

## DELIVERABLE

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# D6.1 PILOT OPERATIONS PLAN

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### Authors:

Steve Cross (CEN)  
Susie Ruston McAleer (21c)  
Lieven Raes (CORVE)  
Peter Merchant (iMinds)  
Carina Veeckman (iMinds)  
Ari Apteker (ANT)  
Andy Radford (BCC)  
Matteo Satta (Issy)  
Dimitri Kozhukh (HSRS)

### Internal Reviewers:

Matteo Satta (ISSY)  
Andy Radford (BCC)  
Ari Apteker (ANT)  
Carina Veeckman (iMinds)  
Jan Martolos (EDIP)  
Karel Charvat (HSRS)  
Jiri Bouchal (ISP)

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## Revision History

Revision	Date	Author	Organization	Description
0.1	30/03/2015	Peter Mechant, Carina Veeckman	iMinds	TOC Pilot Operations Plan
0.2	01/04/2015	Bram Lievens	iMinds	Initial comments and input
0.3	21/04/2015	Peter Mechant	iMinds	Additional input & refinement
0.4	05/06/2015	Steve Cross, Susie Ruston	CEN, 21c	Content and structure
0.5	03/07/2015	Steve Cross, Susie Ruston	CEN, 21c	Content
0.6	16/07/15	Susie Ruston	21c	Integrating pilot content
0.7	22/07/15	Steve Cross, Susie Ruston	CEN, 21c	Content
0.8	28/07/15	Susie Ruston	21c	Adding in Reviewers Comments
0.9	29/07/15	Susie Ruston	21c	Adding in Reviewer Comments
1.0	31/07/15	Jiri Bouchal	ISP	Final version after consortium approval

### Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

## Executive Summary

This report provides a planning template for setting up the pilots for the OpenTransportNet (OTN) project. The pilot operations plan focuses on the three cities of Antwerp (Belgium), Issy-les-Moulineaux (France) and Birmingham (UK), as well as the region of Liberec (Czech Republic) and outlines how they will implement localised versions of the OTN virtual data visualisation hubs.

The plan is the foundation for the whole project implementation to be used as a framework for the operation of the pilots detailing how their subsequent findings and outputs will be fed back into improving the data visualisation hubs. Testing outcomes and feedback from pilot stakeholders will enable refinements to be made to the Hubs and their applications creating an iterative process which can be utilised for evaluation and validation processes carried out in WP7's evaluation tasks. Following this project stage, a final 'proof of concept' phase will test scalability and replicability of the Hub solution by (a) demonstrating how webs services (i.e. new visualisations and map mash-ups) created by one pilot's Hub can be used by another Hub, and (b) enabling a new pilot site to easily and simply use OTN's outputs to set up their own Hub.

The concept of creating services, based on intelligence and insights derived from data on a cloud platform connects the experience developed by a wide range of existing user-driven, open innovation initiatives in Europe. This is particularly true for initiatives developed through Living Labs, and the application of this experience as the challenge of transforming public services by empowering „smart citizens“ provides added value to cities and citizens through the rapid uptake of new services. In the long term the aim is to create a sustainable offering that will provide a wide range of opportunities for new, higher quality sustainable services for citizens and businesses following the conclusion of the project.

### **Addendum for Project Reviewers:**

This deliverable is also used to address key points made by the Reviewers in the first project review namely:

- *“The way users will be engaged in the pilots is not explored. Please define how to engage with potential users, innovators and stakeholders.”*

In response to this point we undertook a workshop to discuss and evaluate user profiles of the Discoverers, Sