack of interest. As we reached out she and her colleagues were entirely motivated and excited to collaborate and share ownership, costs and tasks between us. Decision was made to proceed planning the hackathon as the extended pre-hack - hackathon and post-hack format we advocate based on the learnings throughout the Open4Citizens project.

Our networking activities from 1st cycle and into the 2nd cycle, was also productive in the sense that we continued to maintain dialogue with the national innovation network for IT Infinit. This network had recently received funds for engaging hackathon and co-creation activities (“Videnbro” funds). When we presented the idea of doing activities in the North of Denmark through experimenting to publish and use open data to improve ‘smarten up’ outdoor tourism in the region; as suggested by the open data initiative we had begun dialogue with, they were excited and ready to jump on board the process, adding in particular their network and skill to amplify both the hackathon, the pre-hack and in particular also the post-hack phase.

Overall: From being single owner of a process in the 1st cycle as we reached Summer 2017, we were excited about our successful networking efforts and began formulating responsibilities, tasks, timings and concrete detail planning in an extensive and distributed organisation team between the Open Data Initiative of North Denmark and InfinIT.

Business Region North Denmark (BRN) is a partnership between the 11 municipalities of North Denmark and The Region of North Denmark. The overall purpose of the partnership is to create and pursue a common agenda for growth and development, and collectively master the challenges of North Denmark. One such shared initiative initiated by the BRN is the initiative Open Data Nordjylland (ODN), that aims to utilize the vast amounts of data that is produced by the 11 municipalities and the region, by making selected data publically available. By March 2017, the 11 municipalities of North Denmark and The North Denmark Region collectively obtained membership of Open Data DK, a national public sector initiative that aims to create transparency in the public sector and enable data driven growth. The membership gives the partners of BRN access to a platform for uploading data and to the knowledge within the network of public sector members with similar objectives. Based on the membership of Open Data DK, Open Data Nordjylland will facilitate the release of relevant data on the platform and support the usage of these data in solving relevant issues within a societal and business context. Tourism will be the initial case for utilizing data.

The Innovation Network for IT Infinit: is one of the national innovation networks supported by the ministry of Higher Education and Science (2014-2018). Infinit is a network for innovative utilization of IT. The goal is to convert the infinite possibilities that technology offers into concrete collaborations between research and industry. Infinit is run in a collaboration between Aalborg University and the Alexandra Institute. As part of the Videnbro program Infinit has received funding for organizing a number of hackathons, co-creation workshops, and masterclasses. The collaboration with Open Data Nordjylland and Open4Citizens is set within this framework.

Although there is a radical difference between the themes and topics we worked on in the 1st and 2nd cycle - we continued building on all our experiences, contacts and the networks established; in other words we didn’t experience it as a “radical change of topic” rather; we made progression in a process where we continuously kept seeking out collaborations strategically -- and followed up on relevant openings when they occurred.

As exemplified in the section above, we prioritized close collaboration and a shared ownership throughout the entire process. This priority grew out of the 1st cycle experience of having a little too
much of a single-ownership of the events/process. To heighten the chance of impact and change-making, we were keen to engage actively other partners in the process: Accepting less overall control of how event would progress - but reaching a far wider ecosystem/audience.

It was important for us that our activities in the 2nd cycle didn’t remain ‘owned’ entirely within our “academic domain” at AAU. We wanted it to be more of a project where we co-created the cases, agenda, the timings, cases and outcomes...etc. with relevant organisations, authorities and businesses. For these reasons, the constellation between Open Data Nordjylland, InfinIT and us in the Danish O4C team seemed ideal.

4.1.2 Why a hackathon

Formulated a bit bluntly, we needed a hackathon, because this was what we had received funds to organize and try out experimentally. The reasons are many why we found it an interesting and relevant format to draw on – while at the same time we also experienced some limitations and constraints as we attempted to ‘hack’ the hackathon format into the inclusive three-stage process of pre- hack and post-hack phases.

First of all, in the 2nd cycle, we used the hackathon format actively to find and match synergy among partners. Both the project management of the open data initiative in North Denmark - and the National innovation network for IT where looking for ways to set up a hackathon during Autumn 2017. As such it worked as a concept we could begin discussing and shaping mutual expectations, tasks and roles around.

Working dispersed between 3 different organizations and between North Denmark/Aalborg and Copenhagen, it worked well to have a specific event to “anchor our collaboration around”. The hackathon seemed at once both specific as well as flexible enough for such collaboration.

Secondly, the hackathon is a promising format when you set out to want to bring together different expertise, talent and knowledge: In our particular case; students from a range of disciplines: Design skills, tourism knowledge, geography, techno-anthropology, medialogy, software development, interaction design, engineering and many more.

The hackathon was a playful out-of-the-ordinary format well-suited to work as a great momentum and deadline across a whole region of North Denmark: To come together and to make sure data would begin to be published and made available on the [www.opendata.dk](http://www.opendata.dk) platform for the 11 municipalities and the region of North Denmark who had joined the platform jointly in early 2017.

In the O4C team, we were keen to support this effort making it a successful launch of open data. Focus was on formulating possible and reasonable demands and requests around open data - awakening curiosity to open data as a possibility while solving regionally relevant challenges; as that of tourism.

Ideally the process and the hackathon where people are brought together to ‘squeeze’ their brains in an intense collaborative effort that aims to solve current challenges by activating and utilizing newly available data resources in the best way possibly between technology know-how, data expertise, design skill, startup curiosity and business flair.

A main aim was to try to bring together new perspectives and possibilities for the use of the “outdoor related open data” of the municipalities and organisations in the North of Denmark, and the hackathon format is great because it invites different stakeholders together in an intense collaborative effort: to suggest fresh, new and better ways of doing things (new short-cuts) - by drawing on and using open data as a resource.

From the early planning, we were aware of some limitations of the hackathon - and inspired by the
O4C campaign-notion we were very aware and strategic as we talked explicitly about an extended innovation process spanning several months - rather than a single two-day hackathon event.

In fact a main insight for us is the fact that; it’s more the process of collaboration around the event - than necessarily the event itself that can put things in motion: Allowing for trying out new collaborations in practice; mainly in the very detailed and rich pre-hack process: getting set to the hackathon event.

Attention points and suggested limitations of the hackathon:

- It’s well-known and widespread term with a lot of ‘baggage’ in terms what is expected: between those collaborating and those participating. This leaves a narrower space for experimentation and new definition of what we’re doing.

- The inherent competitive element (when competing for a prize): Makes participants less prone to risk spending their time learning new skills, tools and approaches. When working in a new team: participants are more likely to spend time rehearsing how the skills and knowledge you come already equipped with works in the setting of the new team.

- The history of the term ‘hackathon’ is rich with code, programmers and digital business/start-up success stories (Facebook, Silicon Valley…), this is a benefit you can play with also as you extend other skills to the mix. However, we experienced, that when you invite a diverse participant crowd: the real hackers tend to be harder to make interested. The challenge remains then: if you continually want to pursue the intense demonstration of actual running code at the end of the hackathon (down the lines of the old hacker-saying “demo or die”: you will still need those with the right technical skills.

4.2 Pre-hackathon activities

After setting collaboration, we continued to work together through meetings in Aalborg as well as skype-meetings and phone-calls: Involving Nicola Morelli, Louise Torntoft and the two involved people from North Denmark: Rasmus Engsig from BRN and Tine Rønø Bove from It & Digitalisering Aalborg Municipality / ODNordjylland. When it was agreed that InfinIT also join the planning of activities and the synergy created in the form of consultant Lea Schick. Together, we agreed to support the focus on Outdoor tourism relevant data for the launch of the Open Data initiative in North Denmark – under the title: “Hack the Outdoors – data driven tourism in North Denmark”. We all agreed to frame it more as an innovation process - influenced deeply by the O4C concept of thinking more in a broader campaign or temporary ecosystem around a key event (the hack):

![Figure 20: The “dream process” planned for the Autumn (see rough outline above)](image-url)
As we formulated the challenges for the hackathon in the early pre-hack phase, a key part of our activities was about mapping out how to engage and best involve different actors:

“Contact to open data resource-persons”

E.g. through the Open Data initiative of North Denmark, the project manager in Aalborg Municipality lead the contact with the IT persons and employees in every municipality of the region: Those employees who were to do the actual curation, preparation and upload to the open data portal. She held meetings motivating and getting all of them set and ready to publish open data. At AAU we joined a few of these meetings and continued to spare and discuss different approaches. A key part of the project managers’ work was to continually motivate the employees across the region to do in practice what more higher-level politicians across the region had decided: that all municipalities of region North Jutland; join the national open data efforts. The hackathon as an event worked as a ‘deadline’ and ‘motivator’ for getting data “out there” -- however with varying priority at the level of practice.

“Contact to key tourism sector representatives”

Through the contact in BRN already early on in the process there was a clear commitment on the part of the tourism managers in the region - who had just begun a new management network - to strengthen the tourism sector across the region.

A big task in our work here, was about updating this commitment to understand more in-depth what these actors had “signed up for”: What it might mean to join this O4C flavoured Hackathon process aiming to make available and suggest relevant use cases for open data in the region on challenges within outdoor tourism.

Setting the frame for nurturing dialogue between offices and organisations who might know about each other’s existence - but who had never collaborated directly before.

**Figure 21: overview of some main activities in our process**

<table>
<thead>
<tr>
<th>PRE-HACK</th>
<th>HACKATHON</th>
<th>POST-HACK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>June</strong>&lt;br&gt;22/6: Workshop with Tourism Managers in the Region of North Dk</td>
<td><strong>November</strong>&lt;br&gt;3+4/m: Hackathon in Aalborg!&lt;br&gt;Follow-up with:&lt;br&gt;- participants&lt;br&gt;- case-holders&lt;br&gt;- mentor-support&lt;br&gt;Planning the Co-creation workshop&lt;br&gt;- Dialogue with case-holders:&lt;br&gt;Supporting their dialogue with the teams/cases of interest&lt;br&gt;- Tailor-making the groups to support the teams: Inviting companies and other relevant new competences</td>
<td><strong>December</strong>&lt;br&gt;7/12: Co-Creation Workshop (InfiniT)&lt;br&gt;(Struggles: External Mentor-support)&lt;br&gt;Evaluation, follow-up with teams. Stakeholder interviews. Emails to teams. Evaluation of the workshop.</td>
</tr>
</tbody>
</table>
### 4.2.1 Meeting and Workshops

Getting the whole extended collaboration set required a lot of networking, interviews and meetings to be held. The table below show the highlights exemplifying our work in the pre-hack process:

<table>
<thead>
<tr>
<th>Date</th>
<th>Type of meeting &amp; Participants</th>
<th>Main achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/2 2017</td>
<td>Explorative meeting Infinit, AAU and Antropologerne</td>
<td>Mapping down activities, priorities and interests in open data and the hackathon innovation process - possible collaborations</td>
</tr>
<tr>
<td>6/4 2017</td>
<td>Explorative meeting Open Data DK in Aarhus and AAU</td>
<td>Mapping down activities, priorities and interests in open data and the hackathon innovation process - possible collaborations</td>
</tr>
<tr>
<td>27/4</td>
<td>Explorative meeting Open Data Danish Business Authority and AAU</td>
<td>Mapping down activities, priorities and interests in open data and the hackathon innovation process - possible collaborations</td>
</tr>
<tr>
<td>5/5 2017</td>
<td>Explorative meeting Open Data North DK and AAU</td>
<td>Mapping down activities, priorities and interests in open data and the hackathon innovation process - possible collaborations</td>
</tr>
<tr>
<td>11/5 2017</td>
<td>Follow-up meeting Infinit and AAU</td>
<td>Deepening the interests in open data and the hackathon innovation process for a possible collaboration</td>
</tr>
<tr>
<td>16/5 2017</td>
<td>Follow-up Meeting Open Data North DK + AAU</td>
<td>Deepening the interests in open data and the hackathon innovation process for a possible collaboration</td>
</tr>
<tr>
<td>May 2017</td>
<td>Working meetings, AAU and Infinit to develop possible InfinIT matchmaking funds</td>
<td>Developed application and attempted to network the support to external funds.</td>
</tr>
<tr>
<td>24/5</td>
<td>Meeting Infinit, AAU and EthosLab (Matchmaking option)</td>
<td>Possible continued support on topic (e.g. ETHOS setting up Twitter query on relevant keywords)</td>
</tr>
<tr>
<td>24/5 2017</td>
<td>Meeting Tourist Managers: Introduce idea and case-invitations started! (Open Data North DK)</td>
<td>Positive outcome: Agreement from Tourist Managers to engage case-formulation</td>
</tr>
<tr>
<td>June 2017</td>
<td>Several status and working meetings</td>
<td>Setting agreements and practical collaboration structures. Framing the overall topic and planning workshops and contacts.</td>
</tr>
<tr>
<td>20/6 2017</td>
<td>Meeting with IT Managers/staff of municipalities. (Open Data North Dk)</td>
<td>Introduction to the national open data platform: <a href="http://www.opendata.dk">www.opendata.dk</a></td>
</tr>
<tr>
<td>22/6 2017</td>
<td>Tourism Managers meeting – 1.5-2 hour timeslot for workshop setting the frame for possible challenges. Open Data DK and AAU</td>
<td>First important touch-point and early dialogue/brainstorm on challenges and data.</td>
</tr>
<tr>
<td>August 2017</td>
<td>Several meetings/calls planning the collaboration</td>
<td></td>
</tr>
<tr>
<td>10/8 2017</td>
<td>Meeting with the steering committee of Open Data North Dk</td>
<td>Aligning expectations and presenting the hackathon process for the steering committee for</td>
</tr>
<tr>
<td>Date</td>
<td>Activity</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>September 2017</td>
<td>Meetings and dialogue, planning the workshop in mid-October</td>
<td>the Open Data initiative of North Dk. Pinning down how best to draw on their extended network.</td>
</tr>
<tr>
<td>13/10 2017</td>
<td><strong>Pre-hack Workshop</strong>: To Define/Refine/Prioritize/Qualify Case definitions and data availability/possibility</td>
<td>Defining the challenges for the hackathon and mapping the data of interest.</td>
</tr>
<tr>
<td>October 2017</td>
<td>Emails, phone-calls and dialogue</td>
<td>Pinning down relevant data and making sure it can be uploaded or made available for each case-challenge.</td>
</tr>
<tr>
<td>3-4/11 2017</td>
<td><strong>Hackathon</strong>: Hack the Outdoors, Data-driven tourism in North Denmark.</td>
<td>HACK!</td>
</tr>
<tr>
<td>November-December 2017</td>
<td><strong>Post-hack</strong>: Following up on the hackathon and tailor-making the post-hack workshop between participants/teams and case-holders – as well as specific additional expertise/sparring</td>
<td>Maintaining momentum from the hackathon while inviting case-holders to take ownership and continue dialogue with the teams from the hackathon.</td>
</tr>
<tr>
<td>7/12 2017</td>
<td><strong>Post-Hack</strong>: Full day Co-creation workshop: On technology and tourism in North Denmark</td>
<td>Supporting the teams/ ideas and concepts closer into realization between mentors, funding advisors, entrepreneurial contacts, start-up businesses and existing companies.</td>
</tr>
</tbody>
</table>

**Table 7: An overview of main activities in our 2nd cycle process**

From the above table, two meetings/workshops possible case-holders was productive in terms of shaping the specific challenges. Below we zoom in on the particular activities:

- 2-hour workshop with regional tourism managers in Aalborg, June 22nd, 2018
- ½ day Challenge definition pre-hack workshop in Aalborg, October 13th, 2018

**First meeting and workshop work with tourism managers 22/6 2017:**

At this meeting, the first actual work defining the challenges and themes for the hackathon began: We had been granted 1,5-2 hours of an already scheduled full-day meeting between Tourism managers of the whole region North Denmark.

Overall, together we told them about the hackathon process - about ourselves as partners and we guided them to brainstorm on relevant challenges and possible topics to focus on; a process with the use of both joint brainstorming putting up topics on a white-board - as well as making them sit in silence putting down ideas and topics on post-it notes - which were then prioritized and shared in plenum.

After this workshop we digested their ideas and reshuffled them - sending a digested matrix back to them in August: listing and grouping the possible ideas they had come up with at the meeting in June 22. To ensure and activate organisations/dedicated persons to take dedicated ownership we asked the tourism managers across the region to answer to a call to pose a case at the hackathon - to commit and take ownership of particular selected cases/problems; sending back an email detailing their case and what open data they would suggest.

Beyond the tourism managers - we maintained the dialogue with the municipalities and also, we had
a dialogue with the NGO “Danmarks Naturfredningsforening” (The Danish Nature preservation organisation), as they were also interested to join the process broadening the perspective and scope. In the end they had to withdraw their case-challenge as the project manager we had dialogue with had to prioritize differently.

During September, we learnt that 9 possible cases were committed to pose challenges – and we invited all of them to join a dedicated half-day workshop in Aalborg on October 13. Aim of this workshop was to bring together tourism managers and the local municipal IT / GIS employees. To formulate together the relevant challenge and begin agreement and brainstorm on what key data to prioritize publication of - for the hackathon and in the longer run.

Prehack workshop defining the challenges and mapping the data 13/10 2017:

This workshop was key in terms of ensuring dedicated time be spent on:

- Matching of expectations
- Voicing the challenges of tourism organisations while discussing availability of data within the municipalities
- Giving inspiring talks and examples through live visiting inspirational speakers from businesses, research and national innovation networks.

The program consisted of explanation and exemplification of what a hackathon is, inspirational talks on digital tourism and data-usage, dedicated work in teams with sparring discussing the suggested case-problems - and listing the data of interest within the relevant municipalities.

We used extensively an adjusted and Danish translated version of the Need Definition template, to ensure work and thinking along both user needs and data availability axes’.
Figures 23-25: Glimpses of the templates we used in the workshop. A translated and adjusted version of the Need-Definition in the Starter Kit.

At the end of the day - some cases had teamed up focusing on selected specific areas of an adjusted topic/challenge and we had the overview set that would form the ground for the intense data-publication efforts before the hackathon:
Table 8: the six final cases for the hackathon

<table>
<thead>
<tr>
<th>Title of ‘problem’</th>
<th>Problem-holder/Case-owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Eat like a local”</td>
<td>Head of tourism Visit Vesthimmerland, Turisthus Nord (Frederikshavn) and Visit Brønderslev</td>
</tr>
<tr>
<td>Extended active family time (across cities of Løkken and Blokhus)</td>
<td>Jammerbugt &amp; Hjørring Municipality jointly</td>
</tr>
<tr>
<td>Discover and Return for more (conference guests in Aalborg)</td>
<td>Visit Aalborg</td>
</tr>
<tr>
<td>Comprehensive primi-deluxe experiences</td>
<td>Municipality of Vesthimmerland (A passionate ‘Nature guide’)</td>
</tr>
<tr>
<td>Smart Fishing in the Limfjord</td>
<td>Project manager in cross municipal organisation: The Limfjord Council</td>
</tr>
<tr>
<td>Follow the trail to hidden treasures (MTB &amp; Hiking)</td>
<td>Head of tourism Mariagerfjord municipality with Jammerbugten Municipality</td>
</tr>
</tbody>
</table>

4.2.2 Identified Data Set

Data dialogue, mapping and research had been going on all along, but intensified slowly in August, September – and in particular in the three weeks between the pre-hack workshop and the actual hackathon. In this process, the AAU team would be in mail and phone dialogue with these different case-holders: making them feel ready-and-set for the pitch of the problem at the start of the hackathon - and to support their process of making the data available in their municipal subsite of the national opendata.dk platform - or elsewhere: that is in the shared google folder we set up for the event.

One challenge occurring in this intense part of the process, was the fact that the project manager in Aalborg municipality left to start another job just a few days before the actual hackathon – leaving an empty spot with know-how on local municipal matters and local key contacts.

As we had 6 different challenge topics in play, also different data was made available for the event. The full and extensive listing and reflections are to be found in Deliverable D3.3 and the appendixes for that deliverable. Below I simply exemplify how data was made available for one of the cases – namely the one focusing on Smart Fishing:

**Smart Fishing in the area of the Limfjord**

Case holder: Limfjordsrådet, Project manager in cross-municipal organization: The Limfjord Council.

<table>
<thead>
<tr>
<th>What</th>
<th>Owner</th>
<th>Available</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview of data on fishing spots – based on local angler know-how</td>
<td>Limfjordsrådet</td>
<td>yes</td>
<td><a href="https://drive.google.com/open?id=1ZLcwD0jblwp3RLHi-yORMocH0sc1wE-0th5O75wU92g">https://drive.google.com/open?id=1ZLcwD0jblwp3RLHi-yORMocH0sc1wE-0th5O75wU92g</a> (for the hackathon)</td>
</tr>
<tr>
<td>User data on fishing spots, catches and</td>
<td>DTU Aqua</td>
<td>Yes</td>
<td><a href="https://drive.google.com/open?id=1nca6j-sdmR_afvabaK1nPYhsoIDQism3-">https://drive.google.com/open?id=1nca6j-sdmR_afvabaK1nPYhsoIDQism3-</a></td>
</tr>
<tr>
<td>conditions</td>
<td>Provider</td>
<td>Access</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------------------------</td>
<td>------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Images of fishing sites</td>
<td>Limfjordsrådet</td>
<td><a href="https://drive.google.com/open?id=0BwO1fw4vQgmKQjg2bUpsV0izSTAg">https://drive.google.com/open?id=0BwO1fw4vQgmKQjg2bUpsV0izSTAg</a> (shared for the hackathon)</td>
<td></td>
</tr>
<tr>
<td>Data and stories on particular sites of cultural heritage interest</td>
<td>Limfjordsmuseet</td>
<td><a href="https://drive.google.com/open?id=0BwO1fw4vQgmKWU93S1dVTEzxC">https://drive.google.com/open?id=0BwO1fw4vQgmKWU93S1dVTEzxC</a> (shared for the hackathon)</td>
<td></td>
</tr>
<tr>
<td>Map images of area</td>
<td>Limfjordsrådet</td>
<td><a href="https://drive.google.com/open?id=1TZi5Af4Zil3HwU0LUOhafDavcZinry">https://drive.google.com/open?id=1TZi5Af4Zil3HwU0LUOhafDavcZinry</a> (shared for the hackathon)</td>
<td></td>
</tr>
<tr>
<td>Guide on Fishing in the Limfjord area (pdf)</td>
<td>Limfjordsrådet</td>
<td>In Danish: <a href="https://drive.google.com/open?id=0BwO1fw4vQgmKM1J1Vm1BeGxDODA">https://drive.google.com/open?id=0BwO1fw4vQgmKM1J1Vm1BeGxDODA</a> In German: <a href="https://drive.google.com/open?id=0BwO1fw4vQgmK3dyeEZSrzIq2M">https://drive.google.com/open?id=0BwO1fw4vQgmK3dyeEZSrzIq2M</a></td>
<td></td>
</tr>
<tr>
<td>Data from the Fishing Guide</td>
<td>Limfjordsrådet</td>
<td><a href="https://portal.opendata.dk/dataset/fiskeplad">https://portal.opendata.dk/dataset/fiskeplad</a></td>
<td></td>
</tr>
<tr>
<td>Water levels</td>
<td>DMI</td>
<td><a href="https://www.dmi.dk/hav/maalinger/vandstand/">https://www.dmi.dk/hav/maalinger/vandstand/</a></td>
<td></td>
</tr>
<tr>
<td>Tide</td>
<td>DMI</td>
<td><a href="https://www.dmi.dk/hav/maalinger/tidevand/">https://www.dmi.dk/hav/maalinger/tidevand/</a></td>
<td></td>
</tr>
<tr>
<td>Water depths</td>
<td>Limfjordsrådet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water temperatures</td>
<td></td>
<td><a href="https://www.dmi.dk/hav/maalinger/vandtemperatur/">https://www.dmi.dk/hav/maalinger/vandtemperatur/</a></td>
<td></td>
</tr>
<tr>
<td>Zones of preservation</td>
<td></td>
<td><a href="https://portal.opendata.dk/dataset/fredningszoner-limfjorden">https://portal.opendata.dk/dataset/fredningszoner-limfjorden</a></td>
<td></td>
</tr>
<tr>
<td>Stores of great gear</td>
<td>-</td>
<td>Google searches.</td>
<td></td>
</tr>
<tr>
<td>Outdoor camp sites</td>
<td></td>
<td><a href="http://naturstyrelsen.dk/naturoplevelser/overnatning/">http://naturstyrelsen.dk/naturoplevelser/overnatning/</a></td>
<td></td>
</tr>
<tr>
<td>Parking areas</td>
<td>Limfjordsrådet</td>
<td><a href="https://portal.opendata.dk/dataset/parkeringspladser-1-naerheden-af-limfjorden">https://portal.opendata.dk/dataset/parkeringspladser-1-naerheden-af-limfjorden</a></td>
<td></td>
</tr>
</tbody>
</table>

Table 9: Example of what data was gathered for the Danish hackathon – for one of the case-challenges on smart fishing. What is highlighted in colour, was made available and disclosed in particular for the hackathon.
4.2.3 Key Actors

The pre-hack phase enabled an ecosystem spanning the whole region of North Denmark with multiple actors involved in multiple ways – as case-holders, mentors, participants or interested hang-abouts.

<table>
<thead>
<tr>
<th>Organizing team</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job title</strong></td>
</tr>
<tr>
<td>Research Assistant (O4C)</td>
</tr>
<tr>
<td>Consultant</td>
</tr>
<tr>
<td>Research &amp; Innovation specialist</td>
</tr>
<tr>
<td>Entrepreneur, Innovation &amp; Start-up advisor</td>
</tr>
</tbody>
</table>

*Table 10: Components of the organization team.*

<table>
<thead>
<tr>
<th>Mentors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job title</strong></td>
</tr>
<tr>
<td>Engineer, Consultant, Coordinator</td>
</tr>
<tr>
<td>Professor, Coordinator of O4C</td>
</tr>
<tr>
<td>Project manager, PhD Fellow, Engineer</td>
</tr>
<tr>
<td>CEO, Chief Anthropologist, O4C Partner</td>
</tr>
<tr>
<td>CEO, O4C Partner</td>
</tr>
<tr>
<td>Researcher and entrepreneur</td>
</tr>
<tr>
<td>Innovation consultant</td>
</tr>
<tr>
<td>Research assistant (ODEdu)</td>
</tr>
<tr>
<td>PhD Fellow</td>
</tr>
</tbody>
</table>

*Table 11: List of the mentors.*
<table>
<thead>
<tr>
<th>Case / Challenge holders:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job title</strong></td>
</tr>
<tr>
<td>Head of tourism, Mariagerfjord</td>
</tr>
<tr>
<td>Recreational consultant</td>
</tr>
<tr>
<td>Head of tourism, VisitVesthimmerland</td>
</tr>
<tr>
<td>Webmaster</td>
</tr>
<tr>
<td>Head of tourism, VisitAalborg</td>
</tr>
<tr>
<td>Nature guide</td>
</tr>
<tr>
<td>development consultant</td>
</tr>
<tr>
<td>project manager</td>
</tr>
<tr>
<td>public relations manager</td>
</tr>
<tr>
<td>land surveyor and IT</td>
</tr>
<tr>
<td>specialist</td>
</tr>
<tr>
<td>Tourism Development consultant</td>
</tr>
</tbody>
</table>

**Table 12: List of the case holders.**

<table>
<thead>
<tr>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job title</strong></td>
</tr>
<tr>
<td>Head of Knowledge Collaboration in AAU Innovation</td>
</tr>
<tr>
<td>Mayor in Thisted Municipality, Chairman BRN</td>
</tr>
<tr>
<td>project manager</td>
</tr>
<tr>
<td>Associate professor</td>
</tr>
</tbody>
</table>

**Table 13: List of speakers.**
### Table 14: Jury composition.

<table>
<thead>
<tr>
<th>JURY</th>
<th>Organisation</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Manager Comwell Rebild Bakker</td>
<td>Comwell Hotel Rebild</td>
<td>Jury</td>
</tr>
<tr>
<td>Entrepreneurship consultant</td>
<td>Experience Consult</td>
<td>Jury</td>
</tr>
<tr>
<td>Vice President at COWI</td>
<td>COWI</td>
<td>Jury</td>
</tr>
<tr>
<td>Chairman of the board at BrainsBusiness</td>
<td>BrainsBusiness</td>
<td>Jury</td>
</tr>
</tbody>
</table>

#### 4.3 The second Hackathon Event

We hosted the 2-day hackathon at AAU in Aalborg on November 3-4th 2017.

In the previous sections, I’ve described our dialogue with case-holders and collaborators more closely.

1½ - 2 months prior to this we had set up a website[^3], a Facebook event[^4] and an Eventbrite[^5] for participants to sign up and register. We hung up posters and spread around post-cards as well as invested time in massively communicating directly with colleagues and different study-coordinators to make relevant people, citizens and students aware of the option of joining our hackathon.

We used our shared network to engage and involve a broad network of mentors to be available during the event for supporting the teams in their process. As a result, we had 9 great mentors available to support and challenge the teams during the entire event. The mentors represented both consultancy, research, technical/data aspects, user-research and business opportunities.

In the team between AAU, Open data initiative of North Denmark and InfinIT we detailed the agenda and prepared the host Lasse Chor in a selection of meetings: How we would want him to steer the event and where we would supplement his hosting role.

We kept teasing and communicating with all registered via Eventbrite and through the Facebook event until the opening on the first day. Already two weeks before the hackathon tickets had sold out 75 tickets – and we kept a waiting list.

[^3]: https://hacktheoutdoors.wixsite.com/hacktheoutdoors
[^4]: https://www.facebook.com/events/174642776417633/
[^5]: https://www.eventbrite.com/e/hack-the-outdoors-tickets-37941911278
Figure 26: 6 interesting challenges were posed by highly dedicated case-holders.

<table>
<thead>
<tr>
<th>Title of ‘challenge’</th>
<th>Problem-holder/Case-owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Eat like a local”</td>
<td>Head of tourism Visit Vesthimmerland, Turisthus Nord (Frederikshavn) and Visit Brønderslev</td>
</tr>
<tr>
<td>Extended active family time</td>
<td>Jammerbugt &amp; Hjørring Municipality jointly</td>
</tr>
<tr>
<td>(across cities of Løkken and Blokhus)</td>
<td></td>
</tr>
<tr>
<td>Discover and Return for more</td>
<td>Visit Aalborg</td>
</tr>
<tr>
<td>(conference guests in Aalborg)</td>
<td></td>
</tr>
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</tr>
<tr>
<td>Follow the trail to hidden treasures (MTB</td>
<td>Head of tourism Mariagerfjord municipality with Jammerbugten Municipality</td>
</tr>
<tr>
<td>&amp; Hiking)</td>
<td></td>
</tr>
</tbody>
</table>

Table 15: the 6 challenges (repeated outcome of the workshop in 13/10 2017).

4.3.1 The process framework of the hackathon event

Below we detail the agenda and timings – that overall took the following shape:
DAY 1: We had geared for a grand opening, with a packed programme of people setting the stage.

First the official welcome was in the hands of a leading figure from AAU Innovation greeting all 50-60 participants and 20-30 other interested listeners to the hackathon opening. After this, the political setting was highlighted as the chair-woman of Business Region North Denmark and Mayor of Thisted Municipality opened the floor for doing interesting things with open data related to tourism in the region. All through the event, the host: Lasse Chor, who have been involved in a large number of recent Danish hackathons energized the audience in a playful and open-minded way, alerted them to challenges in team-work and kept them smiling and laughing at key moments of an intense process.

Also, we had a leading consultancy make available their tourism related data and talk about use of data to smarten up the tourism sector. All of this was relatively short pitches to build a common ground and framework on the arena.

The key part of the opening was the 6 cases being shortly pitched and introduced. Following these equally sincere and playful pitches we had set aside time for everyone to ask questions and lead dialogue with the case-holders in a more one-to-one or one-to several style of dialogue; with each case-holder standing near a poster for ease of visibility.

This dialogue process was followed by time for the teams to actually take shape. When a team had been set, between Lasse; the host and the AAU team of facilitators, we showed the team to what we offered them in terms of a dedicated temporary workspace and handed them a package of printed O4C tools: inspiration cards, brainstorming sheets, pens, post-its, and data-inspiration cards. This hand-over was done with varying detailed explanation of usage.

At this moment also, we provided sandwiches for a working lunch: where dialogue between teams and the given case-holder would continue. After lunch case-holders mostly went off – some/most of whom would return the next step when the pitches would be presented in the finale.

The afternoon where left for teamwork and getting set. All along the mentors would circulate and sit down among teams – as would also the evaluation crew; following curiously the process of the teams.

The checkpoint of the day, was in the afternoon, where Amalia De Goetzen gave an inspiring presentation to unfold an example of data-usage in a case from the Barcelona hackathon a year earlier; as well as exemplify use of the O4C tools provided to each team. Our motivation to do this relatively late in the agenda, was the fact that from the perspective of the participants – they would be geared towards getting into a great team as well as working on the relevant case-challenge in the first part of the day. Whereas, in the late afternoon: they might be reader to the proposal of new ways and methods/ideas. – And they might be reaching a tough
moment in their process: so, it would be productive to hear a great success story from a similar hackathon in Barcelona: where a lot had since been achieved and implemented.

After the inspirational talk each team made a quick pitch and status on where they were and if there were particular challenges they needed sparring and input on.

All along the afternoon we provided coffee and snacks and the Dinner on Friday evening was a loose setting, where teams could continue to work until they decided to part.

**DAY 2**: Doors opened early and most teams came equally early to continue into day 2. We didn’t meet-up to energize together: simply invited them off to a good start with a croissant and fresh coffee and gave them space to work intensely on whatever challenge they met. Again, lunch was made available in a loose manner: allowing teams to help each other and continue to work and perform the tasks they needed to do. Mentors were available and balanced stepping in and out of dialogue with the teams. Supporting them when needed and challenging them to do better – when they needed a bit of sparring. In particular the AAU team strived to communicate where to find the data prepared for the event and how to use the tools provided/suggested.

At 4 PM on Day 2 everyone convened to open the stage for the grand finale. The host Lasse Chor introduced they jury, teased out the prizes and told the story of the progress during the event. Prior to this: the organisers had held a meeting with the jury: also to keep them updated on what had evolved.

Finale: All 11 teams made it to pitch their concepts during the event. They each had no more than 4 minutes to do so. After this each jury would give comments and ask a few questions. After all pitches the Jury withdrew to define the winner and decide who was to be awarded the prizes.

This was followed by happy moments of prizes and bubbles and happy winners:

![Figure 27: Image of the finale glimpses and exited winners](image)

### 4.3.2 Hackathon Event data and information

The hackathon was hosted at AAU in the **AAU Create building, Rendsburggade 14, 9000 Aalborg** on the 3 and 4th of November 2017.

The theme: **Outdoor tourism in North Denmark – and open data**
Figure 28: What skills the participants listed as they signed up in the Eventbrite registration.

Total number of participants:\(^6\):
- At Day 1 kick-off: **60**
- For final pitches Day 2: **54**

Number of men:
- At Day 1 kick-off: **25**
- For final pitches Day 2: **25**

Number of women:
- At Day 1 kick-off: **35**
- For final pitches Day 2: **29**

Overview of the teams participating and making it to the end of Day 2:
- Team 1: Wanderband, 7, members
- Team 2: GlamNature, 5 members
- Team 3: SMAG, 4 members
- Team 4: Path of the Vikings, 5 members (WTF prize)
- Team 5: Bucket List, 4 members
- Team 6: Get Hooked, 4 Members (2. prize)
- Team 7: NordicBite, 5 members
- Team 8: Confelize, 5 Members
- Team 9: Aalborg VR, 4 members
- Team 10: The Heritage Hunt, 5, members (1. Prize)
- Team 11: FishSpot, 5 members

---

\(^6\) These numbers are approximate.
Overall, we had provided these relevant 6 challenge-questions from real world organisations – and made available through a shared google folder: selected data-sets for each case. Some cases had an extensive and rich data-selection attached to it (such as the Smart Fishing case) – and other cases had a more thin and suggestive material. Under the Facebook event of the Copenhagen Open Data Lab page, we made a Facebook Group for participants to join. Here we would link to the relevant google folders for teams to dig into and to explore.

As organisers jointly, we provided food, snacks and coffee for the participants in a great venue in the centre of Aalborg at university. Also, we provided materials, paper, pens and post-it notes. We had made available a set of O4C tools for each team: Inspiration Cards, Data-cards, Brainstorming tool and need definition tool. All along also part of the support package in the intense event were the available mentors to bounce ideas back and forth with ‘live’.

The prizes in the finale: 10.000kr winners, 5.000kr 2nd prize and the fun WTF ‘all you can eat gift card’ for the most puzzling presentation was also a resource provided. A part of the prize offered, was also that we would draw on a particular format developed by InfinIT to ensure post-hack follow-up. We had planned to nudge the case-holders to take ownership and engage to set a follow-up meeting with the interesting teams and proposals coming out of the hackathon; either in person or via skype or telephone.

Based on this follow-up dialogue between teams and case-holders, we supported the case-holders invite the teams to a dedicated follow-up workshop on month later: the co-creation workshop in the hands of InfinIT. Aim would here be to make a plan for further development of a realistic project: based on the initial idea of the hackathon participants.

In terms of specific budget – these were the rough financial framework we were working within. In the O4C team at AAU we may have invested the most time/hours in the making of the event, whereas we benefitted greatly from the funds and synergy as we collaborated with both Open Data in North DK and InfinIT. These are the rough estimates.

<table>
<thead>
<tr>
<th>Occasion</th>
<th>What</th>
<th>Who</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-hack workshop</td>
<td>materials, venue, snacks and refreshments</td>
<td>Open Data North DK / BRN</td>
<td>7.000 DK kr</td>
</tr>
<tr>
<td>13/10 2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hackathon 3-4/11 2017</td>
<td>Food and Drinks in the hackathon</td>
<td>InfinIT</td>
<td>19.500 DK kr</td>
</tr>
<tr>
<td>Hackathon 3-4/11 2017</td>
<td>Materials, cards and creative resources</td>
<td>AAU / O4C</td>
<td>4500 DK kr</td>
</tr>
<tr>
<td>Pre-Hack &amp; Hackathon 3-4/11 2017</td>
<td>Posters and marketing</td>
<td>AAU</td>
<td>4000 DK kr</td>
</tr>
<tr>
<td>Pre-Hack &amp; Hackathon 3-4/11 2017</td>
<td>External host</td>
<td>Open Data initiative in North Dk / BRN</td>
<td>45.000 DK kr</td>
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<tr>
<td>Hackathon 3-4/11 2017</td>
<td>Venue, cleaning and security</td>
<td>AAU / O4C</td>
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<td>Speaker</td>
<td>InfinIT</td>
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<td>Hackathon 3-4/11 2017</td>
<td>Jury and mentor gifts</td>
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<td>16.000 DK kr</td>
</tr>
<tr>
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<td>17.650 DK kr</td>
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<td>Post-Hack workshop</td>
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<td>57.000 DK kr</td>
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<td>7/12 2017</td>
<td>coverage etc.</td>
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<td></td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>180.250 DK kr</strong></td>
</tr>
</tbody>
</table>

Table 17: Overview of the distribution of co-financing various areas and resources needed for a “big scale event” involving several actors across Region of North Denmark.

7 Please observe these are the latest numbers available to us as estimation and ‘splitting the bill’ within the collaboration. Also, the numbers listed here does not include all hours spend across the organizations involved.
4.3.3 Hackathon Event outputs and results

We had gathered and convinced a relevant jury to join the finale of the event to give feedback and nominate 3 prizes: A first prize of 10,000 kr, a Second prize of 5,000 kr and a fun WTF prize for the most puzzling presentation (a gift card for ‘all you can eat’ in a hot-dog stand). All these prizes were offered by the Business Region North Denmark, who was involved all through the process as they had initiated and appointed the Open Data Initiative of the region.

The Jury:
- Johanne Bugge, Entrepreneurship consultant working on tourism development and marketing
- Morten Hauggard Jakobsen, Vise President at COWI A/S
- Jane Andersen, Hotel manager at Comwell Rebild Bakker
- Claus Falk, Chairman of the board in BrainsBusiness
- Lars Erik Jønsson, CEO in Væksthus Nordjylland (had to cancel last-minute)

The jury was briefed to determine the winner, 2nd prize and WTF prize based on 4 criteria:
- Innovation
- Execution
- User focus/validation
- Use of data

We used the following note-sheet for the panel to use:

![Figure 29: The assessment tool for the hackathon jury](image)

Below all cases and the proposed concepts/prototypes are described:
Team 1: Wanderband

Team WanderBand aimed to develop something beyond an app. Their concept is an armband with a chip in it. The wristband allows people walking along a scenic trail to interact with nature through various activities and to access e.g. water from a vending machine.

Data used is the GIS data along the trail. The data generated by tourists while carrying out activities along the trail is provided to the users themselves, the municipality and to local businesses. The solution was presented through a slide presentation. This was supported by an acted-out scenario, where two tourists walked along the trail and used the touchpoints.

Team 2: GlamNature

A service concept that tie together the load of different communities and offerings, sites and existing websites for those travellers who want the primitive nature experiences as well as the delicate luxury. Aimed to promote through a little Lego-animated video the concept for a user visiting Vesthimmerland.

Team 3: SMAG

The target audience of this team/concept is the conference visitors and guests coming to Aalborg. They demonstrated statistics on how ‘high spenders’ are interested in going outside in the nature around Aalborg. For those ‘foodies’ passionate about a combination of quality food delicacies and nature, this is a service where you build your experience/your visit like a sandwich.

One thing they are interested in: FOOD: How long do you stay, what kind of activities are you looking for – what kind of food do you want to taste? The data is drawn from Guide DK data and food blogs and other data-sets combined; for the visitor not to miss out on local food experiences nearby.
Team 4: Path of the Vikings

The Path of the Vikings concept is an app that guides tourist families through activities between the towns of Løkken and Blokhus, connecting the two towns. The presentation was of a concept, rather than a working prototype. The app aims to appeal to families and will include elements for both parents and children. Parents would get to explore local heritage, as well as their own. Children would have a ‘gold stealing activity’. The activities themselves would be in transportable shipping containers.

The data to be used for the app include information about services needed by tourists along the route: parking spots, toilet facilities, rentals, companies, sports. The app would make more data available for tourists about the local area. Judges’ questions related to e.g. how users would travel between the two towns, which could be done by shuttle bus. It was also suggested that the team highlight the bonus of learning more about the local heritage.

Team 5: Bucket List

This is an app that allows you to plan and make a ‘bucket list’ of things/activities in an area that you would want to pursue. You can either feel spontaneous and get inspired – or plan a trip more carefully. You can share and compete with your friends. If you complete a ‘bucket’ you win a bitcoin - and when we use the app we create bit-coins.

Team 6: Get Hooked

This team created an AI interface along with a step by step fishing guide. They draw on the knowledge of local committed anglers – as well as data on sites, conditions and catch. In a web-based application, they propose an overview of the fish right now, guides on where to go; which spots are best for what. Also, they provide comprehensive and cool guides to capture young people with less or no experience in angling: What do you need if you want to go fish? Where could you get this gear and what will you do once you’ve made a catch? This group really convinced the Jury and won the 2nd prize.

After the hackathon they continued to build on the Facebook messenger chatbot: based on all the data.
in the web-application. Get hooked and go fish!

Team 7: NordicBite
This group worked on a case of how they can develop a service that could accommodate tourists coming to the region by ferries by including local businesses and actors. The outcome is ‘Nordic Bite’, a digital platform/mobile application, which gives to local businesses, like farmers, a possibility to depict their offerings digitally (visibility) on one unite platform and at the same don’t eliminate their ownerships over the platform. By that local actors will meet new flow of clients. From tourist perspective, it gives a chance to plan their travel route right after leaving the ferry until the destination point and show offerings available in the region from local providers.

Team 8: Confelize
This team worked on the case of developing a service that could help the participants of conferences to stay longer in Aalborg or come back after the conference. The main idea was that through the app they can connect with locals and with other people from the conference and discover very local attractions and beautiful places to visit.
Team 9: Aalborg VR
A service which allows to see ‘top’ Aalborg sports in 360-degree video by using VR technologies. This service could be provided during conferences – to add glimpses of the experiences available in the nearby area of Aalborg. There might be a hub with VR glasses in the lounge areas during the conference.

Team 10: Heritage Hunt
Team #10 was able to, during the time of the hackathon, create an idea for an app, which was The Heritage Hunt. The Heritage hunt is based on the case that something was needed to connect Løkken/Blokhus into a singular tourist destination, while also providing something for the active families which visit the destinations. The team came up with an Artificial Reality App, which uses the heritage and historical diversity of the area, to create interest in both the history, as well as have families participate in finding or “hunting” for these sights. Active Tourists with families would thus gain knowledge of the surrounding area, engage actively with it, and also take part in the history themselves, through Artificial Reality events through the screen on their phone. The Idea ended up winning the event based on the criteria established beforehand, but during the hackathon the team was also able to have fun and would often joke and laugh with each other.

Team 11: FishSpot
This team aimed to solve the smart fishing challenges in the Limfjord by targeting experience angler tourists, while promoting how to go fish in the North of Denmark; through a Smart Application you can carry on your iPhone. Through data that is compiled and used it will list what fish to catch where, while combining with Social media, to search for friends and sharing of knowledge among experienced anglers. Data will draw together: weather forecasts, sea-level and multiple conditions locally. Idea is to make a simple interface of 1)
4.4 The Post-Hackathon: Development and Testing

During the 1st cycle we didn’t have a prize and a spectacular external post-hack follow-up in place, we made ourselves and our network available through a series of engaging workshops. For the 2nd cycle of events the situation was different and we had to find ways of overcoming the fact that on a daily basis, most of the O4C team is anchored in Copenhagen; relatively far from Aalborg. Therefore our approach had to be different – and the partnership with InfinIT was in particular instrumental as they co-financed through offering the innovation-business-networking format they label ‘a co-creation workshop’. We therefor planned this event carefully and set the date one-month after the hackathon on December 7th 2017, at AAU in Aalborg.

A key priority after the hackathon was over, was to encourage the case-owners to take ownership and invite the teams which ideas they found interesting and relevant to further conversation and a possible follow-up meeting. This unfolded in a couple of collaborations as actual meetings in Aalborg – whereas others had mail-correspondence and phone-call dialogue. Many however, found it challenging to maintain momentum and fully understand the purpose of the continued dialogue; although we aimed to support and stay in the loop nurturing the first exchanges. It was a key challenge to be situated far from the local actors and participants (between Aalborg and Copenhagen).

4.4.1 From Hackathon event’s achievements to post Hackathon activities

Beyond the single post-hack event of the co-creation workshop, we had been strategic also in involving the organization BrainsBusiness an active role as one mentor during the hackathon and the chairman of the board in BrainsBusiness. The agreement was that they were well-positioned to offer a series of mentoring sessions to a selection of interesting teams/concepts after the hackathon. For reasons unclear to me, they simply silenced this agreement and must have become busier and under more pressure than anticipated. Between InfinIT and AAU/O4C we never heard back when trying to settle how to pursue this with our concrete contacts in BrainsBusiness. In short we learned the hard way the risks you run when engaging such broad network and collaboration – many organisations are keen to play a role and join the party, but it’s more tricky to rely on commitment in the slower pace that follow after a hackathon. In particular, when no written forms and signatures have been made.

Luckily, we had a really good dialogue with AAU Innovation and they were keen to follow both the hackathon as well as offer their innovation support and incubation services also to all interested teams and participants after the hackathon. To our knowledge, in particular one team has continued into their incubation programme although their project have shifted (the “Get Hooked” Smart fishing team).

Out of the 11 teams that made it through the hackathon to the final pitch, 4 teams were represented at the Co-creation workshop:

- Working on the Smart Fishing case: the “Get hooked” team (2nd prize)
- Working on the Eat like a local food culture case: “NordicBite” Team
- Working to solve the challenge posed by Løkken-Blohus area through promotion of active family time: “Heritage Hunt” team (winners)
• Working to solve the make conference guests stay longer case in Aalborg: Aalborg VR.

Beyond representatives from these four hackathon teams, seven case-holders joined the full day workshop – and 15 companies were represented spanning different skills and expertise areas to offer sparring and possible further ideation and strategies to reach closer to actual realization. Also 3 funding and start-up coaches took part as well as 8 public institution representatives.

Through the day, we had some inspirational talks on both what went on during the hackathon and a PhD researcher working on Smart Tourism gave an inspirational talk on current smart tourism good practices. Also, an AAU innovation consultant facilitated various canvas exercises such as among others: the business model canvas – and invited the four teams around the 4 concepts from the hackathon to become refined and further developed: Planning possibly next follow-up steps.

Concretely, it was slightly more challenging than anticipated to pick up on the speed and intensity of the hackathon. Some groups had taken much more active ownership and proposed actual further developments (e.g. the Get hooked team working on their messenger chat bot idea for getting young people out fishing along the Limfjord area). Others where more frustrated and overwhelmed by the reality and expensive new technology realities of e.g. augmented reality solutions (e.g. such as the actual winning team: Heritage Hunt). To our knowledge into 2018, only the group Get Hooked has picked up on the open invitation to join the incubation process offered by AAU innovation.
4.4.2 Towards the OpenDataLab

Moving on from the hackathon events and other activities as a more solid actual OpenDataLab anchored at AAU. We engaged a three-fold strategy:

- Networking and actively hosting a joint Open Data Day event along with ‘sister labs’ in Copenhagen interested in Open Data promotion and discussion, we hosted the **Open Data Socializing event** as a Friday afternoon event the day before the International Open Data Day event globally. Together with the Ethos Lab at the IT University of Copenhagen and Open Knowledge Denmark we “placed ourselves” in the arena as we jointly instigated and awarded the first Danish Open Data Award. A key strategy was to open up the focus on hackathons as the main activity – and join in to host other networking and knowledge-building smaller events.

- As part of the semester course for the Service Systems Design Master programme, we integrated a **3-day workshop on working with Open Data** as part of student projects. As we hosted this type of activity for the second time, we realize this is also part of making a fraction of the Service Design Lab grow into the early shape of the OpenDataLab at AAU.

- Continuously also, we have been in dialogue with and map synergy of outcomes with the humble focus within AAU, to draw on also other resources for students eager to work on Open Data. Notably, we’ve been proposing to build a resource hub between O4C outcomes and researchers at AAU working in the EU project ODEdu; developing E-learning tools and lectures for better open data learning.

- At AAU we have also invested a great deal of time and effort in proposing and leading a **COST Action application** for networking funds to establish and consolidate a rich Network of Open Data Labs across Europe. As we write this, it is yet unknown whether these funds are allocated.

- Looking ahead, the continued work around use of open data in service design methodologies continues to inspire our research: Currently we are working to develop a number of funds application that in various ways also will establish the grounds for further open data and design exploration, knowledge and network building.

8 [https://www.facebook.com/events/278057246058482/](https://www.facebook.com/events/278057246058482/)
9 [https://servicedesignlab.aau.dk](https://servicedesignlab.aau.dk)
10 [http://odedu-project.eu](http://odedu-project.eu)
5 Rotterdam

5.1 Preamble: a new hackathon for the same challenge

5.1.1 Keeping the challenge

For the Rotterdam pilot, the hackathon organization of the first cycle was focused on the “self-management of public parks”, in collaboration between TU Delft, WIJ Delfshaven and the Municipality of Rotterdam. This topic was initially selected in discussion between these stakeholders, as a promising area that could be addressed by open data and with a necessary momentum at the start of the project. From the beginning of our approach, we have considered our hackathon (and broadly the local O4C pilot) as an ongoing process that runs in parallel with the entities we have collaborated, and as such supporting them in a dynamic way as their work unfolds. In this way, the hackathon process has been similar to a design project; we continuously reframed our approach to better answer the needs. In this approach, the first hackathon was a broad exploration of challenges and needs of the members of the network (primarily park initiatives in Delfshaven).

During the first cycle we established a new network that is facilitated by open data and a designerly approach of working on citizen initiatives. From the first cycle, we could identify “champions” – key people from citizen initiatives and the civil servants, who would likely make a difference through open data empowerment, given that TU Delft provides support in different ways (facilitation of learning, process support, graduation students working on their cases, etc.).

Transitioning from the first cycle to the second cycle of hackathons, we have concluded that between the different volunteer-driven parks we have worked with in the first cycle, the underlying motivation is to have more and better greenery in urban spaces, but also to improve citizens health through various ways of healthcare; preventive healthcare, community care and alike. With this insight, we started to sharpen our hackathon focus on “parks + care”, iterating on the previous “self-management of public parks” challenge with an additional focus. In parallel, the “Green Connection” project (which concept was still in its infancy when we started the local O4C pilot) has been gaining momentum, connecting self-managed public parks with different bottom-up care facilities around the area of Delfshaven. In this way, the chosen narrower focus enabled a more direct impact on the Green Connection and related projects. In this transition phase between the two hackathons, we organized a “Healthcare Data Expert Session”, where we invited healthcare experts and activists to come together and establish new agendas facilitated by open data. For instance, a data expert joined this session from the Dutch National Health Services, who helped bottom-up initiatives working on neighbourhood-level care to make sense of the healthcare open data in Rotterdam.

Prior to the second hackathon, we further narrowed the challenges; one graduation student work focused on developing design tools that help members of the Green Connection to better frame and elaborate on certain challenges, focused on open data usage in relation to solving these challenges. For the second hackathon, 6 sub-challenges were defined, and these challenges were developed by the stakeholders, with process support by TU Delft – thus, owned by the network itself.

4.1.2 Why a new hackathon

In pragmatic terms, hackathons as a format was established by the Horizon-2020 grant funding, thus was a necessary option to pursue in complying with the expectations of the European Commission. However, hackathons had proven well being the most important pillars of our activities in Rotterdam. In contemporary understanding a hackathon is known to be a technical, collaborative come together, and there have been many hackathons in Rotterdam in recent years. Hackathon
collaboration format was a melting pot for designerly approaches by the TU Delft team, but also a way to engage with open data in Rotterdam (based on the traditions of open data in the city).

As multiple flavours of a hackathon exist, in Rotterdam we went with the civic hackathon flavour, fostering collaboration around civic issues. As such an event, non-technical people (most of citizen activists, civil servants, regular citizens) could conceptually work on technical things (open data, data analysis, etc.), and hypothetically technical people could join as well to support such civic initiatives (in the end, for the second hackathon no developers have joined, however many of the participants had a high-level technical literacy and an eagerness to learn). Although we didn’t organise a coding-marathon style of hackathon, it was a suitable format for our research to understand how hackathons without coding could be used for challenge definition and generally lead towards constructive solutions, even without creating prototypes.

If we assume that multiple options had been available or interesting, then organizing a service design jam could have been a potentially better frame, but it might have had resulted in losing the technical angle a hackathon carries. Under service design jam, we mean a pressure cooker event, where people come together to collaborate and work on a shared topic, following a co-design process. For a civic hackathon, organized around a shared civic agenda, it was important for us to motivate people joining not for a competition (and thus, we had no financial incentives – e.g., prices – offered), only symbolic awards to boost morale and motivate teams to pursue their projects further.

Bottom line, the Rotterdam interpretation of a hackathon can be summarised in an event where citizens are empowered to “hack the city” with help of open data (transform it, adapt it, in an ad-hoc improvised, bottom-up manner), rather than performing hacking activities limited to hacking programming code and developing apps.

5.2 Pre-hackathon activities

5.2.1 Meeting and Workshops

Healthcare Data Expert Session – May 2017

This interim session was the connecting link between the first and the second hackathon cycles. We used the event to introduce our narrowed down focus (parks and healthcare). We invited 8 experts from citizen initiatives and the local public health authorities. We managed to have a data expert joining from the public health office, and her help was invaluable in explaining how to efficiently access their public datasets.

Various smaller sessions as parts of graduation projects – April – December 2017

As we had multiple graduation students working with different citizen initiatives, the students held multiple co-creation sessions with different members of the citizen initiative network between the two hackathons.

Challenge definition process – November 2017

Part of one graduation project, the key activists from the Green Connection were tasked to define the challenges for the hackathon. This happened in a co-creation process within one graduation, with active consultation from TU Delft.

5.2.2 Identified Data Set

Rotterdam public health data

The Healthcare Data Expert session proved that the available open data on public health in the
Rotterdam region is of high relevance and value for the citizen initiatives. This dataset is publicly accessible through an online dashboard, which had two consequences. First, the data is already available and accessible, thus was not possible and necessary to upload it on the O4C platform. Second, although there is an online dashboard to access the data, the interface is intimidating at first. Having a data expert explaining how to use it and showing tips and tricks helped the pilot to develop tutorials for the hackathon.

**Rotterdam 2037 dataset**

In 2017, the Municipality of Rotterdam initiated a large-scale city-wide survey to gain information on how the citizens of Rotterdam wish to see their city in 2037. Multiple types of open-ended questions were asked on streets, online, etc., on seven crucial themes (such as sustainability, education, etc.). We were provided with the raw dataset by the Business Innovation office of the Municipality. The dataset we received contained over 9000 rows, and providing data on street-level demographic input.

### 5.2.3 Key Actors

Since the beginning of the project we worked with the same set of key actors: WIJ Delfshaven, innovation officers of the Municipality of Rotterdam and key park activists.

**Green Connection**

The Green Connection initiative has a large ambition to tighten the collaboration and representation of green and health citizen initiatives in Delfshaven. They have been involved since the beginning, and were the challenge owners for the majority of challenges for the second hackathon.

**Innovation officers of Municipality of Rotterdam**

Involved from the very beginning in the local pilot, the innovation officers from the Municipality have been supportive and helpful partners with providing infrastructure, outreach towards civic servants and datasets.

**WIJ Delfshaven**

Involved from the very beginning, WIJ Delfshaven has been helping to provide real value in Delfshaven, by connecting the Open4Citizens pilot with local initiatives and ongoing (or new) projects, ensuring visibility, and inviting relevant parties to participate in the hackathon.

#### 5.3 The second Hackathon Event

**5.3.1 The process framework of the hackathon event**

**Challenges:** Prior to the hackathon, there was an intensive collaboration period with the different challenge owners to engage them in the process of filling up the challenge canvases. As these canvases need some work and reframing of the problem space, this was not only a “form-filling exercise”, but a process that supported the challenge owners to clarify the challenges for themselves, while preparing the challenges in a way that hackathon participants without the necessary challenge background can engage in them at the event.
Figure 31: Example challenge canvas from the Rotterdam hackathon

**People:** To recruit the right people for the hackathon, we relied on the network of the initiatives involved in the challenge definition, and in the end most of the participants came from parks of various levels of involvement (ranging from key activists leading the initiative to ‘regular’ volunteers, that are basically ‘regular citizens’ with some engagement in certain local entities. Further recruiting involved engaging more design students from TU Delft, who also have ended up being part of different graduation projects in relation to the local O4C pilot.

**Datasets:** The datasets were differently curated for the second hackathon; learning from the first cycle and the different post-hack engagements, our aim with the datasets were not to “directly” offer datasets that can offer answers on the theme, but to offer datasets that can help participants to find inspiration and be interesting/engaging to explore. Beyond the datasets, we also offered a wider variety of data tools, to address data literacy skill acquisition, a guided process to analyse datasets and guided processes to better understand what kind of data would be needed for a challenge and how to extract strategic value out of a dataset. In our approach, we prepared a “data booklet”: a written document that had visualizations and examples from the datasets, and tutorials on basic Excel usage and searching through healthcare data.
Figure 32: Agenda of the Rotterdam hackathon.

The hackathon venue was in the middle of Delfshaven, at a location that operates as a community house for various youth initiatives; very contextual and very centered around our network approach.

At the end of the hackathon, all teams presented in front of a jury, that consisted of a representative from the Municipality of Rotterdam, various experts from open data (data journalist, etc.) and citizen issues. Typically, the jury was a friendly crowd that easily could have been event participant as well – and as such, more focused on the network establishment with this as well. The prizes were on “Most meaningful use of open data” and “Best concept”, without financial prizes.

As our research agenda at TU Delft is design method innovation, we tailored the “vanilla O4C approach” to address some specificities. We wanted to host an event, which has a friendly atmosphere, and one which feels that the participants own the event as much as possible. As a consequence, we decided not to be as closely involved in the hackathon groups (where every group had one member of the TU Delft team directly participating and facilitating), but only facilitating the flow of the 1.5 days.

For the agenda, our rationale was to divide Friday and Saturday conceptually. On Friday, after an introduction and group forming with dinner, we aimed to have an assigned session of Data exploration. For this session, multiple research tools have been utilized, elaborated in E1 section. We wanted to make sure that all teams have a taster of the datasets, even if data is a bit forcefully injected into the discussions. We considered data as a creative tool, that may foster certain
conversation directions that can lead to fruitful considerations in defining the needs and problem frames.

For Saturday, our rationale was to realize a fast-paced, fun, design process. In order to achieve this, we divided the day into multiple sections, with a clear deliverable to finish by each section, ending with a prototype that tells the concept. These are enlisted in the agenda figure below.

Throughout the event, we also focused on establishing a community spirit as much as possible, and in order to achieve this, the hackathon groups were asked to present their status at the end of Friday, Saturday morning and the final presentations at the end of Saturday. Besides, having dinner, breakfast and coffee breaks together helped to have the different hackathon groups meet with each other.

5.3.2 Hackathon Event data and information

The Park + Care hackathon took place on 8-9 December 2017, at Jong Delfshaven, in Rotterdam. In total, over 30 people participated in the hackathon in various roles and at various times. In three teams, 23 people (13 men, 10 women) worked on challenges.

The participants worked on 6 challenges that were defined in a process described in earlier sections. Five challenges were proposed by members of the Green Connection, and one challenge was proposed by our partner at WU Delfshaven.

The participants were primarily Green Connection-related activists, citizens and design students. In addition, members from the TU Delft team were around to facilitate and to collect research data from the event.

The resources used are listed in the following.

Event production assets:
- Venue (rented, 800 EUR) – tables, chairs, etc.
- Stationery – from TU Delft (papers, post-its, pens, flipcharts, tapes)
- Large-sized prints (50 EUR)
- Projector – from TU Delft
- Coffee, food for breakfast and other snacks, plus dinner from catering (400 EUR)
- Drinks for networking closing of the Friday and the event (price included in the catering and food)
- Large map of Delfshaven (provided by Green Connection)

IT assets:
- Internet connection
- Laptops provided by participants

Methodological assets:
- O4C toolkit – printed and provided by TU Delft

Personnel
- Hospitality help, provided by the venue (included in the rental price)
- TU Delft team as facilitators, data collectors, logistics and other organizational needs (5 people)
- Additional visitors from other O4C partners (3 people)

The overall direct costs for the hackathon, excluding staff costs, was about 1450 EUR.

5.3.3 Hackathon Event outputs and results

Compared to last year, the main differences between the two hackathons were on data awareness and use, sharper challenges, and a better way of framing problems.

For the data aspects, we had a main goal to inject data into the challenges in an unobtrusive way: by providing a variety of data tools and a data booklet that had a printed out guide for all the available datasets and data sources, we really did an extra effort to have everybody in the room able to make sense of the data that we have, but also to raise the curiosity of participants to really look into the datasets. During the first hackathon, basically there was no use of or interest in data, and we wanted to approach it differently.

The challenges were also a success. While during the first hackathon we worked with a rather broad theme, in which everybody found an angle to pursue, for the second hackathon we targeted to scope much narrower and brought challenges in front. All challenges were defined to a high-level of detail in the weeks prior to the hackathon, streamlining what might be valuable areas to innovate in during a hackathon.

In connection with the challenges and the datasets, it was also salient that we prepared more before the hackathon to scope the potential design spaces of the different challenges, and bring together datasets, and facilitation specifics (such as assigning design students to specific groups, anticipating where they can make a difference). The problem framings were not on smaller issues though, still addressing large, important issues that are relevant for the citizens.

5.4 The Post-Hackathon: Development and Testing

5.4.1 From Hackathon event’s achievements to post Hackathon activities

The three hackathon projects were only high-level concepts that would have required much further work to actually develop and test them. However, the concepts as communication tools to tell the story of “preferred futures” have been put into use; for example the video made by one of the teams was used in non-O4C organized events to communicate the value of data. Furthermore, the project on participatory budgeting was used to better understand how this concept could be adapted in Rotterdam and Delfshaven. At an event present in the next section (West Practice A.N.D. 2018), consultants from Deloitte attended the interactive exhibit just in order to learn more about our findings in this question.

5.4.2 Towards the OpenDataLab

Five months after the hackathon, the Open4Citizens pilot joined a 2-days event organized by the Delfshaven network of citizen initiatives. At this event, West Practice A.N.D. 2018, the O4C pilot organized an interactive exhibit to present the outcomes of the various local projects, such as student graduation projects, and showcased the hackathons. Within this interactive exhibit, a workshop also took place where interested people could try the O4C toolkit and methodology.

The exhibit was valuable for additional visibility and to communicate our findings to the people from the Delfshaven network of citizen initiatives. Our vision for the ODL in Rotterdam is a co-located, co-
owned ODL, which supports an organically changing network of citizen initiatives in an area where similar structured collaborations are already happening. With the interactive exhibit, our aim was to plant the seeds that activists can pick up the O4C methodology and use it in the future in their respective projects. This will yield results only later, but we met real interest and potential leads, that will ensure the continuity.
6 Karlstad

6.1 Preamble: the challenge evolves

6.1.1 Keeping the challenge

From a local to a regional Hackathon

In the first year of hackathon for health the project group focused on targeting health from an individual “wellness” perspective and by involving and working with citizen and citizen based initiatives. During that research phase it became clear to the project group that people primarily concerns were issues beyond wellness. People living in the targeted area in Karlstad addressed the need of access to housing, health care information, employment, safe and sound environment - all socio-economic factors that needs to be addressed on a structural level.

For the second cycle it was a natural step to focus on a regional level and also involving the county council unit for public health planning in the entire O4C process from pre to posthack. The County Council of Värmland is a regional organization with a regional mission that could develop more in terms of public health issues. However, the knowledge of data and open data in particular is one sensitive topic to many health care professionals and analytics. We needed to make the hackathon for health relevant and attractive to them that work within the system and the to the public to be able to bridge the gap between people, practice and research/innovation.

![Figure 33: Welcome to the hackathon](image)

6.1.2 Why a new hackathon

The use of open data in digital public health solutions is obsolete. In light of this issue there are several reasons why a hackathon has needed.

One major reason, and mission, was to hype open data as a possibility for better public health services. What became clear from the first hackathon cycle was that open data as a concept was pretty foreign to many of the stakeholders who where needed to get coherent in order to succeed with bridging the gap between the public sector and the citizens. This also promoter us to get regional stakeholders together in the same room – something that would be made possible with a hackathon methodology. A hackathon would, most likely, help us to promote tools and meting for working with open data.
Another key factor was to get stakeholders interested in working in a quadrupole helix platform, meaning NGO:s, businesses, policy stakeholders and citizens

6.2 Pre-hackathon activities

6.2.1 Meeting and Workshops

Prior to the hackathon, a working group/Planning committee consisting of the County Council of Värmland, Karlstad Innovation Park, the Swedish research institute RISE, the NGO Ett Öppnare Kronoparken and the NGO Överenskommelsen had regular meetings. The planning committee supervised the project managers and supported with research and advice for planning.

The Hackathon challenges was put together through extensive research using both data analyses and interviews with stakeholders.

6.2.2 Identified Data Set

Given the topic, we supplied participants with a wide arrange of datasets. To quantify, we gave access to five public health data bases with over 1 000 different data sets, gave access to four special data-set regarding public health in the region and gave access to at several API:s related to the overall mission.

The data included:

- Data within the Värmland County Council
- National survey of child and youth health - Swedish Public Health Agency (raw data .csv)
- Comparative index data - Karlstad municipality / SCB (raw data .csv)
- Statistics compiled on and young people at the municipal level - Barnombudsmanen (The Child Ombudsman) (raw data .csv)
- National survey on LGBT-rights – RFSL The Swedish Federation for Lesbian, Gay, Bisexual, Transgender and Queer Rights (raw data .csv)
- Sex in Sweden - National survey of sex and reproductive health - Swedish Public Health Agency (raw data .csv) Database data
- Public health data from the Swedish Public Health Agency (database with export functions)
- The National Board of Health and Welfare (database with export functions)
- Kodala - Swedish Association of Local Authorities and Regions (database with export functions)
- Geodataportalen- Swedish Geo Data Portal (database with export functions)

6.2.3 Key Actors

The County Council of Värmland together with Research Institutes of Sweden where still served as project managers, but also in a way as an owner of a specific set of problems related to open data.

The project managers were supported by a working group with people from Karlstad Innovation Park, the NGO Överenskommelsen and the NGO umbrella Ett Öppnare Kronoparken. Additional technical support was provided by Karlstad Makers.
6.3 The second Hackathon Event

Figure 34: Moment of the hackathon

6.3.1 The process framework of the hackathon event

During the hack we worked in teams where citizens, employees from the health care sector, students and companies from the IT and communications business together created prototypes and new solutions.

The process is a method with tools developed by the Danish company Antropologerne and are used by all pilots in the project, so that the results can be compared between them. As last year Hackathon for Health started with a kickoff event! Around 40 excited and curious people took the opportunity to meet to talk about solving societal challenges with the help of digital solutions, starting at Kronoparken.

DAY ONE: INTRODUCTION AND IDEATION

Before the day is over, each team have created a basis for a concept and presented it for the other teams.

DAY TWO: PROTOTYPE AND PITCH

The second day was characterized by prototyping and preparations for the team presentations of their ideation process the previous day.

At 14:45 sharp all the teams were gathered to start their pitches. All the teams were praised by the jury for impressive creativity and fully workable solutions and prototypes.

Figure 35: Tobias Norén — Bacill Productions, Henrik Svensson — the County Council of Värmland, Sandra Eriksson — Research Institutes of Sweden
The assessment grounds for which the jury were asked to base their feedback was:

- **In what way does the team’s idea / concept promote health?** On an individual, group or structural level?
- **Is the concept inclusive and accessible to the population’s various target groups linked to the grounds for discrimination?**
- **How does the team’s idea use existing data sources or does it create or promote open data?**
- **Does the team show an understanding for open data and what height for innovation has the idea?**
- **Has the implementation of the idea / concept been thought through?**

We created five inspiring, conceptual solutions, all about how you can improve peoples’ everyday life and health using open data. The hack has been based upon Open Innovation. This means that everyone involved have had the opportunity to freely go ahead with ideas and networks that were created during the hack.

The work with open data structures and facilitating more open data resources is an ongoing dialogue within the County Council of Värmland. The input from the hackathon has proven very useful in further developing the overall structures for promoting open data within the organization.

Here is a summary of our five cases and the prototypes and proposals for new solutions coming out from Hackathon for Health 2018.

**Team 1**: Let’s talk about sex baby — Sexual health and open data.
**Team 2**: County Council ♥ Civic sector= Open data.
**Team 3**: Happy Street 2.0 — Open data for a prosperous community.
**Team 4**: Instead of the flouride lady — Gamification, open data and new perspectives on oral health.
**Team 5**: More intelligent health — with and for open data // Other perspectives on personalized health services.

### 6.3.2 Hackathon Event data and information

To recruit the right people for the hackathon, we relied on the networks from business, civic and public sector, as well as posters and web-events. We also used different communications channels within the county council.

The datasets for the second hackathon-cycle where curated in the same way as previous hackathon. Beyond the datasets, we also provided a wider variety of data tools through digital case folders. This in order to raise data literacy among participants.

The hackathon venue was Karlstad Innovation Park. As last year, we used this facility to have access both to the networks of our civic and business partners, but also to access the recourses of the maker space.

During the hackathon pitch a jury consisted of a the Innovation Manager for the County Council of Värmland, the Head of Service Labs at Research Institutes of Sweden and the Creative Digital Director for award winning Bacill.
6.3.3 Hackathon Event outputs and results

Team #1: Let’s talk about sex, baby — Sexual Health and open data

Team-challenge: How can we find new ways of collecting, opening up and disseminating data and knowledge about SRHR sexual reproductive health and rights based on current national data collections?

Background: Talking about sex is important — but it may be a bit difficult. Sexuality is also something that is intimately linked with human health throughout life. And it is also a matter of rights. The sexual health is about quality of life and personal relationships, on counselling and health care. While sexual rights include the right of all people to decide on their own body and sexuality. This applies regardless of sex, age, ethnicity, disability, gender identity, or sexual orientation.

Outcome/results: In the mists of the #metoo movement, it has become clear that more needs to be done to address sexual harassment and assault — and one of those aspect is to document the previously unrecorded scale of the problem in hard data. There is fairly good data available about certain aspects of sexual health (e.g., how many have sexually transmitted diseases) but hardly any data related to rights. So by creating a reporting tool, not unlike the tool Harassmap, and connect it to services and support functions we could create a system that both supports the victims of harassment and assault, but also contributes with data to visualize and address the scale and scope of the problem in a geographic area, a workplace or within a community.

![Figure 36: Presenting the outcomes](image)

Team #2: The County Council of Värmland ❤ The Civic Sector = Open Data

Team-challenge: How can we increase the ability of civic organizations and county councils to share, gather and act on open data to co-prevent ill health?

Background: Today there are no routines and systems for how interaction works around data (i.e. statistics or digital information) or on the basis of data. Both the county council and regional NGO:s collect and act on data, not together — even though these actors often work with similar issues and with the same goals. Much could be achieved if they could work better together with creating, using and opening up data.

“Our service gives people a chance to be human. Our idea will fly high given time and if the involved actors have courageous leaders”. Jonas, 27
**Figure 37: Working on the challenge**

**Outcome/results:** The team identified a need for common standards for data on health and a platform that is accessible for ordinary people as well as decision-makers. The idea is to create a digital platform based on common standards and indicators showing data on public health in different angels and perspectives. The ordinary citizens can report in to the system showing data that’s not available today. That would create local data which both the County Council and actors in the civic sector can take locally targeted action.

**Team #3 : HAPPY STREET 2.0 // Open Data for a Healthy Community**

**Team-challenge:** How can we, by using as well as generating open data, create health-promoting community planning and community building?

**Background:** Actors working with public health, have had an increasingly marginalized role in planning, building and organizing society. Similarly, data relating to human health have also had less space in the planning of society.

However, with the opportunities that digital tools provide for collecting and sharing data, there is scope for reintroducing public health as a factor in community planning.

**Outcome/results:** In social planning of Karlstad today, there is much talk about what we DON’T have. The teams idea is providing an app giving the ordinary citizen data in their local community and an opportunity to comment on data — that is not currently available.

> “When I saw my case I thought — hello, this is so far away from what I’m working with. But my knowledge has been used and it was fun to see my ideas used in the film we made” Caisa, 58

The team’s idea is also to provide a holistic view of data: how has data been collected? During a short or a long time? Through survey or deep interviewer? The team compared it to buying a refrigerator when one is getting information about environmental classification, electricity consumption etc. In the same way, they want to classify the quality of data to clarify what the data can show and not show, when it comes to well-being, wellness factors, social networks or sense of community in an area. To make that possible the data must be made available and visualized in common standards.
Team #4: Instead of the Fluoride Lady

**Team-challenge:** How can you collect data and use open data to strengthen Folktandvård’s preventive efforts against children and adolescents?

**Background:** The National Board of Health and Welfare and the Public Health Authority have compiled oral health data from clinics for several decades. Sweden introduced the Fluoride Lady in the beginning of the 1960s - they were dental hygieneists that visited schools and learned children from an early age to brush their teeth, dental care and using fluoride. This public health intervention lasted until 1990s and was compulsory for all students. However, statistics show that children’s and adolescent’s oral health has deteriorated considerably in recent years. Public dental health services needs more behavioural data aggregated locally in order to target children and adolescents at risk with new public health interventions.

**Outcome/results:** The team idea is to generate open data via digital and IRL meetings. Through an application that collects lifestyle data on health among 10–13 year old students. This data can then be used by all actors who work with prevention and health promotion. But also visit schools as back in the days and conduct quiz and fun activities that can engage young ones in their own dental health.

" I learned in this process that in order for us (the public dental care) to develop, it’s essential that we open up our data that is now closed. " Moa, 39

Prior to that the county council and the public dental care should arrange a health hackathon with children to develop the application and then conduct a test business in Värmland. The application is supposed to gather lifestyle data relating to consumption patterns and behaviours. The new idea about this project is that dental health and health are integrated. Today dental health promotion are separate from lifestyle related health promotion.

Team #5 Data Smart Health- For and With Open Data // A Different Perspective on Individualized Health Services.

**Team-challenge:** How can the county council provide better personalized health services by using and creating open data?

**Background:** Data-driven health services are becoming more common. These may include apps and wearables that collect data about exercise, food intake and sleep. But it can also be about help and support in one’s home. Data-driven health services creates new opportunities for health care services, public health work and the individual’s ability to control and understand one’s health. However, today there are no routines and systems for how data, and especially open data, can and should be used in the context of these services.

**Outcome/results:** The team worked with the idea about how we can provide conditions for citizens, to taking responsibility for their own health based, on their needs. The team presented an idea about a digital platform linked via the 1177.se (national health guidance) API. Users can create a profile and get specific tips and advice about their health, find others and ask questions to experts available through the platform. Users choose if they want to share their personal health data for more individual feedback on exercise, lifestyle etc. This type of user generated data can provide a different dimension of what citizens need for a preventive response to be successful.
6.4 The Post-Hackathon: Development and Testing

6.4.1 From Hackathon event’s achievements to post Hackathon activities

This has been a challenge. There is a structural challenge in implementing open data as concept and culture in an organization where data privacy is law. There is an inherent reluctance of addressing the status quo on data usage, public sector information and transparency. Statistics is primarily used as a tool for the organization, not as a resource to be used outside of the organization. It should be stressed that this is not in any way malice, but rather symptom of a management and organizational philosophy built on security.

Implementing the results from Open4Citizens has hence been quite challenging. The process has not been thwarted in any way by the County Council, but the lack of knowledge and policy to support open data as a concept and tool has halted both the O4C-team, the hackathon out-out and the hackathon process itself.

6.4.2 Towards the OpenDataLab

xKRP is already in place as a datalab structure to support open data use in the region. Community Experience Data Lab Kronoparken (xKRP) is a conceptual and mobile open data lab spun from the O4C-approach. It is focused on developing, testing and evaluating visualization, interaction and use of data where the local community is the end user. A concept where data-based products, services and processes has a focus on collective use, social services, community development, gender equality and diversity. xKRP is a cooperation between civil society, business, public sector, research institutes and academia and based on the overall idea and methodology of Open 4 Citizens.

xKRP has the opportunities to position itself as a national testbed for data-driven innovation and community values. The Research Institutes of Sweden include xKRP in its list of demonstrations facilities, and has stressed the need to empower citizens as a port of our mission. xKRP also has opportunities to expand (or move) its resources and base to other regions or urban areas in Sweden, discussions which are currently ongoing.
7 Milan

7.1 Preamble: identifying a new challenge for the hackathon experience

7.1.1 From transparency in urban transformation to migrants support

After the 1st hackathon cycle and the recommendation of the reviewers to keep the hackathon challenge/domain within the framework of the second cycle, the Polimi team made several attempts to develop a new challenge within the general issue of Transparency in urban transformation. Initially this appeared as an easy task due also to the positive effects of the first hackathon cycle but slowly it appeared more and more complex due to the absence of any digital infrastructure in the management of urban transformation related procedure and also to the resistance of some offices. The proposal made to some officers to have an hackathon internally to the Municipality with the urban management offices for the identification of easy solutions towards the creation of databases to monitor and observe urban transformations was no longer considered by the municipal managers and no real attempt was made by the managers to develop a deeper collaboration. In the meanwhile the completion of disclosure of the data sets made available for the hackathon was carried out together with the development of the winner application.

The Polimi team looked for another challenge to adopt for the second hackathon cycle to be coherent with the issue of transparency. As reported in deliverable 1.7, the problem of public housing was identified as relevant for transparency as well as for the relevance of the issue in the city of Milano. Within this perspective the Polimi team has organized many meetings with different actors: the manager of the municipal office for public housing, the public company managing the municipal housing stock, the company supplying maintenance and electricity/water services to the public housing stock. In the table below the list of the organized meetings.

<table>
<thead>
<tr>
<th>Date</th>
<th>Type of Meeting</th>
<th>Participants</th>
<th>Main achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>Round table</td>
<td>Milano municipality (Staff of Alderman Lipparini)</td>
<td>define the area of the challenge</td>
</tr>
<tr>
<td>November</td>
<td>Explorative meeting</td>
<td>MM director (the authority for Public Housing) and the Alderman Lipparini</td>
<td>ERP (Public Social Housing) data disclosure</td>
</tr>
<tr>
<td>November</td>
<td>Explorative meeting</td>
<td>Member of innovative urban agencies and some data owner (water) and the Alderman Lipparini</td>
<td>Shift to other genera services issues in the city</td>
</tr>
<tr>
<td>December</td>
<td>Round table</td>
<td>Milano municipality (Staff of Alderman Lipparini)</td>
<td>Definition of the challenge on services for migrants</td>
</tr>
</tbody>
</table>

Table 18: Overview of the pre-hack activities looking for a new challenge.

At the same time the Polimi team contacted some Private Foundations supplying support services and/or funding to facilitate access to house rights. All the attempt conducted in this respect had no real result: data, whatever data, on housing appear to be difficult to be made available for several reasons:

- access to public housing is a very contested issue and this does not facilitate data disclosure;
- a large part of the municipal stock is in bad conditions and cannot be made available and the public administration does not accept this reality to be clearly demonstrated through data;
- in this domain, data is considered a strategic resource as it is the main source for
Foundations to maintain their power and image at the city scale. The main attempts done in accessing data by disclosure produced a clear set of related challenges to populate the chances for the hackathon. Citizens using public housing services have a long list of needs which are all related to transparency: to have a transparent management of the access priorities assessment; to have a clear and transparent information of electricity and water consumption that they are charged for; to have access to commercial spaces at the street level of public buildings which are, in enormous quantity, empty and closed. All these (sub)challenges could have been relevant and consistent with an hackathon event but all have the nature of “data oriented” challenges and the total lack of data did not allow to continue.

When also the housing challenge did not produce any relevant result (august in the pre-hack phase, the Polimi team decided to look for a different challenge to embrace: one of the contested issues in the most recent national political discussions in Italy is related to the immigrants’ integration and their path towards a full citizenship.

7.1.2 Why an hackathon
The number of associations and groups volunteering for immigrants support is the measure of their needs. Most of these associations and public offices work in reducing the distance between immigrants and urban services which are hard to access for several reasons: complexity of the bureaucracy, high complexity of ad hoc norms, not yet friendly language. Immigrants services are very complex and working in the direction to facilitate their accessibility to their users appeared a very good challenge for the Milano pilot.

The main characteristic of this new challenge appeared immediately the reversed condition with respect to data: data in this challenge does not represent the target of the challenge rather a resource to improve the service quality and accessibility for immigrants. Solutions are needed to use data to produce ideas for reducing the gap and making services closer to immigrants life: a good challenge for an hackathon.

A survey carried out in October 2017 shows that the 11.4% of the Lombardia region population is of immigrants. They represent the 22.6% of immigrants in Italy. Milano hosts the 39.2% of the regional immigrant population and the most of them is living there with legal permission, i.e. with citizenship rights. A large number of associations and public institutions work to support their presence in the municipal reality: either when they have full citizenship rights or when they are refugees and demand for protection. Their needs vary from very basic when they have just arrived to very specific ones when they have full citizenships.

Also the second hackathon cycle was structured in Milano according to the agreed scheme of Pre-hack, Hack and Post-hack. At a high level, these phases entailed the following activities:

- **Pre-hack (start October 2017 – end February 2018):** user elicitation and stakeholder interviews, to have an initial understanding of the problems at hand and challenge specification; identification of available open data, data set discovery and creation, data
disclosure.

- **Hackathon Event (10-11 March 2018):** a two-day event in which the challenge was tackled by groups of participants based on open data sources and needs specification documents.

- **Post-hack (start April 2018):** mainly dedicated to the solution development into a service integrated in the municipal environment (still going on at the time this document is being written).

### 7.2 Pre-hackathon activities

#### 7.2.1 Towards a clear challenge

Challenges related to immigrants are many, diverse, highly complex and depend extremely on the citizenship/right conditions immigrants experience: they may be under 18 without parents, they can be asking for asylum, they can be refugees, they can be temporary resident in the city, they can be “irregular”. For any of these conditions, there are needs to be responded and many refer to services access. Even when immigrants are in “irregular” conditions there are services that are supplied for them to have a decent life but they should know, should be informed about these. A large offer of support is offered by volunteers’ associations and organizations that represent bridges between them and the existing services.

Large part of the pre-hack activities has been carried out to select among the several challenges and needs some (a couple or three) having also a critical link with data. In these pre-hack experience data did not represent the main target rather a sort of constraint: a challenge could become significant for the open4citizens experience not only in relation to its real criticality for the citizens but also for its ability to activate data use.

In the table below you can find a list of the meetings carried out, the participants, and the main achievements.

<table>
<thead>
<tr>
<th>Date</th>
<th>Type of Meeting</th>
<th>Participants</th>
<th>Main achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2017</td>
<td>Explorative meeting</td>
<td>- Croce Rossa Italiana - Politecnico di Milano</td>
<td>Understanding of main needs by migrants demanding asylum</td>
</tr>
<tr>
<td>Oct/Nov 2017</td>
<td>Short interview</td>
<td>Naga</td>
<td>Understanding of the specificity of each agency-institution and problems they are facing</td>
</tr>
<tr>
<td>Oct/Nov 2017</td>
<td>Short interview</td>
<td>Croce Rossa Italiana</td>
<td></td>
</tr>
<tr>
<td>Oct/Nov 2017</td>
<td>Short interview</td>
<td>Fondazione Don Colmegna</td>
<td></td>
</tr>
<tr>
<td>Oct/Nov 2017</td>
<td>Short interview</td>
<td>Caritas Ambrosiana</td>
<td></td>
</tr>
<tr>
<td>Oct/Nov 2017</td>
<td>Short interview</td>
<td>Istituto Martinitt</td>
<td></td>
</tr>
<tr>
<td>Oct/Nov 2017</td>
<td>Short interview</td>
<td>Fondazione casa del Giovane la Madonnina</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Participants</td>
<td>Notes</td>
</tr>
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<td>------------</td>
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<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>13/12/2017</td>
<td>Focus group</td>
<td>Social workers [Naga: Fabrizio Signorelli (Medico/Direttore sanitario); Fondazione la Madonnina: Giorgio Pacchiarini (Direzione); SPRAR (richiedenti asilo) – Comune di Milano (Caritas) – Sede Di Via Sammartini: Umberto Galli]; Avvocato Paola Regina (Human Rights attorney)</td>
<td>- Data Experts from the Municipality [Responsible: Arch. Bruno Monti, Unità SIT e Toponomastica, Comune di Milano (assente)]</td>
</tr>
<tr>
<td>16/01/2018</td>
<td>Detailed interview</td>
<td>Centro Culture del Mondo, Comune di Milano [Stefano Montrasio, Giulia Piccinno, etc.]</td>
<td>Identification as a scope of work, the creation of services, tools and apps, intended to intercept and guide the migrant that passes from the minor to the age of majority</td>
</tr>
<tr>
<td>24/01/2018</td>
<td>Detailed interview</td>
<td>Centro Culture del Mondo, Comune di Milano [Antonella Colombo, Maura Gambara]</td>
<td>Identification of the definitive focus of work around the theme of family reunification; Identification of the subject that will take the management of the service in the Centro Culture del Mondo</td>
</tr>
<tr>
<td>25/01/2018</td>
<td>Service jam</td>
<td>Social workers [Fondazione la Madonnina: Giorgio Pacchiarini; SPRAR (richiedenti asilo) – Comune di Milano: Umberto Galli-Colombo (assente); Centro Culture del Mondo, Comune di Milano: Stefano Montrasio, Giulia Picinni (assente)]</td>
<td>Data Experts from the Municipality [Responsible: Arch. Bruno Monti, Unità SIT e Toponomastica, Comune di Milano (assente)]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service Design Expert [Data and innovation policies: Ilaria Vitellio, Ondata; Service Design: Giuseppe Salvia, Davide Spallazzo, Politecnico di Milano; Social studies: Giuliana Costa, Sociologa Urbana, Politecnico di Milano]</td>
<td>O4C Research Group [Grazia Concilio, Anna Moro]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- O4C Research Group [Grazia Concilio, Anna Moro]</td>
<td>Identification of the main criticalities of the bureaucratic procedures for migrants</td>
</tr>
</tbody>
</table>

Table 19: Overview of the pre-hack activities.
During the several meetings held with the contacted organizations and municipal offices, some specific challenges have been identified:

- give information and directions about rights and duties, supporting new comers
- support access to services conceived by age
- support specific category, for example pregnant woman and new mothers to find services in town
- support young migrants when they change their status from under 18 to elders, losing many benefits and protection
- structuring the access to medical cure and assistance for migrants, and in particular for some irregular, to achieve the correct contacts and paths to reach it
- support the networking between existing services in town and make them more accessible by migrants

Each meeting was conducted in a way that could enable the exploration of data possibly useful in responding to specific discussed need. During each meeting specific need and possible solutions were discussed with the support of service idea cards collected along the pre-hack so to keep the discussion well rooted into the search and exploration of solutions.
Each meeting also included discussions on data: the main questions referred to environments where data could be available although not in an open format and where to make them available in open format. This discussion contributed also to the official making of the Municipal OpenData portal and to the opportunity to create there a space for not official/certified data made open for specific initiatives (the discussions became part of the ODL creation).

While the pre-hack activities where carried on, a meeting was organized with the Municipal Centre for Foreign Culture: the meeting was aimed at verifying a list of possible challenges identified during the previous work in order to guarantee the office could become responsible for the eventual app/service being proposed and implemented in the second hackathon cycle. The long list of challenges discussed with them drove to the selection of one of them as crucial for the Municipality and the Prefecture together: supporting immigrants in completing the bureaucratic procedure for familiar reunion. This procedure is tremendously complex and high risky for the immigrants: only a limited percentage of those starting it achieve its completion successfully. It has several critical points, involves different administrative institutions and requires immigrants perfectly know the procedure and control its update.
This procedure is starting to have a strategic political role in Italy and especially in Milano as the most important for its value in making the key integration policy of the city. The Prefecture is the administrative institution responsible for it and the municipality is the key supportive organization for immigrants willing to call for familiar components.

The complexity of the procedure is demonstrated by the fact that the two offices together have developed a guide to the procedure for the operators who give their support to immigrants as well as a simplified guide has been developed for immigrants to deal with it.

The selection/definition of the final challenge was made: simplifying and facilitate the procedure walkthrough to immigrants. This choice was strategic to gain two fully committed institutions to become owners of the hackathon solutions as well as to be the promoter of the last pre-hack activities. A new meeting was organized having a service jam form and mainly exploring the critical difficulties and criticalities the immigrants face during the procedure. The meeting also allowed the identification and scanning of all the data potentially useful to be provided to immigrants to facilitate them the completion of the procedure. Also in this occasion it appeared clear that data played a different role in this second hackathon: data, open data, more and more represented the resource to improve the quality of a service rather being the target.

The pre-hack activity enabled the creation of an ecosystem made of different actors belonging to different institutions:
1.3.2 Key Data collection

Data sets selected to improve the quality of the service are:

a) Overseas Italian Embassies
b) Overseas Italian Consulates
c) Local sellers of tax stamps (such stamps are needed on official documents as tax payment)
d) Milano schools teaching Italian to immigrants and Provincial Centers for Adult Education (CPIA)
e) Trade unions and patronage offices of the municipality of Milan
f) Trade unions and patronages offices the Milan Metropolitan Region
g) Local offices of citizens registry services
h) Local offices for housing and urban certificates
i) Local post offices

These data sets have been created by scraping and collecting them from official web sites. They have been made available online at the following list of links as well as made available on the municipal OpenData Portal ([http://dati.comune.milano.it/hackathon2018](http://dati.comune.milano.it/hackathon2018)).
Table 20: List of the hackathon data sets.

<table>
<thead>
<tr>
<th></th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td><a href="https://docs.google.com/spreadsheets/d/1Rs11d6R-Pe8p7YJWWbQFkcnvUQONn8mXh_Ue6Bo/edit?pli=1#gid=2030060464">https://docs.google.com/spreadsheets/d/1Rs11d6R-Pe8p7YJWWbQFkcnvUQONn8mXh_Ue6Bo/edit?pli=1#gid=2030060464</a></td>
</tr>
<tr>
<td>B</td>
<td><a href="https://docs.google.com/spreadsheets/d/1Tx_oxvE6GZqkVCjn7abXzeGLZ2BT9X_B_hOIQDQmVCQ/edit?usp=drivesdk&amp;pli=1">https://docs.google.com/spreadsheets/d/1Tx_oxvE6GZqkVCjn7abXzeGLZ2BT9X_B_hOIQDQmVCQ/edit?usp=drivesdk&amp;pli=1</a></td>
</tr>
<tr>
<td>C</td>
<td><a href="https://docs.google.com/spreadsheets/d/1UbhCyX4DRnkI7ZL4YenuV2QPWO7nU76sGhLRV6KPAK/edit?usp=drivesdk&amp;pli=1">https://docs.google.com/spreadsheets/d/1UbhCyX4DRnkI7ZL4YenuV2QPWO7nU76sGhLRV6KPAK/edit?usp=drivesdk&amp;pli=1</a></td>
</tr>
<tr>
<td>D</td>
<td><a href="https://docs.google.com/spreadsheets/d/1yuQiQ3EAXZr9agEDlxQ2zUs5wrdksqDQA_xDLSReQ/edit?pli=1#gid=321672970">https://docs.google.com/spreadsheets/d/1yuQiQ3EAXZr9agEDlxQ2zUs5wrdksqDQA_xDLSReQ/edit?pli=1#gid=321672970</a></td>
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<tr>
<td>E</td>
<td><a href="https://docs.google.com/spreadsheets/d/1BWSQMs_SPAuE8FPBXX0i6GZqkVCjn7abXzeGLZ2BT9X_B_hOIQDQmVCQ/edit?usp=drivesdk&amp;pli=1">https://docs.google.com/spreadsheets/d/1BWSQMs_SPAuE8FPBXX0i6GZqkVCjn7abXzeGLZ2BT9X_B_hOIQDQmVCQ/edit?usp=drivesdk&amp;pli=1</a></td>
</tr>
<tr>
<td>F</td>
<td><a href="https://docs.google.com/spreadsheets/d/1v0j8ynf2xvq8kqhsHhcKvYJK7O0FdqyCPC-JV0jmoY/edit?usp=drivesdk&amp;pli=1">https://docs.google.com/spreadsheets/d/1v0j8ynf2xvq8kqhsHhcKvYJK7O0FdqyCPC-JV0jmoY/edit?usp=drivesdk&amp;pli=1</a></td>
</tr>
<tr>
<td>G</td>
<td><a href="https://docs.google.com/spreadsheets/d/1dwpzyKozFnaomp9-ucyiQfBVDly6Km1_JDRS2o1W0/edit?usp=drivesdk&amp;pli=1">https://docs.google.com/spreadsheets/d/1dwpzyKozFnaomp9-ucyiQfBVDly6Km1_JDRS2o1W0/edit?usp=drivesdk&amp;pli=1</a></td>
</tr>
<tr>
<td>H</td>
<td><a href="https://docs.google.com/spreadsheets/d/1YwH6jZGmMnesKlwBGqew2FP_XElIeB6J2tsV2uxnY/edit?usp=drivesdk&amp;pli=1">https://docs.google.com/spreadsheets/d/1YwH6jZGmMnesKlwBGqew2FP_XElIeB6J2tsV2uxnY/edit?usp=drivesdk&amp;pli=1</a></td>
</tr>
<tr>
<td>I</td>
<td><a href="https://docs.google.com/spreadsheets/d/1E-eiwsEhmvbMO0TQZ36v221MZPTUzr5AhXqPheYzL/edit?pli=1#gid=0">https://docs.google.com/spreadsheets/d/1E-eiwsEhmvbMO0TQZ36v221MZPTUzr5AhXqPheYzL/edit?pli=1#gid=0</a></td>
</tr>
</tbody>
</table>

The preparation of these data sets enabled a new experience in resistance in data disclosure from Public Administrations.

“The data tables are components of our website and cannot be disclosed!” This was the answer given by Farnesina (the Italian Ministry for Foreign Affairs) to the organization team of the II hackathon held in Milano within the framework of the Open4Citizens EU project. The team was working for creating the open data resources for the ideation of ICTs solutions to ease the access of complex bureaucratic procedures to immigrants in Milano; and was looking for the open data version of the list of Italian Embassies all over the world. No way to find such a data set available on any of the possible official ministerial web sites, not even on www.dat.gov.it. No way! Therefore the organizational team sent an e-mail to the Farnesina asking for a ready to use table in any open data format in order to avoid a boring data scraping work.

The answer came soon from the press office of the Farnesina:

“Dear user,

We are sorry but we cannot follow up on your request as the tables are components of our site and as such cannot be disclosed. These data are however available on the Farnesina website.”

Those data are not private, not a property of any specific individual, and even less
of the Ministry. Those are public data. It makes no sense to do a script to download such a dataset. But, this is exactly what we did.

This story is true; it is not a fantasy story. It supplies the measure of the resistance we can still experience in data disclosure from public institutions in Italy; the measure of the unreasonable lack of orientation to the sharing of a common good, a common resource widely recognized as a driver to innovation, as an opportunity to an open government.

7.3 The second Hackathon Event in Milan

7.3.1 The process framework of the event

The hackathon was organized in collaboration between Politecnico di Milano, Department of Architecture and Urban Studies (DASTU), and Comune di Milano - with the political support of the Alderman in charge of participation and open data and the preparatory work of various City departments in charge of data collection, management and utilization as specified here above.

As already underlined the POLIMI team was also supported by the not-for-profit association Ondata (http://ondata.it), holding sound experience in this kind of events, that provided a team of experienced mentors.
The hackathon event was held at the Politecnico di Milano on March 10-11 2018 and was fully organized by the POLIMI team of O4C in cooperation with OnData.

- Registration and participant management by Eventbrite
- Launch and communication by Facebook/Twitter + O4C, POLIMI and Comune di Milano web portals
- Hackathon rules made known since the launching stage and made available in Eventbrite

To drive the event we did the following:

- **Set the agenda.** The agenda of the hackathon, with the details of all the sessions that made up the event, was shared within the framework of the call and also given to the participants as part of their welcome package, right after registration. Actually a draft of it was already shared at the launch of the hackathon event call through the Eventbrite tool;
- Prepare the detailed description of the challenge with the specific analytical considerations developed during the service jam activity carried out a couple of weeks earlier;

Figure 45: The hackathon event agenda

Figure 46: The challenge description
Figure 47: The personas to describe the difficulties in procedure completion

Figure 48: The “need” explaining the challenge: make the procedure architecture clear
BISOGNI - Esplicitare i tempi

**Descrizione**
La richiesta dei molti documenti, le prenotazioni da fare, il fatto di dover attivare la procedura anche all’ultimo rispetto alla persona da ricongiungere genera diversi rami e sottoprofili che hanno tempi di realizzazione e scadenze proprie; alcune sono successive una all’altra, altre sono da attivare in contemporanea.

**Requisiti**
- MOSTRARE LE LINEE TEMPORALI DELLA PROCEDURA E DELLE SOTTOPROCEDURE SUI UN’UNICO DIAGRAMMA TEMPORALE CHE PERMETTA DI CAPIRE CHE COSA SI SOVRAPPONTE E COSA E CONSEQUENTE
- EVIDENZIARE I MOMENTI CRITICI, LE “CONSEGUENZE” DA NON MANCARE
- ...

**Esempio all’interno delle guide**
Sono molti i punti in cui si possono sovrapporre procedure; ad esempio sembra importante chiarire quando/quali documenti debbano essere presenti all’estero.

**Figure 49: The “need” explaining the challenge: highlight the time constraints**

BISOGNI - Garantire comprensione dei prerequisisti

**I documenti e i passaggi da realizzare per portare a termine la procedura si differenziano rispetto alle molte fattispecie che si possono presentare. Le guide ad oggi realizzate evidenziano in modo più immediato due principali linee di profiloazione: chi fa richiesta / chi si vuole ricongiungere. In realtà la profilazione risulta essere più ampia.**

**Requisiti**
- AMPLIARE IL RANGE DELLA PROFILAZIONE
- RENDERE EVIDENTI TUTTI I PROFILI IN UNA FASE ANCORA PRELIMINARE RISPETTO ALL’AVVIO DELLA PRATICA
- ...

**Esempio all’interno delle guide**
In particolare emerge nel corso della redazione dei documenti che altre variabili orientano il percorso, ad esempio rispetto ai:
- tipo di impiego
- reddito
- ...

**Figure 50: The “need” explaining the challenge: guarantee the understanding of prerequisites**

- Prepare the presentations for the introductory session of the event;
- Set up the hackathon working spaces including the room and utilities chosen to overnight;
- Organize everything for lunches and coffee;
- Prepare the templates for the evaluators’ work.

The most important thing we considered relevant for driving the event has been the opening session of the event during which the municipal alderman on open data, the manager for social emergency, and the manager for data integration, all from the Municipality of Milano, clearly supported the challenge as relevant from different points of view for the municipality and the local, large community of immigrants. A part the opening session carefully planned before the event, the team
work has not been planned but teams have been left free to develop their work autonomously under the “on-demand” guidance of the Hackathon Event’s mentors.

7.3.2 Hackathon Event data and information

The service4migrants coding marathon took place on March 10-11, 2018. The event was organized at the premises of Politecnico di Milano and endorsed by the City Alderman for participation and Open Data and supported by the municipal manager of Social emergency, and by the prefecture manager responsible for the familiar reunion procedure. The hackathon advertising started about 20 days earlier on Eventbrite with tickets made available for three different categories of participants:

- creative designers, ICT developers, communication professionals;
- public officials, and
- migrants

Two days before the event, registered participants received the challenge description resulting from the pre-hack phase and a package containing the new data made available “ad hoc” by the hackathon organization team. 60 people registered for the event but only 25 were attending it (18 men and 7 women) and divided into 5 teams, mostly belonging to the first and third category of participants. Some participants registered with a clear intention to be a team (3 teams); others had to create or join a team before starting the work (2 teams).

Many participants, especially those already set in teams, started working even before the event and came with early ideas for possible solutions. The participants attending without a team started to cluster considering mainly the complementarity of competences and eventually considering the available support of the mentors’ team.

A special team was made of a group of immigrants from Ecuador, some having gone through the procedure in the past. They appreciated very much the hackathon initiative also demonstrating an important integrated commitment between several institutions like service4migrants.

Also a group of 3 experts on open data and users’ interface design by onData have been working as mentors along the whole event duration to:

- assist the development teams in addressing whatever need was arising
- discuss emerging ideas and assess the resulting scenarios
facilitate the interaction with the experts of the procedure to achieve clearer elements for the immigrants to deal with it.

The five teams:
- Team #1: Unio
- Team #2: 4Mi
- Team #3: EquaMi
- Team #4: Brainstorm
- Team #5: Teamballo

The following resources were in place in Milan. The event was dimensioned to guest between 40 and 60 expected participants:

<table>
<thead>
<tr>
<th>Event production assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Venue, classrooms of POLIMI at first floor with tables, chairs (papers, post it sets,</td>
</tr>
<tr>
<td>pens, large paper sheets and tape available on each table)</td>
</tr>
<tr>
<td>- Corridor in between the classrooms infrastructured with tables for buffets</td>
</tr>
<tr>
<td>- One large room at the same floor for overnight</td>
</tr>
<tr>
<td>- Projector and large screen for presentations</td>
</tr>
<tr>
<td>- Coffee, drinks and sweet snacks for 3 breaks (delivered early morning on day 2, and</td>
</tr>
<tr>
<td>each afternoon of day 1 and 2) + two lunches + one dinner</td>
</tr>
<tr>
<td>- Beers and savoury snacks, for networking cocktail party at the evening of the second</td>
</tr>
<tr>
<td>day</td>
</tr>
</tbody>
</table>

**IT assets**
- High-speed WIFI connection
- Laptops and team screens supplied by participants

**Methodological assets**
- Scoping Matrix, with the challenges, datasets and groups clearly stated out and validated
- Colour printouts of all the service idea cards
- Colour printouts of the 2 procedure guides

**Personnel**
- 3 hackathon facilitators (OnData team) available for the entire duration of the hackathon |
  event; 4 procedure experts available during day 1
- 1 POLIMI person fully dedicated to communication (Facebook, twitter and Flickr)
- 5 POLIMI persons as staff team (one of them fully dedicated to data gathering for the     |
  evaluation)

<table>
<thead>
<tr>
<th>Description</th>
<th>Costs (euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and drinks</td>
<td>2.750,00</td>
</tr>
<tr>
<td>New mattresses</td>
<td>100,00</td>
</tr>
<tr>
<td>Prizes</td>
<td>6.000,00</td>
</tr>
</tbody>
</table>

Table 21: needed resources.

Costs are showed in the table below.

Most of the materials and tools acquired for the first hackathon was used during the second one.
7.3.3 Hackathon Event outputs and results

At the end of the two days, 5 mock-ups have been presented in a pitch mode to a large public made of participants, participants friends, municipal officers, participants of the pre-hack phase and the evaluators.

The evaluation team was made of the following components:

- Prof. Antonio Capone, Politecnico di Milano
- Dott.ssa Donatella Cera, Prefettura di Milano
- Assessore Lorenzo Lipparini, Comune di Milano
- Prof. Nicola Morelli, Aalborg University
- Dott. Cosimo Palazzo, Comune di Milano
- Dott. Giuseppe Sindoni, Comune di Milano
- Dott.ssa Rosanna Sucato, Comune di Milano
- Dott.ssa Ilaria Vitellio, onData, Napoli

The evaluation team has been provided with the following evaluation table

<table>
<thead>
<tr>
<th>Criteria (1-3)</th>
<th>Unio</th>
<th>4Mi</th>
<th>equaMi</th>
<th>Brainstorm</th>
<th>TeamBallo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear response to the challenge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovativeness of the idea (existence on the market)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovativeness of the graphical language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of available and new open data sets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of open source software</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation planned with open source software</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovative use of digital technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective user interface and user experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multidisciplinarity of the team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relevance for the PA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 23: Criteria table for the jury
The participant teams produced the following projects:

**Unio**
The applicant defines and understands, step by step, his own path of family reunification through simplified wizards and information tools. The platform stands as a real personal assistant along entire process: informing on the suitability of the applicant to start the procedure, providing information on the production and delivery of documents, helping in completing online forms, indicating the contact details of the offices and the relevant bodies.

**4Mi**
The platform is an open source project: all the data used and the technologies with which the platform will be implemented are free and open. The aim is to provide a guide that simplifies the bureaucratic and non bureaucratic practices that the migrant faces during his stay in the country. Initially the application will implement the "Family reunification" wizard and through this, the migrant will be guided through the steps customized according to his situation (user-specific).
equaMi
A platform that shows and explains the steps to follow in order to a family reunification, shortening the distances between the foreign community and the public administration. It is a dynamic way to support migrants: a model that can be adapted to different places and users and that connect in a simple way users and the institution.

Brainstorm
HiNoi wants to make this procedure as simple and innovative as possible. The user is followed during his bureaucratic process: first he is profiled to understand if the requirements of the procedure are satisfied, then a dynamic and personalized path is created, organized by step on a timeline that can be shared even with relatives abroad. It is a model that can be exported and also tool that works for different profiles: articulated for migrants and mediators.

TeamBallo
Development of a guide for family reunification that is simplified, personalized and intuitive, using data in a conscious way to provide useful and specific information. Every single user will be profiled through a simple interactive questionnaire, based on gamification.

The prize ceremony took place 10 days later during the “Milano Marketing Festival”, on the 21th of March, with the event entitled “Milano Open per l’innovazione sociale. Premiazionedell’hackathon Services4Migrants promoted by the Milan Municipality and Politecnico di Milano within the Open4Citizens project”, after a deep analysis of the two proposal by the evaluators. The reason for this delay was decided by the POLIMI team to achieve a more effective evaluation of the two technical/design solutions especially with respect to their potential effectiveness in supporting immigrants. The two finalist team have been asked to present their solutions again at the event of the Milan Marketing Festival.
7.4 The Post-hack: development and testing

7.4.1 From Hackathon event’s achievements to post Hackathon activities

The Hackathon event was finally extremely positive since it generate a potential real and very concrete solution to a quite important criticism with the public administration services, dedicated to an extremely fragile category of users, through a better use of open data.

What happen since then, was the emerging of a new and different “challenge”. We need to organize a very functional group of work, made by many different stakeholders, such as the winning hackathon team, the Polimi O4C researchers, the Opendata group, expert and political representative of different Municipal Sectors, the Milan Prefecture, technicians who could manage the final output as a service, etc.

We organize two different moment/group of work with different roles:

- a direction group who shared main decisions and define the frame and the feasibility of the activities
- an operative group to realize an effective tool.

With a first meeting (Polimi, Municipality, Prefecture), on the beginning of April in the offices of the Milan Municipality Social Services department, we define the frame, the objectives, the role of partners, and the ownership and management of what was to develop as a service within the public administration shared with the Milan Prefecture.

Then we had a first operative meeting, at the end of April, with a large number of participants (8 people from the Municipality, 1 form the Prefecture, 2 Ondata, 3 O4C, and the team winner – Teamballo), where we organized the work and a calendar of meeting, and a deadline to close the project (mid-September 2018).

At the beginning of May we had another coordination and alignment meeting with the focus on ownership issues and with a check-up moment on the work of the team. Now we are following the work with a meeting each 2/3 weeks.

The result of this design activity will be a service integrated within the Municipality procedures, a web app and mobile app too, managed and updated by the Municipality and the Milan Prefecture together.
The application will support the “Family reunion” procedure for the city of Milan, but could be implemented to make more usable and functional many other web/on line services in the Social Services Area of the Milan Municipality. The application could be also further revisited for similar Familiar Reunion procedure in many other cities in Italy and even abroad (in Europe).

7.4.2 Towards the OpenDataLab

The Milan ODL

The two hackathons are to be considered as preliminary activities of the new borning Open Data Lab of Milan.

From summer 2017 The 04C PoliMi group and the Aldermann Lipparini Staff (Milan Municipality) start to reflect and design the feature of the Milan ODL.

We shared the general frame and aim since the beginning, but decide in the last meetings to have a lighter protocol between the two main institutions (Politecnico di Milano and Milan Municipality) open to cooperate with many partners.

THE STRUCTURE AND THE PARTNERS

Our next tasks shared with the Municipalities are
1. To sign the first general Agreement to institutionalize the ODL as a collaboration between the Milan Municipality and Politecnico of Milan
2. To produce a “Manifesto” defining the mission and the objectives
3. To define the first year activity program
4. Continue to organized explorative meetings to find potential partners
5. To write a cooperation protocol for partners
6. To study how to collect founding

DATA@TERR Lab at Politecnico of Milan

Figure 55: General structure and potential partners of the Milan ODL
In the meanwhile as researchers, we have work in these months in a parallel project, which see the cooperation among different Departments and pre-constituted group of work of Politecnico di Milano, around the binomial “Data and Territory”. The survey led us to meet many other colleagues working within this field with very different but complementary approaches.

Meeting an “internal call” for interdisciplinary group within our university, by the Rector of Politecnico, we managed to organize those different approaches within on unique group, called DATA@TERR Lab.

The aims of the Lab are for now to share research questions around Data and territory at the border of different domains, to investigate new potentialities in those borders, to generate news occasion of cooperation.
8 Conclusion: an interpretative overview of the O4C hackathon experience

In the Open4Citizens project we explicitly aimed to explore the potential of the hackathon as a format to play a role in the empowerment of citizens to make sense of open data as a resource. Supplementing the first hackathon report D3.4, this report has richly detailed the different efforts going on in each pilot with all the diversity this have implied; as we all took point of departure in the rich and varying contexts the pilot teams were - and are - embedded in.

Outcomes and analysis in the shape of conclusions and recommendations are described in the series of final deliverables due at the end of the project; notably the D2.1 Best Practices report, D1.5 Concept Definition, the D2.5 Citizen Data Toolkit, D4.4 The Open4Citizens Scenarios as well as the D4.8 Open4Citizens Policy Briefs and the D4.10 Open4Citizens Business Models and Sustainability plans. However, to supplement the qualitative narratives contained in this report, we offer a section of reflection and analysis that crosscut the experiences of the 5 pilots on a more abstracted level.

The aim of this chapter is to provide an overview of the O4C hackathon experience based on received replies to a short survey, which was filled in by at least one representative of every project partner at the end of the respective 2nd round of pilots (see Annex 1 to the present deliverable). The focus of the survey was mainly set on the progress – or learning – achieved in comparison with the 1st round according to a variety of analytical dimensions, thus providing room for critical assessment and valuation of the efforts we’ve engaged while experimenting the hackathon format. We examine the rationale for duplicating or multiplying this type of events in the future.

8.1 An internal survey

Before launching the internal survey, in the beginning of 2018, an interpretative framework based on six analytical dimensions was designed and shared with the partners by a dedicated teleconference. The framework is displayed in the following picture, which particularly highlights the iterative nature of the learning process and, as a consequence, of its evaluation. In fact, the reporting and discussion of the responses received will follow the same order as in the picture, starting from “Justification” and ending with “Sustainability”.

![Figure 56: The O4C hackathons’ interpretative framework](image-url)
Before analysing the six dimensions, one can note the following. In the above representation, three of them belong to an “Inside Out” perspective. This means that the respondents were asked to dig into the current and past experience of the 2 rounds of hackathons, to “extract” arguments, interpretations and qualifications of the work already done. This method was applied to explore more in-dept the interpretations of the O4C model as proposed in the DoA in order for us to contribute to the continual definition of what ‘a hackathon’ is understood to be.

The other three dimensions presented in the picture on the right-hand side belong to the so called “Outside In” perspective. This means that the respondents were asked to look at the evidence of post-hackathon results and draw conclusions in terms of the salient characteristics of those events, which may affect their further replication over time, particularly in the context of the emergent OpenDataLab configuration and network (NOODL.eu). In that regard, we wanted to explore how the progress and learning achieved between the 1st and the 2nd round of hackathons affected the three dimensions on the right-hand side – but also, as a feedback loop, those on the left. Therefore, a final group of survey questions invited the partners to reflect on the visible connections/emergent interrelations between the pairs of dimensions on each row, thus further explaining the interdependencies between the first and the second hackathon cycles.

8.2 Investigating the 6 dimensions

8.2.1 Inside-out dimensions

The first dimension considered is Justification. Dealing with this means to question the appropriateness of a complex instrument such as a hackathon to solve the proposed issue (challenge) launched at the beginning of the pilot. What can we see that the application of the hackathon format contributes to – when reflected up against other possible formats? This issue is particularly relevant in the future perspective of possible OpenDataLabs across Europe; willing to use the format as an instrument within the local stakeholder community, not only for its effectiveness, but also efficiency. Which in turn, points at the obvious connection between the Justification and the Sustainability dimension, to be explored later in this chapter.

Adopting the “Inside Out” perspective first, the partners were asked to choose among a set of possible “meta-purposes” for their hackathon, ranking them in order of importance (1 being the most, 9 the least important). The expression “meta-purpose” is related to the fact that the individual challenges supporting each hackathon (e.g. open data for healthcare, services to immigrants, etc.) were abstracted, while considering the issue of Justification. Received responses are clustered in the following graph.
From what can be seen, almost all meta-purposes were graded above average, with the exception of two of them. These are: “To develop new IT applications based on open data” and “To take benefit from the recent publication of open data”. While the latter can be just a sign of a more holistic, and less contingency based, approach to the topic by the pilot teams; the former evidence requires an interpretation that is clearly embedded in the core contents of the present deliverable. From its very name, the essence of a hackathon as “hacking marathon” is to deliver new IT applications, albeit in prototype form, in a very short time. This specific output of the questionnaire result shows the great commitment of the five pilots in the involvement of non ICT experts in the Hackathon events. This main, crucial goal of the project required, especially in some cases, a relevant reduction in the hackathon ICT-related expectations and scopes. The Hackathons of the O4C kind, in fact, aims at demonstrating the potentials of open data and this is only relevant for not ICT persons.

As an evidence to the discussion, three meta-purposes that gathered most consensus among the respondents, are: “To demonstrate the potential of Open Data in a domain”, “To integrate key stakeholders in an existing partnership”, and “To explore the potential of Open Data in a certain domain”. Taken together, and compared with the meta-purposes scoring below these three, the result to this first question on Justification is the evidence for the following:

1) the lack of awareness of the potentials of Open Data is still such an issue that requires relevant efforts to be achieved;
2) the pre-hack phase is crucial in order to keep the ICT development scope of the Hackathon practice within the wider scope of the Open4Citizens project;
3) the development of new ICT applications based on Open Data can keep its main value if the pre-hack phase has achieved a wide confidence of participants with data and the challenge is so well defined that the hackathon event can be assumed as a merely technical response.

These conclusions are proved also by the responses given to a question concerning the extent of use, during the hackathon event, of the challenges worked out in the pre-hack phase. The average score within the five pilots has been 3,6 – where 1 was “The solutions developed perfectly adhered to one or more of the proposed challenges” and 10 that “New challenges emerged during the hackathon and the solutions developed adhered to them”.

Still speaking about challenges, and assuming that the transition from the first to the second hackathon cycle did imply a sort of learning process, the pilots’ teams were asked to elaborate on the elements of possible distinction between the 1st and 2nd round of challenges. Received answers are
displayed in the following graph, showing normalized scores within the range (0,1). Due to visualization issues (too many replies holding the same scores), the full set of received answers is presented right below the graph.

Figure 58: Comparison of Hackathon challenges between the two O4C cycles

The majority of respondents replied that the new challenges where “more realistic, concrete and achievable”, therefore “more acceptable to data owners”, thus “more prone to induce data disclosure” This shows the learning of some basic lessons related to the relevant achievements of the pre-hack phase, and namely the alignment between data and challenges. The improved work carried out in the second cycle, in fact, shows both: more precise, workable, and social embedded challenges, as well as more problem oriented data used and made available for the second cycle events. Both data and challenges show a more reciprocating value and in some case, as can be appreciated in the several chapters of this deliverable, new data have been made available in an open format.

Another significant majority qualified the new challenges as “more targeted to public value delivery”. However, mixed feelings, to say the least, have prevailed concerning the qualification of being “more acceptable for citizens”. In contrast, a relevant minority opinion considered the new challenges “probably not politically correct / acceptable”. These responses are coherent with some difficulties to activate collaboration with the local public authorities in some of the first cycle experiences (namely the responses about “public value”) as well as to the challenge capacity to attract citizens with respect to the effort to involve them. Challenges characterized by insurgence and sharing of urban problems are to some extent more prone to attract citizens’ attention and commitment.

Another, less relevant minority opinion defined them “not embedded in open data” – a statement
that has to be interpreted in relation to the need for further data disclosure.

To conclude this reflection, the pilot owners were asked to grade (with a score from 1 to 9) the degree of achievement of hackathon objectives (or meta-purposes) as stated in the previous question. Received responses are clustered in the following graph. Lower scores indicate higher positions in the ranking.

![Achievements of the O4C hackathons](Figure 59: Achievements of the O4C hackathons)

While most of the stated meta-purposes (including some that were not considered priority) have been largely achieved, only the development of “new IT applications based on open data” is found lacking. This result, in perfect coherence with the one discussed few lines above, poses the question of the balance between the objective of ICT development outputs and the engagement of citizens.

Organizing a hackathon event in the Open4Citizens way needs a sort of dilemmatic choice between two different perspectives:

1) the creation of ICT new applications using open data and responding to citizens’ needs may be achieved when squeezing the challenge into a precise one and developing the alignment with the available data to be made open during the pre-hack phase; in this perspective citizens are less interested in the hackathon event and more in its results, but at the same time, they are not directly involved in the development of ICT solutions that use Open Data;

2) reducing the importance assigned to the ICT development of applications using Open Data, keeping the challenge more open to re-interpretations and critical discussions keeps the hackathon event interesting to a wider number of competences and people, and exposes citizens to more practical and ICT driven activities on Open Data use, although not always producing advanced prototypes.

Relevant to the discussion on the two competing choices is the communicative effort spent for the hackathon event: such an effort is hardly spent for the pre-hack activities, whatever number of activities (workshops, meetings, service jams, …) we consider, so making the hackathon event in any case more visible to citizens. These considerations show that there is not a preferable choice, rather, the context is crucial as well as its (open) data maturity and literacy, its commitment to the challenge solution.

The survey also shows that some of the hackathon results were sort of “unwanted” or “unexpected”: the next diagram compares the scores obtained by each meta-purpose “ex post” with the corresponding “ex ante” value. Four of them exceeded expectations, notably: “To integrate citizens
in the process of service design”, “To develop new IT applications based on open data”, “To demonstrate the potential of open data in a domain” and “To open up data that would otherwise remain closed”. Another four of them were scored below initial expectations, notably: “To integrate my organisation in an existing partnership”, “To integrate key stakeholders in an existing partnership”, “To promote the bottom up emergence of innovations, and “To take benefit from the recent publication of open data”.

One can conclude that, despite the IT skills of participants were widely mixed with other skills (so reducing the ICT weight with respect to traditional hackathons), the IT results produced by the O4C hackathons have been rather significant, although missing the bottom-up push that one might have expected when dealing with citizen driven processes. Perhaps the hackathon organizers’ goal of creating a community of interest on the open data topic was ambitious, although proved to work very well under certain conditions; differently the capacity of demonstrating the potential of open data and stimulating further disclosure of closed datasets has largely exceeded initial expectations” and it is relevant to the main goal of Open4Citizens, i.e. showing the potentials of open data to non-expert people, with an added one related to data disclosure.

Another key dimension of the “Inside Out” perspective is **Organisation**. By that we do not mean how a certain hackathon has been set up – this would rather pertain to Execution – but the way its initial “meta-purposes” have been translated into actions by the hackathon organizers. As displayed in the following diagram (and again in the next table showing the raw data, added to improve the readability of visuals), 10 aspects have been identified for a hackathon’s roll-out and organisation, and the O4C partners in charge of the respective pilots were asked to compare them with those of other competing events – to juxtapose and zoom in on the actual added value of using the format and label of the hackathon – as compared to for instance, service jams or different co-design experiments with end users. The scores attributed have been normalized within the range (0,1).
As reflected by the above scores, the majority of respondents considered their hackathons as effective compared to other competing format and styles of events in the use of data and somehow less effective in ensuring business buy-in. This evidence is confirmed by some of the previous answers already commented before. Overall this seems to illustrate how the use of data in the O4C hackathons demonstrated a certain potential in terms of the outcomes achieved (e.g. the applications and prototypes suggested; or in some cases merely concepts and early mock-ups) – where they seem to have been more interesting for the public (i.e. the data owners) than the private sector (i.e. the potential developers of new apps). This is not surprising as for the relevant focus assigned to the challenge ownership: the deep civic and social embedment of the challenges does not guarantee an interest or relevance from the business point of view. This somehow underlines the relevance of initiatives like the O4C ones towards problems and issues which are not easily adoptable by business interests to develop marketable solutions (in fact they stay unsolved!). There is more in this respect. The delivery of new concepts and mock-ups was considered as the essential and peculiar feature of the O4C hackathon model, showing more effectiveness in achieving the policy makers buy-in (beyond any comparison). This is possibly due to the opportunity offered by O4C, to exploit the crowd’s genius, and to make co-design methods available to the hackathon organizers in an especially productive fashion.

The hackathon did not attract citizens more than other participatory methods, nor was it more effective in attracting more business, but for sure it was a very attractive opportunity for public
administrations and for these others (citizens and business actors) to interact with the public administrations towards some possible common ends. In this regard, the pilots provided evidence that the O4C model is a co-creation format especially suited to the particular needs and requirements of public administrations and public service providers, which prioritise citizen engagement and needs satisfaction above short-term prospects of profits or the production of marketable outputs. This observation may open up another choice issue when organizing a hackathon of the O4C kind:

1) choosing challenges having a deep and relevant civic societal value will make the hackathon more prone to attract public officers and policy makers rather business actors who would not be much interested to buy in the results;

2) choosing challenges having a higher potential in producing marketable outputs may keep policy makers and public actors more on the periphery of the process although potentially interested in the opportunity offered for new urban services having private providers.

As already observed in the choice dilemma discussed above, and considering the experience gained by the O4C project approaching their hackathons in both ways (having a prevailing one on each cycle) there is no better way to proceed as it crucially depends on the maturity of the innovation ecosystem around the challenge, on the civic orientation of the business agents, on the citizens’ attitude to participation.

The last dimension of the “Inside Out” perspective is Execution. In that regard, having in mind the results of the previous deliverable of this series, which was focused on the 1st round of O4C hackathons and already noted a limited take-up of the post-hackathon activities within the pilots, a number of questions were posed specifically on the final phase of the O4C “Funnel Model”. First of all, the pilot teams were asked to rank a set of possible activities that are typical of the post-hack phase, with grades from 1= “The post-hack phase has been monopolized by this activity” to 10= “Nothing as such has been realized during the post-hack phase”. The responses received are displayed in the following diagram.

As it was already clear from the earlier discussion, “knowledge diffusion on open data potentials” is the most important activity of the post hack. This is perfect in line with the Open4Citizens project and is positively associated to another activity characterizing the Open4Citizens post-hack phase,
namely the delivery of “new public policies/actions in the hackathon domain”. Both these activities highlight the real essence of Open4Citizens in its influential capacity on the topics and communities involved during the organisation and execution of the hackathons.

Staying limited to the survey results, one can note that only in few cases such policy initiatives include the disclosure of closed datasets by the respective owners, or the creation of new datasets to feed the co-designed prototypes. Looking at the answers given by the pilots in annex 1, as well as the earlier chapters of this deliverable, it is clear that this is the consequence of the differences in hackathon ecosystem creation (data owners were not considered crucial in the first cycle as it was in the second) and in the relevance given to data creation (which is also evident in the development of data creation tools carried out between the first and the second cycle). The development/testing of new apps or the promotion of those already developed for the market is clearly not a diffused activity, consistently with the not constraining condition for ICT development; in fact, where new products or solutions have been produced by the hackathon, the delivery has been guaranteed and its promotion in charge of the solution owners.

The post-hack activities restitute another dilemma, that has to do with the ecosystem surrounding the challenge:

1. choosing a reduced ICT expectation from the hackathon event will require a more intense effort on the policy dimension of the post hack activities in terms of data disclosure and data creation so to achieve the result that the solutions ideated in the event become feasible, possible and realistic, although to be adopted far in the future;
2. when the hackathon event is targeting ICT applications using Open Data, the post hack activities are strictly related to implementation and testing (the existence of necessary open data already or to be guaranteed) and the collaboration with the solution adopters or owners is crucial.

8.2.2 Outside-in dimensions

Having exhausted the three dimensions of the “Inside Out” perspective, it is now time to move towards the three corresponding ones, starting with Manageability – the corresponding dimension to Execution. As evident from the 3-staged O4C model, the involvement/engagement of a plethora of stakeholders, including, but not limited to, citizens, NGOs and civic communities within the first phase of the hackathon’s execution, can be decisive to ensure the achievement of co-created goals set forth. However, this also implies the necessity of dealing with – governing or managing – a complex network of relationships, not all of them well consolidated and supported enough by reciprocal trust or a successful track record of previous interactions. To reveal and approximate the level of complexity of this task, we asked the O4C partners to state whether the number of stakeholders involved/engaged in the 2nd round of hackathons was ultimately higher or lower than in the 1st one. Received answers (normalized between 0 and 1) are distributed as per the diagram that follows.
All in all, the “Don’t know” answers show that the partners have been well aware of which stakeholder categories were involved and why. Among the less engaged stakeholders, the business and consultancy sectors are the most frequently indicated; the coders have been more targeted in the second cycle, showing a relevant project reflection on the above mentioned discussion on the justification side. Academics, city officials, and NGO representatives are not recognized as the most important participants, neither as the most irrelevant: this because on the one hand, little importance was attributed by several pilots to growing the number in these categories who did not appear to have a great relevance as for roles and goals. Finally, among the stakeholders who have certainly gained more prominence within the O4C pilots across time, it is worth making reference to policy makers, designers, service providers and, although not mapped, data owners.

Quite likely, the heterogeneity of these results reflects the different goals and challenges of the hackathons in the different pilot locations. However, to some extent the picture is quite clear in describing a shared motivation and drive towards developing a substantial and purposeful value delivery to the ultimate beneficiaries of these events (policy makers and service providers) and an even deeper involvement of methodology experts in the setup and running of initiatives, first and foremost the design professionals, due to reasons already explained before.

All of the above activities inevitably exercise a certain (big) pressure on the event management costs and resources required. While ensured the availability of an EU grant, all partners kept close account of incurred expenses, to make them visible and transparent to potential followers, belonging to new OpenDataLabs. This consideration drives us into the Affordability dimension, which has been the subject of the survey question inviting to compare the costs and benefits of organizing an O4C hackathon with those of comparable co-design events such as service jams. Received responses (again, normalized between 0 and 1) are displayed in the following graph, together with their
First and foremost, there is a unanimous consensus that the costs of organizing a hackathon are higher than those of comparable events. This can be explained in many ways: 1) the partners responsible of hackathons are not usual runners of hackathons and some costs are related to the frequency, such as the temporary infrastructuring of spaces and of supporting personnel. In fact, exploring the cost categories, a good majority estimates the “other costs”, in addition to staff, of the hackathon organizers being about the same as those of other comparable events. Then staff costs are those making a difference, which also impacts on the average cost per attendee. The hackathons of the Open4Citizens kind requires a differentiated and wider group of facilitators as for the sake of effective interaction between different expertise and, more critical, different levels of expertise.

As far as the relative benefits are concerned, received responses point at a good number of indicators. As already discussed, most significant benefits affect the policy makers. These benefits are delivered despite the fact that the quantity and/or quality or hackathon results may be “about the same” or only “probably higher” than that of comparable events. There is something more which is not captured by the results obtained in a specific event and mapped through the survey, which is related to the spreading of an open data disclosure culture, notably within local public administration, and more extensively within the citizens and/or stakeholder communities. As a result, the benefits to public service delivery as well as to society as a whole stand out as the most prominent outcomes of the O4C hackathons together with the creation of the challenge-related ecosystem which is, obviously, a permanent achievement when a new app or new service is...
produced.

The future recourse to the Open4Citizens hackathon has been further explored through the definition of Sustainability, which constitutes the last analytical dimension of the survey framework. It goes without saying that this definition of **Sustainability** includes not only the environmental or the socio-economic compliance verification, but also the capacity of this whole service setup (soon being framed within the OpenDataLab “umbrella”) to be embedded in the local innovation system and thus to last / be financially autonomous for a long while. It is in this sense that Sustainability can be considered as an extension of the Justification dimension – being the concept dependent on the likelihood that a certain hackathon project or experimentation is considered appropriate or relevant for a given socio-economic environment.

In order to measure this likelihood, we first asked the pilot teams to give an overview of the signs of continuity across time of the hackathon activities and the resources built or summoned around them. The responses are displayed on the following graph. Lower scores indicate higher positions in the ranking.

![Figure 65: Weak signs of O4C hackathons sustainability](image)

As one can see, the three statements gaining most consensus are all related to the specific event organized and its “face value” characteristics – efficiency, effectiveness, performance and quality. Following on that, the judgment concerning “good value for money” is broadly shared, as is the belief that a competent team within the partner organisation has been created, which may become useful again in the future. If other events of the same kind will follow after the project’s end is not sure but strongly depends on the moment in which the survey has been made (in the making of the second cycle post-hack activities and also in the middle of the project wrap-up). A O4C hackathon campaign is not immediate as traditional hackathons and the pre-hack phase requires a relevant time and personnel effort. Moreover, on this:

1) in one of the pilots a new hackathon campaign is already planned and came out in the planning of the starting activities of the coming ODL; and

2) the efforts towards sustainability of the ODLs are just starting to coalesce in most pilot implementations, as can be seen in more details in D4.4; at such early stage of operational planning, it may be understandable that some pilots hesitate in foreseeing full-fledged O4C hackathons in the near future.

As repeatedly stated however, the future of the project is not only local, but also European – in terms of the OpenDataLab network just launched – thus the added value of its outputs or outcomes should be assessed with a higher perspective, having in mind the possibility of “cross fertilization” of other
local contexts by the reuse and adoption of some instruments developed within the Open4Citizens project for the running of similar events. In order to consider this aspect, the O4C partners have been asked to document which pilot results could be “packaged” and put at free disposal of other OpenDataLabs according to a “cooperation network” logic. The scores attributed – again, normalized within the range (0,1) – are visualized in the next graph.

As one can notice, the methodological contribution of Open4Citizens is broadly perceived to have been huge. Without any hesitation, the methods and tools produced in the project are seen as highly or at least to some extent reusable on other occasions. The O4C hackathons successfully facilitated and/or mentored by project partners in sites such as Morocco and Switzerland provide additional evidence of the reusability of the O4C toolkit. Same goes, with some qualification, for the templates, ideas and concepts that have been delivered by the pilots, as well as – another important outcome to be noted – for new policies, most likely related to open data.

On the other hand, but this is not surprising, the opinions concerning the reusability of mock-ups, prototypes, applications and services are more widely distributed, with a lean on stressing their uniqueness for the goals of the specific hackathons, and the problems/challenges to be tackled therein. This is understandable, given the huge effort undertaken by the pilot teams in contextualising the hack processes and therefore the developed solutions in a local challenge, and it brings attention to the need of properly assessing the similarities and differences of other local contexts when attempting to transfer hack outputs from place to place.

This concludes the D3.5 Hackathon Report and we point towards more in-depth analysis and recommendations spread across the numerous parallel deliverables due at the end of the project.
Annex 1

1.1.a. Description of the work done to develop chapter 8

In order to collect evidences from the five different pilots and developing the interpretative view of the five different experiences, pilots have been provided with the following template. See the whole text in blue.

***********

GLOBL ACTIVITY REPORT

Each partner organising a 2nd round of hackathons is kindly requested to deliver an overall description based on the following Table of Contents.

1.1 Pre-hackathon activities

Meeting and Workshops

Identified Data Set

Key Actors

1.2 The Hackathon Event

The process framework of the hackathon event

Hackathon Event data and information

Hackathon Event outputs and results

1.3 The Post-Hackathon: Development and Testing

From Hackathon event’s achievements to post Hackathon activities

Towards the OpenDataLab

Logic tree of the survey

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<th>Question ID(s)</th>
<th>Already in last year’s survey?</th>
<th>What’s new this year</th>
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<td>Questions J11, J12, J13</td>
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From Execution to Manageability

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Manageability

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Questions:

**Question A11**

**Reference to the ODL**

**Questions M11, M12, M13**

### Justification

**J1) Specification of the challenge or new challenge**

*Please add some free text (about 2 pages max) using the guidance notes below, then answer the questions that follow:*

**Your input here**

**Guidance notes:**

For DK, ES\(^{11}\), and IT → why did you change the domain(s) and challenges of the previous hackathon

For NL → why did you decide not to do this

For ES\(^{*}\), SE → why did you change the challenges but not the domain

Additional qualifications required:

**J11) For everyone** → how much did the outcomes of the first cycle impact on your decision as described above and how?

**J12) For everyone** → how did you come to formulate the new challenge(s), tell us about the process and locate it very clearly at the pre-hack or within the hack phase

**J13) For everyone** → was there any change with respect to last year’s methods and tools?

### From Justification to Sustainability

**JS1) For everyone** → compared with last year’s, do you think that your new challenges (apart from the different domain chosen, if relevant to mention) are

- More realistic, concrete, achievable | _ _ | Definitely yes | _ _ | Perhaps | _ _ | Don’t know | _ _ | Probably not | _ _ | Quite the opposite
- More politically correct / acceptable | _ _ | Definitely yes | _ _ | Perhaps | _ _ | Don’t know | _ _ | Probably not | _ _ | Quite the opposite
- More embedded within open data | _ _ | Definitely yes | _ _ | Perhaps | _ _ | Don’t know | _ _ | Probably not | _ _ | Quite the opposite
- More targeted to public value delivery | _ _ | Definitely yes | _ _ | Perhaps | _ _ | Don’t know | _ _ | Probably not | _ _ | Quite the opposite

\(^{11}\) A specific note for Marc: feel free to calibrate your answers to provide a unitary feedback instead of 3 distinct ones – for instance, I may imagine that the stakeholders involved may be quite similar in some cases, but the impact achieved could be differentiated according to the topic and domain of the individual hackathon.
- More acceptable for citizens |__| Definitely yes |__| Perhaps |__| Don’t know |__| Probably not |__| Quite the opposite
- More acceptable for data owners |__| Definitely yes |__| Perhaps |__| Don’t know |__| Probably not |__| Quite the opposite
- More prone to induce data disclosure |__| Definitely yes |__| Perhaps |__| Don’t know |__| Probably not |__| Quite the opposite
- More prone to induce new IT apps |__| Definitely yes |__| Perhaps |__| Don’t know |__| Probably not |__| Quite the opposite

JS2) For everyone → how much use of the challenges has been done during the hackathon, please tick once between 1=the solutions developed perfectly adhered to one or more of the proposed challenges and 10=new challenges emerged during the hackathon and the solutions developed adhered to them

• 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • 10

Justification (again)

J2) Motivation, or why did we need a hackathon?

Free text (about 1 page max) for each partner, then answer the questions that follow:

Your input here

Hint: we assume that multiple options could have been available or interesting, so it’s not enough to say “we had that problem, so we decided to run a hackathon”. We might have done e.g. a service jam or another co-design exercise.

Additional qualifications required:

J21) Please grade the following purposes from 1 to 9 in order of importance for your hackathon, with 1=most important and 9=least important (put 0 if not applicable to your case):

- To take benefit from the recent publication of open data |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0
- To open up data that would otherwise remain closed |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0
- To explore the potential of open data in a certain domain |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0
- To develop new IT applications based on open data |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0
- To demonstrate the potential of open data in a domain |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0
- To promote the bottom up emergence of innovations |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0
- To integrate citizens in the process of service design |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0
- To integrate key stakeholders in an existing partnership |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0
- To integrate my organisation in an existing partnership |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 0

Note: if anyone would like to add questions we must sacrifice one of the existing to keep their total
From Justification to Sustainability (again)

JS3) Now grade the above purposes from 1 to 9 in terms of degree of achievement after your hackathon, with 1=fully achieved and 9=not achieved at all (put 0 if not applicable to your case):

- To take benefit from the recent publication of open data [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0
- To open up data that would otherwise remain closed [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0
- To explore the potential of open data in a certain domain [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0
- To develop new IT applications based on open data [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0
- To demonstrate the potential of open data in a domain [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0
- To promote the bottom up emergence of innovations [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0
- To integrate citizens in the process of service design [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0
- To integrate key stakeholders in an existing partnership [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0
- To integrate my organisation in an existing partnership [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 0

Note: these must be the same questions as above

JS4) How can you compare the achievement of the above purposes this year with last year’s hackathon? Please tick: 1=much better than, 2=better than, 3=same as, 4=worse than, 5=far worse than last year

- To take benefit from the recent publication of open data [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- To open up data that would otherwise remain closed [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- To explore the potential of open data in a certain domain [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- To develop new IT applications based on open data [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- To demonstrate the potential of open data in a domain [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- To promote the bottom up emergence of innovations [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- To integrate citizens in the process of service design [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- To integrate key stakeholders in an existing partnership [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- To integrate my organisation in an existing partnership [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

Note: these must be the same questions as above

Organisation

O1) Ownership, or – who was in charge of the hackathon organisation?

Free text (about 1 page max) for each partner\(^{12*}\), then answer the following question:

Your input here

12* A specific note for Marc: unfortunately (or luckily) you have managed to organise more than one hackathon, so feel free to differentiate your answers only if/when it is really needed
From Organisation to Affordability

OA1) Compared with last year, has the commitment and engagement of colleagues and “bosses” from within your own organization increased, decreased or stayed invariant – and why?

*Your input here*

Organisation (again)

O2) Who stated the mission and proposed the thematic contents?

*Free text (about 1 page max) for each partner, then answer the questions that follow:*

*Your input here*

From Organisation to Affordability (again)

OA2) In your opinion, what have been the elements of distinction of your hackathon? Please rate the following aspects as unique or differential to your hackathon and its rollout and impact, compared with e.g. a service jam or another co-design exercise as alternative options:

- Use of data | essential and peculiar | more effective than | as effective as | less effective than alternative options
- Use of co-design methods | essential and peculiar | more effective than | as effective as | less effective than
- Use of crowd’s genius | essential and peculiar | more effective than | as effective as | less effective than
- Policy makers buy-in | essential and peculiar | more effective than | as effective as | less effective than
- Citizens buy-in | essential and peculiar | more effective than | as effective as | less effective than
- Businesses buy-in | essential and peculiar | more effective than | as effective as | less effective than
- New concepts delivery | essential and peculiar | more effective than | as effective as | less effective than
- New mock-ups delivery | essential and peculiar | more effective than | as effective as | less effective than
- New prototypes delivery | essential and peculiar | more effective than | as effective as | less effective than
- New applications delivery | essential and peculiar | more effective than | as effective as | less effective than

OA3) In the post-hack phase, how much of the following activities has been foreseen or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row between 1=this activity has been / will be monopolizing the post-hack phase and 10=nothing as such has been foreseen or realized during the post-hack phase:

- Promotion of developed applications | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9
<table>
<thead>
<tr>
<th></th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development/testing of new applications</td>
<td>1</td>
</tr>
<tr>
<td>New services ideation/prototyping</td>
<td>1</td>
</tr>
<tr>
<td>Improvement of the hackathon mock-ups</td>
<td>1</td>
</tr>
<tr>
<td>Conceptual refinement of the hackathon ideas</td>
<td>1</td>
</tr>
<tr>
<td>Existing datasets integration within prototypes</td>
<td>1</td>
</tr>
<tr>
<td>New datasets creation to feed the prototypes</td>
<td>1</td>
</tr>
<tr>
<td>Closed datasets disclosure by respective owners</td>
<td>1</td>
</tr>
<tr>
<td>Knowledge diffusion on open data potentials</td>
<td>1</td>
</tr>
<tr>
<td>New public policies/actions in the hackathon domain</td>
<td>1</td>
</tr>
</tbody>
</table>

### Execution

Following is a replica of last year’s evaluative questions, with some qualifications\(^{13*}\), namely:

E1) Approach, or – how was the hackathon put in place?

*Free text (about 1 page max) for each partner:*

*Your input here*

E2) Structure, or – what was the hackathon agenda, micro-organisation, etc.?

*Free text (about 1 page max) for each partner:*

*Your input here*

E3) Management, or – where to and how did you drive the operations?

*Free text (about 1 page max) for each partner, then answer the following question:*

*Your input here*

### From Execution to Manageability

EM1) Looking at this year’s versus last year’s participants, do you think there have been:

\(^{13*}\) A specific note for Marc: see previous footnote
- More academics involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More business persons involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More citizens involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More city officials involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More coders involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More consultants involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More designers involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More NGO representatives involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More policy makers involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite
- More service providers involved | _ | Definitely yes | _ | Perhaps | _ | Don’t know | _ | Probably not | _ | Quite the opposite

**Affordability**

A1) Needed resources, or – what was provided by the organisers to the participants?

*Free text (about 1 page max) for each partner*¹⁴, then answer the question that follows:

**Your input here**

A11) If and only if you have experience in the organization of other comparable experiments (such as service jams and the like) how do you think the cost benefit ratio of a hackathon compares with them:

- Staff costs of the hackathon organizer: | _ | certainly higher | _ | probably higher | _ | about the same | _ | probably lower | _ | certainly lower
- Other costs of the hackathon organizer: | _ | certainly higher | _ | probably higher | _ | about the same | _ | probably lower | _ | certainly lower
- Attendees to a hackathon: | _ | certainly higher | _ | probably higher | _ | about the same | _ | probably lower | _ | certainly lower
- Total costs per attendee: | _ | certainly higher | _ | probably higher | _ | about the same | _ | probably lower | _ | certainly lower
- Quantity of hack results: | _ | certainly higher | _ | probably higher | _ | about the same | _ | probably lower | _ | certainly lower
- Quality of hack results: | _ | certainly higher | _ | probably higher | _ | about the same | _ | probably lower | _ | certainly lower
- Policy benefits: | _ | certainly higher | _ | probably higher | _ | about the same | _ | probably lower | _ | certainly lower
- Benefits to public service: | _ | certainly higher | _ | probably higher | _ | about the same | _ |

¹⁴ A specific note for Marc: see previous footnote
probably lower | _| certainly lower
- Benefits to businesses: | _| certainly higher | _| probably higher | _| about the same | _|
  probably lower | _| certainly lower
- Benefits to society: | _| certainly higher | _| probably higher | _| about the same | _|
  probably lower | _| certainly lower

**Sustainability**

S1) In the perspective of the Open Data Lab network, and based on experiences from your hackathon, what kind of results can be “packaged” and put at free disposal of other Open Data Labs according to a “cooperation network” logic?

- Methods | _| Definitely yes | _| Perhaps | _| Don’t know | _| Probably not | _|
  Quite the opposite
- Tools | _| Definitely yes | _| Perhaps | _| Don’t know | _| Probably not | _|
  Quite the opposite
- Templates | _| Definitely yes | _| Perhaps | _| Don’t know | _| Probably not | _|
  Quite the opposite
- Ideas | _| Definitely yes | _| Perhaps | _| Don’t know | _| Probably not | _|
  Quite the opposite
- Concepts | _| Definitely yes | _| Perhaps | _| Don’t know | _| Probably not | _|
  Quite the opposite
- Mock-ups | _| Definitely yes | _| Perhaps | _| Don’t know | _|
  Probably not | _|
  Quite the opposite
- Prototypes | _| Definitely yes | _| Perhaps | _| Don’t know | _|
  Probably not | _|
  Quite the opposite
- Applications | _| Definitely yes | _| Perhaps | _| Don’t know | _|
  Probably not | _|
  Quite the opposite
- Services | _| Definitely yes | _| Perhaps | _| Don’t know | _|
  Probably not | _|
  Quite the opposite
- Policies | _| Definitely yes | _| Perhaps | _| Don’t know | _|
  Probably not | _|
  Quite the opposite

**Manageability**

M1) Other special characteristics, or – what differentiated this year’s experience from last year’s?

*Free text (about 1 page max) for each partner*\(^{15}\), then answer the following questions:

*Your input here*

M11) Should you repeat this identical hackathon from scratch again, what is the big mistake that you would happily avoid?

*Your input here*

M12) What is your major take-away from the organization of this hackathon?

*Your input here*

\(^{15}\) A specific note for Marc: see previous footnote
M13) To conclude, please grade the six statements below from 1 to 10 in terms of appropriateness to your hackathon, with 1=fully appropriate and 10=not appropriate at all

- Organizing a hackathon on that topic was the right thing to do |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 10
- We knew how to put things in the right order and we made it |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 10
- We have been cost efficient and effective in terms of benefits |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 10
- There will be additional hackathons after the project’s end |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 10
- There is consensus on the value for money of the hackathon |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 10
- We have developed a competent team who is here to stay |__| 1 |__| 2 |__| 3 |__| 4 |__| 5 |__| 6 |__| 7 |__| 8 |__| 9 |__| 10

1.1.b. Managing data
The entire templates have been filled in by pilots in order to share their status and opinion. Responses have been collected both textual and table-based.

With respect to the textual part, it has been utilized and further developed for the creation of chapter 3-8; the remaining parts have been transferred to an excel file and utilized to develop chapter 8.

In order to make the reader aware of the detailed responses the excel file is attached.
From Justification to Sustainability
1A. How much use of the challenges has been done during the hackathon, please tick once between 1=the solutions developed adhered to one or more of the proposed challenges and 10=new challenges emerged during the hackathon and the solutions developed adhered to them

1B. In the post-hack phase, how much of the following activities has been foreseen or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row

1C. If and only if you have experience in the organization of other comparable experiments (such as service jams and the like) how do you think the cost benefit ratio of a hackathon compares with them:

1D. How can we compare the achievement of the above purposes this year with last year's hackathon? Please tick once between 1=much better than, 2=slightly better than, 3=the same as, 4=worse than, 5=the worse than last year

1E. From the perspective of the Open Data Lab network, and based on experiences from your hackathon, what kind of results can be "packaged" and put at free disposal of other Open Data Labs according to a "cooperation network" logic?

From Organization to Affordability
OA1. What have been the elements of distinction of your hackathon? Please note the following aspects as unique or differentiated to your hackathon and put the number 1 in the right column, compared with the same service or another co-design exercise as alternative options

OA2. In the past hack phase, how much of the following activities has been financed or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row between 1=tick this activity has been there, 10=manipulating the post hack phase and 11=something as such has been financed or realized during

From Execution to Manageability
DM1. Looking at this year’s versus last year’s participants, do you think there have been

Affordability
AI1. If and only if you have experience in the organization of other comparable experiments (such as service jams and the like) how do you think the cost benefit ratio of a hackathon compares with them

Sustainability
SU1. In the perception of the Open Data Lab network, and based on experiences from your hackathon, what kind of results can be "packaged" and put at free disposal of other Open Data Labs according to a "cooperation network" logic?

SU2. Please grade the above statements below from 1 to 10 in terms of appropriateness to your hackathon, with 1=fully appropriate and 10=not appropriate at all

Justification
1A. Please grade the purposes from 1 to 9 in order of importance for your hackathon, with 1=most important and 9=least important (put 0 if not applicable to your case):

1B. From the viewpoint of difficult to measure and achievable, please grade the above purposes from 1 to 9 in terms of degree of achievement after your hackathon, with 1=fully achieved and 9=not achieved at all (put 0 if not applicable to your case):

1C. How do you think that your new challenges (apart from the different domain chosen, if relevant to mention) are compared with last year's, do you think that your new challenges (apart from the different domain chosen, if relevant to mention) are

1D. Please grade the above purposes from 1 to 9 in order of importance for your hackathon, with 1=most important and 9=least important (put 0 if not applicable to your case):

1E. We have developed a competent team who is here to stay

1F. There is consensus on the value for money of the hackathon

1G. We have been cost efficient and effective in terms of benefits

1H. We knew how to put things in the right order and we made it

1I. Organizing a hackathon on that topic was the right thing to do

1J. Policies

1K. Services

1L. Applications

1M. Prototypes

1N. Mock-ups
In the post-hack phase, how much of the following activities has been foreseen or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row between 1 = this activity has been / will be monopolizing the post-hack phase and 10 = nothing as such has been foreseen or realized during the post-hack phase:
From Justification to Sustainability

JS1: compared with last year’s, do you think that your new challenges (apart from the different domain chosen, if relevant to mention) are

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Last Year</th>
<th>This Year</th>
<th>New Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>More realistic, concrete, achievable</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More politically correct / acceptable</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More embedded within open data</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More targeted to public value delivery</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More acceptable for citizens</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More acceptable for data owners</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More prone to induce new IT apps</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

JS2: how much use of the challenges has been done during the hackathon, please tick once between 1 and 10: more use than last year, the same, less use than last year

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Last Year</th>
<th>This Year</th>
<th>New Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>More realistic, concrete, achievable</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More politically correct / acceptable</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More embedded within open data</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More targeted to public value delivery</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More acceptable for citizens</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
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<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More prone to induce new IT apps</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Justification

JS3: Please grade the following purposes from 1 to 9 in terms of degree of achievement after your hackathon, with 1=fully achieved and 9=not achieved at all (put 0 if not applicable to your case):

<table>
<thead>
<tr>
<th>Purpose</th>
<th>This Year</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>To take benefit from the novel publication of open data</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>To open up data that would otherwise remain closed</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>To explore the potential of open data in a certain domain</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>To develop new IT applications based on open data</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>To demonstrate the potential of open data in a domain</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>To promote the bottom-up emergence of innovations</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To integrate citizens in the process of service design</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To integrate key stakeholders in an existing partnership</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To integrate my organization in an existing partnership</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

From Justification to Sustainability (again)

JS4: grade the above purposes from 1 to 8 in terms of degree of achievement after your hackathon, with 1=fully achieved and 1=not achieved at all (put 0 if not applicable to your case):

<table>
<thead>
<tr>
<th>Purpose</th>
<th>This Year</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>To take benefit from the novel publication of open data</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>To open up data that would otherwise remain closed</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>To explore the potential of open data in a certain domain</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>To develop new IT applications based on open data</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>To demonstrate the potential of open data in a domain</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>To promote the bottom-up emergence of innovations</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To integrate citizens in the process of service design</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To integrate key stakeholders in an existing partnership</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To integrate my organization in an existing partnership</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

JS5: How can you compare the achievement of the above purposes this year with last year’s hackathon? Please tick: 1=much better than, 2=better than, 3=same as, 4=worse than, 5=far worse than last year

<table>
<thead>
<tr>
<th>Purpose</th>
<th>This Year</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>To take benefit from the novel publication of open data</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>To open up data that would otherwise remain closed</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>To explore the potential of open data in a certain domain</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>To develop new IT applications based on open data</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>To demonstrate the potential of open data in a domain</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>To promote the bottom-up emergence of innovations</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>To integrate citizens in the process of service design</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>To integrate key stakeholders in an existing partnership</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To integrate my organization in an existing partnership</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

From Organization to Affordability

OA1: what have been the elements of distinction of your hackathon? Please rate the following aspects as unique or different from your hackathon and its input and impact, compared with e.g. a service provider or another co-design exercise as alternative options

<table>
<thead>
<tr>
<th>Element</th>
<th>Rating</th>
<th>Last Year</th>
<th>This Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of data</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Use of co-design methods</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Use of crowd's genius</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Policy makers buy-in</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Citizens buy-in</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Business buy-in</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>New concepts delivery</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>New mock-up delivery</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>New prototypes delivery</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>New applications delivery</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

OA6: in the past hackathon, how much of the following activities has been known or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row: 1=this activity has been / will be monopolizing the post-hack phase and 10=nothing as such has been foreseen or realized during it

<table>
<thead>
<tr>
<th>Activity</th>
<th>Rating</th>
<th>Last Year</th>
<th>This Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of new applications</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>New services: design/prootyping</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Improvement of the hackathon inside-up</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Conceptual rethinking of the hackathon’s ideas</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Existing datasets integration within prototypes</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>New datasets creation to feed the prototypes</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Closed datasets disclosure by respective owners</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Knowledge diffusion on open data potential</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>New public policies/actions in the hackathon domain</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

From Execution to Manageability

DM1: looking at this year’s versus last year’s participants, do you think there have been

<table>
<thead>
<tr>
<th>Change</th>
<th>This Year</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>More academics involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More business persons involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More citizens involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More city officials involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More coders involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More consultants involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More designers involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More NGO representatives involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More policy makers involved</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>More service providers involved</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Affordability

A11: if and only if you have experience in the organization of other comparable experiments (such as service jams and the like) how do you think the cost benefit ratio of a hackathon compares with them

<table>
<thead>
<tr>
<th>Comparison</th>
<th>This Year</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>More staff costs of the hackathon organizer</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Other costs of the hackathon organizer</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Attendees: use a hackathon</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total costs per attendee</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Quantity of hack results</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Quality of hack results</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Policies benefits</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Benefits to public service</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Benefits to businesses</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Benefits to society</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Sustainability

S3: in the perspective of the Open Data lab network, and based on experiences from your hackathon, what kind of results can be “package” and put at the disposal of other Open Data labs according to a “cooperation network” logic?

<table>
<thead>
<tr>
<th>Method</th>
<th>Rating</th>
<th>Last Year</th>
<th>This Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tactic</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vector</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ideas</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Concepts</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mock-ups</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Prototypes</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Applications</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Services</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pictures</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

S31: please give the six statements below from 1 to 10 in terms of appropriateness to your hackathon, with 1=fully appropriate and 10=not appropriate at all

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
<th>Last Year</th>
<th>This Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing a hackathon is the right thing to do</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>We know how to put things in the right order and we make it</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>We have been cost efficient and effective in terms of benefits</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>There will be additional hackathons after the project’s end</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>There is consensus on the value for money of the hackathon</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>We have developed a competent team who is here to stay</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>
In the post-hack phase, how much of the following activities has been foreseen or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row between 1 = this activity has been / will be monopolizing the post-hack phase and 10 = nothing as such has been foreseen or realized during the post-hack phase:
From Justification to Sustainability

ISA compared with last year’s, do you think that your new challenges (apart from the different domain chosen, if relevant to mention) are

- More realistic, concrete, achievable
- More politically correct / acceptable
- More embedded within open data
- More targeted to a public value delivery
- More acceptable for citizens
- More acceptable for data owners
- More prone to induce data disclosure

- More prone to induce new IT apps

ISA how much use of the challenges has been done during the hackathon, please tick once between 1 (the solution developed perfectly adhered to one or more of the proposed challenges and 10 (new challenges emerged during the hackathon and the solution developed adhered to them)

**Justification**

ISA please grade the following purposes from 1 (the most important to 9 (the least important) in your hackathon, with 1 = fully important and 9 = not important (and if not applicable to your case):

- To take benefit from the recent publication of open data
- To open up data that would otherwise remain closed
- To explore the potential of open data in a certain domain
- To develop new IT applications based on open data
- To demonstrate the potential of open data in a domain
- To promote the bottom-up emergence of innovations
- To integrate citizens in the process of service design
- To integrate key stakeholders in an existing partnership
- To integrate my organization in an existing partnership

From Justification to Sustainability (again)

ISA grade the above purposes from 1 to 9 in terms of degree of achievement after your hackathon, with 1 = fully achieved and 9 = not achieved at all (pick j = 1 if not applicable to your case):

- To take benefit from the recent publication of open data
- To open up data that would otherwise remain closed
- To explore the potential of open data in a certain domain
- To develop new IT applications based on open data
- To demonstrate the potential of open data in a domain
- To promote the bottom-up emergence of innovations
- To integrate citizens in the process of service design
- To integrate key stakeholders in an existing partnership
- To integrate my organization in an existing partnership

ISA How can you compare the achievement of the above purposes this year with last year’s hackathon? Please tick:

- 1 = much better than, 2 = better than, 3 = same as, 4 = worse than, 5 = far worse than last year

From Organization to Affordability

OA4 what have been the elements of distinction of your hackathon? Please rate the following aspects as unique or differential to your hackathon, with 1 = fully appropriate and 10 = not appropriate at all

<table>
<thead>
<tr>
<th>Elements of Distinction</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of data</td>
<td>1</td>
</tr>
<tr>
<td>Use of co-design methods</td>
<td>2</td>
</tr>
<tr>
<td>Use of crowd sourcing</td>
<td>3</td>
</tr>
<tr>
<td>Policy makers buy in</td>
<td>4</td>
</tr>
<tr>
<td>Citizens buy in</td>
<td>5</td>
</tr>
<tr>
<td>Businesses buy in</td>
<td>6</td>
</tr>
<tr>
<td>New concepts delivery</td>
<td>7</td>
</tr>
<tr>
<td>New mock-ups delivery</td>
<td>8</td>
</tr>
<tr>
<td>New prototypes delivery</td>
<td>9</td>
</tr>
<tr>
<td>New applications delivered</td>
<td>10</td>
</tr>
</tbody>
</table>

OA6 In the post hack phase, how much of the following activities has been / will be executed? Please tick once per row between 1 (this activity has been / will be monopolizing the post hack phase) and 10 (nothing as such has been / will be done):

<table>
<thead>
<tr>
<th>Activities</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion of developed applications</td>
<td>1</td>
</tr>
<tr>
<td>Development/fielding of new applications</td>
<td>2</td>
</tr>
<tr>
<td>New services/outputs/prototyping</td>
<td>3</td>
</tr>
<tr>
<td>Improvement of the hackathon mock-ups</td>
<td>4</td>
</tr>
<tr>
<td>Conceptual refinement of the hackathon ideas</td>
<td>5</td>
</tr>
<tr>
<td>Existing datasets integration within prototypes</td>
<td>6</td>
</tr>
<tr>
<td>New datasets creation to feed the prototypes</td>
<td>7</td>
</tr>
<tr>
<td>Closed datasets disclosure by request / owners</td>
<td>8</td>
</tr>
<tr>
<td>Knowledge diffusion on open data potential</td>
<td>9</td>
</tr>
<tr>
<td>New public policies/actions in the hackathon domain</td>
<td>10</td>
</tr>
</tbody>
</table>

From Execution to Manageability

DM3 looking at this year’s versus last year’s participants, do you think that there has been

<table>
<thead>
<tr>
<th>Participants Involved</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>More academics involved</td>
<td>1</td>
</tr>
<tr>
<td>More business persons involved</td>
<td>2</td>
</tr>
<tr>
<td>More citizens involved</td>
<td>3</td>
</tr>
<tr>
<td>More city officials involved</td>
<td>4</td>
</tr>
<tr>
<td>More coders involved</td>
<td>5</td>
</tr>
<tr>
<td>More consultants involved</td>
<td>6</td>
</tr>
<tr>
<td>More designers involved</td>
<td>7</td>
</tr>
<tr>
<td>More Media representatives involved</td>
<td>8</td>
</tr>
<tr>
<td>More policy makers involved</td>
<td>9</td>
</tr>
<tr>
<td>More service providers involved</td>
<td>10</td>
</tr>
</tbody>
</table>

Affordability

A10 if only you have experience in the organization of other comparable experiments (such as service jams and the like) please tick how the cost benefit ratio of a hackathon compares with them:

<table>
<thead>
<tr>
<th>Budgeted Cost</th>
<th>Actual Cost</th>
<th>Difference</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hackathon</td>
<td>Hackathon</td>
<td>Hackathon</td>
<td>Hackathon</td>
</tr>
<tr>
<td>Hackathon</td>
<td>Hackathon</td>
<td>Hackathon</td>
<td>Hackathon</td>
</tr>
<tr>
<td>Hackathon</td>
<td>Hackathon</td>
<td>Hackathon</td>
<td>Hackathon</td>
</tr>
<tr>
<td>Hackathon</td>
<td>Hackathon</td>
<td>Hackathon</td>
<td>Hackathon</td>
</tr>
</tbody>
</table>

Sustainability

SA3 in the perception of the Open Data lab network, and based on experiences from your hackathon, what final results can be "packaged" and put at the disposal of other Open Data labs according to a "cooperation network" logic?

<table>
<thead>
<tr>
<th>Results Packaged</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods</td>
<td>1</td>
</tr>
<tr>
<td>Ticks</td>
<td>2</td>
</tr>
<tr>
<td>Templates</td>
<td>3</td>
</tr>
<tr>
<td>Ideas</td>
<td>4</td>
</tr>
<tr>
<td>Concepts</td>
<td>5</td>
</tr>
<tr>
<td>Mock-ups</td>
<td>6</td>
</tr>
<tr>
<td>Prototyping</td>
<td>7</td>
</tr>
<tr>
<td>Applications</td>
<td>8</td>
</tr>
<tr>
<td>Sensors</td>
<td>9</td>
</tr>
<tr>
<td>Pictures</td>
<td>10</td>
</tr>
</tbody>
</table>

Sustainability

MS4 please give the six statements below from 1 to 10 in terms of appropriateness to your hackathon, with 1 = fully appropriate and 10 = not appropriate at all

<table>
<thead>
<tr>
<th>Statements</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing a hackathon that was the right thing to do</td>
<td>1</td>
</tr>
<tr>
<td>We knew how to put things in the right order and we made</td>
<td>2</td>
</tr>
<tr>
<td>We have been cost efficient and effective in terms of benefit</td>
<td>3</td>
</tr>
<tr>
<td>There will be additional hackathons after the project’s end</td>
<td>4</td>
</tr>
<tr>
<td>There is consensus on the value for money of the hackathon</td>
<td>5</td>
</tr>
<tr>
<td>We have developed a competent team who is still to stay</td>
<td>6</td>
</tr>
</tbody>
</table>
In the post-hack phase, how much of the following activities has been foreseen or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row between 1 = this activity has been / will be monopolizing the post-hack phase and 10 = nothing as such has been foreseen or realized during the post-hack phase:

[ ]

[ ]
From Justification to Sustainability

154. Compared with last year's, do you think that your new challenges (apart from the different domain chosen, if relevant to mentioning) are:

- More realistic, concrete, achievable
- More politically correct / acceptable
- More embedded within open data
- More targeted to public value delivery
- More acceptable for citizens
- More acceptable for data owners
- More prone to induce data disclosure
- More prone to induce new IT apps

155. How much of the challenges has been done during the hackathon, please tick once between 1=the solutions developed perfectly adhered to one or more of the proposed challenges and 10=new challenges emerged during the hackathon and the solutions developed adhered to them:

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Justification

156. Please grade the following purposes from 1 to 9, in order of importance for your hackathon, with 1=most important and 9=least important (put 0 if not applicable to your case):

- To take benefit from the novel publication of open data
- To open up data that would otherwise remain closed
- To exploit the potential of open data in a certain domain
- To develop new IT applications based on open data
- To demonstrate the potential of open data in a certain domain
- To promote the bottom-up emergence of innovations
- To integrate citizens in the process of service design
- To integrate key stakeholders in an existing partnership
- To integrate my organization in an existing partnership

157. From Justification to Sustainability (again)

158. Please grade the above purposes from 1 to 9, in terms of degree of achievement after your hackathon, with 1=fully achieved and 9=not achieved at all (put 0 if not applicable to your case):

- To take benefit from the novel publication of open data
- To open up data that would otherwise remain closed
- To exploit the potential of open data in a certain domain
- To develop new IT applications based on open data
- To demonstrate the potential of open data in a certain domain
- To promote the bottom-up emergence of innovations
- To integrate citizens in the process of service design
- To integrate key stakeholders in an existing partnership
- To integrate my organization in an existing partnership

159. How can you compare the achievement of the above purposes this year with last year's hackathon? Please tick: 1=much better than, 2=better than, 3=same as, 4=worse than, 5=far worse than last year:

- 1
- 2
- 3
- 4
- 5

From Organization to Affordability

160. What have been the elements of distinction of your hackathon? Please rate the following aspects as unique or different from your hackathon and its output and impact, compared with e.g. a service join or another co-design exercise as alternative options:

- Use of data
- Use of co-design methods
- Use of new social groups
- Policy makers buy-in
- Citizens buy-in
- Businesses buy-in
- New concepts delivery
- New mock-up delivery
- New prototypes delivery
- New applications delivery

- More prone to induce new IT apps
- More acceptable for citizens
- More politically correct / acceptable
- More realistic, concrete, achievable

161. In the past hack phase, how much of the following activities has been planned or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row between: 1=activity has been / will be transparentizing the post hack phase and 10=not as such has been transparentized or realized:

- Promotion of developed applications
- Development/tying of new applications
- New services, distributorship
- Improvement of the hackathon mock-ups
- Conceptual refinement of the hackathon ideas
- Existing datasets integration within prototypes
- New datasets creation to feed the prototypes
- Closed datasets disclosure by respective owners
- Knowledge diffusion on open data potential
- New public policies/actions in the hackathon domain

From Execution to Manageability

162. Looking at this year’s versus last year’s participants, do you think there have been:

- More academics involved
- More business persons involved
- More citizens involved
- More city officials involved
- More coders involved
- More consultants involved
- More designers involved
- More Media representatives involved
- More policy makers involved
- More service providers involved

Affordability

163. If and only if you have experienced in the organization of other comparable experiments (such as service jams and the like) how do you think the cost benefit ratio of a hackathon compares with them:

- Quite the opposite
- Definitely lower
- Probably lower
- Perhaps
- Don’t know

Sustainability

164. In the perspective of the Open Data Lab network, and based on experiences from your hackathon, what kind of results can be "packaged" and put at free disposal of other Open Data Labs according to a "cooperation network" logic:

- Policies
- Prototypes
- Mock-ups
- Concepts
- Ideas
- Tinkers
- Tools
- Applications
- Templates
- Methods
- Pictures

- More aware of the value for money of the hackathon
- We have developed a competent team who is here to stay
- We know how to put things in the right order and we made it
- We have been cost efficient and effective in terms of benefit
- There will be additional hackathons after the project’s end
- There is consensus on the value for money of the hackathon
- We have developed a competent team who is here to stay

165. Please grade the following steps below from 1 to 10 in terms of appropriateness to your hackathon, with 1=fully appropriate and 10=not appropriate at all:

- Organizing a hackathon that was the right thing to do
- We knew how to put things in the right order and we made it
- We have been cost efficient and effective in terms of benefit
- There will be additional hackathons after the project’s end
- There is consensus on the value for money of the hackathon
- We have developed a competent team who is here to stay
In the post-hack phase, how much of the following activities has been foreseen or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row between

1 = this activity has been / will be monopolizing the post-hack phase
10 = nothing as such has been foreseen or realized during the post-hack phase:
From justiﬁcation to Sustainability

Are compared with last year's, do you think that your new challenges (apart from the different domain chosen, if relevant to mentioning)

More realistic, concrete, achievable
More politically correct / acceptable
More embodied within open data
More targeted to public value delivery
More acceptable for citizens
More acceptable for data owners
More prone to reduce data disclosure
More prone to induce new IT apps

How much of the challenges has been done during the hackathon, please tick once between 1=the solutions developed...to them?

To take beneﬁt from the novel publication of open data
To open up data that would otherwise remain closed
To explore the potential of open data is in a certain domain
To develop new IT applications based on open data
To demonstrate the potential of open data in a domain
To promote the bottom-up emergence of innovations
To integrate citizens in the process of service design
To integrate key stakeholders in an existing partnership
To integrate my organisation in an existing partnership

How can you compare the achievement of the above purposes this year with last year's hackathon? Please tick once between 1=even better than, 2=of the same, 3=a little worse, 4=the worse than last year

To take beneﬁt from the novel publication of open data
To open up data that would otherwise remain closed
To explore the potential of open data in a certain domain
To develop new IT applications based on open data
To demonstrate the potential of open data in a domain
To promote the bottom-up emergence of innovations
To integrate citizens in the process of service design
To integrate key stakeholders in an existing partnership
To integrate my organisation in an existing partnership

From Organization to Affordability

What have been the elements of distinction of your hackathon? Please rate the following aspects as unique or differential compared to e.g. a service jam or another co-design exercise as alternate options

Use of data
Use of co-design methods
Use of crowd's genius
Policy makers buy-in
Citizens buy-in
Businesses buy-in
New concepts delivery
New mock-up delivery
New prototypes delivery
New applications delivery

In the post hack phase, how much of the following activities has been channelled or implemented (depending on whe...or real-life activities? Please tick once per row between 1=it is channelled or implemented to 5=not at all)

Promotion of developed applications
Development/Pairing of new applications
New services, derivative/products
Improvement of the hackathon mock-ups
Conceptual refinement of the hackathon ideas
Existing datasets integration within prototypes
New datasets creation to feed the prototypes
Closed datasets disclosure by respective owners
Knowledge diffusion on open data potential
New policy actions/Actions in the hackathon domain

From Execution to Manageability

How looking at this year's versus last year's participants, do you think - there have been

More academics involved
More business persons involved
More citizens involved
More city ofﬁcials involved
More coders involved
More consultants involved
More designers involved
More Mattel representatives involved
More policy makers involved
More service providers involved

Affordability

If and only if you have experienced in the organisation of other comparable events/competitions (such as service jamps and the like) how do you think the cost effectively size of a hackathon compares with them

Staff costs of the hackathon organiser
Other costs of the hackathon organiser
Attendants, fee for hackathon
Total costs per attendant
Quantity of hack results
Quality of hack results
Pitches benefits
Benefits to public service
Benefits to businesses
Benefits to society

Sustainability

In the perception of the Open Data lab network, and based on experiences from your hackathon, what kind of results can be "packaged" and put at the disposal of other Open Data labs according to a "cooperation network" logic?

Methods
Tools
Templates
Ideas
Concepts
Mock-ups
Prototypes
Applications
Games
Pictures

Do you please give the six statements below from 1 to 10 in terms of appropriateness to your hackathon, with 1=fully appropriate and 10=not appropriate at all

Organising a hackathon as that topic was the right thing to i
We know how to put things in the right order and we made
We have been cost efﬁcient and effective in terms of beneﬁt
There will be additional hackathons after the project’s end
There is consensus on the value for money of the hackathon
We have developed a competent team who is in love to stay
In the post-hack phase, how much of the following activities has been foreseen or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row between 1 = this activity has been / will be monopolizing the post-hack phase and 10 = nothing as such has been foreseen or realized during the post-hack phase:

<table>
<thead>
<tr>
<th>Activity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1</td>
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<td>Activity 2</td>
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<td>Activity 3</td>
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<tr>
<td>Activity 4</td>
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<td>Activity 5</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Activity 6</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td>Activity 7</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Activity 8</td>
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<td></td>
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<tr>
<td>Activity 9</td>
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<tr>
<td>Activity 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From Justification to Sustainability
JS1: Please grade the following purposes from 1 to 9 in order of importance for your hackathon, with 1=most important and 9=least important (put 0 if not applicable to your case).

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Avg.5 (1=top, 9=bottom)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To take benefit from the recent publication of open data</td>
<td>5.2</td>
</tr>
<tr>
<td>To open up data that would otherwise remain closed</td>
<td>3.6</td>
</tr>
<tr>
<td>To explore the potential of open data in a certain domain</td>
<td>2.4</td>
</tr>
<tr>
<td>To develop new IT applications based on open data</td>
<td>2.4</td>
</tr>
<tr>
<td>To demonstrate the potential of open data in a domain</td>
<td>2.2</td>
</tr>
<tr>
<td>To integrate key stakeholders in an existing partnership</td>
<td>1.8</td>
</tr>
<tr>
<td>To integrate my organisation in an existing partnership</td>
<td>2.0</td>
</tr>
</tbody>
</table>

From Justification to Sustainability (again)
JS2: How can you compare the achievement of the above purposes this year with last year’s hackathon? Please tick: 1=much better than, 2=better than, 3=same as, 4=worse than, 5=far worse than last year.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Avg.3 (1=top, 5=bottom)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To take benefit from the recent publication of open data</td>
<td>3.0</td>
</tr>
<tr>
<td>To open up data that would otherwise remain closed</td>
<td>3.0</td>
</tr>
<tr>
<td>To explore the potential of open data in a certain domain</td>
<td>3.6</td>
</tr>
<tr>
<td>To develop new IT applications based on open data</td>
<td>3.2</td>
</tr>
<tr>
<td>To demonstrate the potential of open data in a domain</td>
<td>2.4</td>
</tr>
<tr>
<td>To integrate key stakeholders in an existing partnership</td>
<td>2.2</td>
</tr>
<tr>
<td>To integrate my organisation in an existing partnership</td>
<td>1.8</td>
</tr>
</tbody>
</table>

From Organization to Affordability
OA2: What have been the elements of distinction of your hackathon? Please rate the following aspects as unique or differential to your hackathon and its rollout and impact, compared with e.g. a service jam or another co-design exercise.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>More essential and pervasive</th>
<th>More effective than</th>
<th>More effective than</th>
<th>Less effective than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of data</td>
<td>0.4</td>
<td>0.4</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Use of co-design methods</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Use of creator genius</td>
<td>0.4</td>
<td>0.4</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Policy makers buy-in</td>
<td>0.4</td>
<td>0.6</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Citizens buy-in</td>
<td>0.2</td>
<td>0.6</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Business买入</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>New concepts delivery</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Much more data</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>New prototypes delivery</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>
In the post hack phase, how much of the following activities has been foreseen or implemented (depending on where this phase is ongoing or finalized)? Please tick once per row. In this activity has been / will be incorporating the pre hack phase and 10 nothing as such has been foreseen or realized during the pre hack phase:

### Promotions of developed applications
- 6.2

### Development/Testing of new applications
- 6.8

### New services/deliveries/prototyping
- 4.6

### Improvement of the hackathon mock-ups
- 4.6

### Conceptual refinement of the hackathon ideas
- 5.2

### Existing datasets integration within prototypes
- 7.8

### New datasets creation to feed the prototypes
- 7.8

### Closed datasets disclosure by respective owners
- 3

### Knowledge diffusion on open data potentials
- 2.6

### New public policies/actions in the hackathon domain
- 2.6

---

**From Execution to Manageability**

**E3** Looking at this year’s versus last year’s participants, do you think there have been:

<table>
<thead>
<tr>
<th></th>
<th>Definitely yes</th>
<th>Perhaps</th>
<th>Don’t know</th>
<th>Probably not</th>
<th>Definitely no</th>
</tr>
</thead>
<tbody>
<tr>
<td>More academics involved</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>More business persons involved</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More citizens involved</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More city officials involved</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More coders involved</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More consultants involved</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More designers involved</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More NGO representatives involved</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More policy makers involved</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More service providers involved</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

---

**Affordability**

**A11** If and only if you have experience in the organization of other comparable experiments (such as service jams and the like) how do you think the cost benefit ratio of a hackathon compares with them:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Definitely higher</th>
<th>Probably higher</th>
<th>About the same</th>
<th>Probably lower</th>
<th>Definitely lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff costs of the hackathon organizer</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other costs of the hackathon organizer</td>
<td>0.2</td>
<td>0.2</td>
<td>0.6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Attendee to hackathon</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total costs per attendee</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Quantity of hack results</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Quality of hack results</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Policy benefits</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Benefits to public service</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Benefits to businesses</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Benefits to society</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

---

**Sustainability**

**S5** In the perspective of the Open Data Labs network, and based on experiences from your hackathon, what kind of results can be “packaged” and put at free disposal of other Open Data Labs according to a “cooperation network” logic?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Definitely yes</th>
<th>Perhaps</th>
<th>Don’t know</th>
<th>Probably not</th>
<th>Definitely no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tools</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Templates</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ideas</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Concepts</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mock-ups</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mock-ups</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Prototypes</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Services</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Policies</td>
<td>0.6</td>
<td>0.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

---

**Sustainability**

**M13** Please grade the six statements below from 1 to 10 in terms of appropriateness to your hackathon, with 10 fully appropriate and 1 not appropriate at all.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing a hackathon on that topic was the right thing to do</td>
<td>1.8</td>
</tr>
<tr>
<td>We knew how to put things in the right order and we made it</td>
<td>2.2</td>
</tr>
<tr>
<td>We have been cost-efficient and effective in terms of benefits</td>
<td>2.3</td>
</tr>
<tr>
<td>There will be additional hackathons after the project’s end</td>
<td>4.8</td>
</tr>
<tr>
<td>There is consensus on the value for money of the hackathon</td>
<td>3.2</td>
</tr>
<tr>
<td>We have developed a competent team who is here to stay</td>
<td>3.4</td>
</tr>
</tbody>
</table>

---

**E4** If and only if you have experience in the organization of other comparable experiments (such as service jams and the like) how do you think the cost benefit ratio of a hackathon compares with them:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Definitely higher</th>
<th>Probably higher</th>
<th>About the same</th>
<th>Probably lower</th>
<th>Definitely lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>New public policies/actions on the hackathon domain</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Development/delivery on open data potentials</td>
<td>0.2</td>
<td>0.2</td>
<td>0.6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Continual development of the hackathon ideas</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Conceptual refinement of the hackathon ideas</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Improvement of the hackathon mock-ups</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>New service delivery on open data potentials</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Promotion of developed applications</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>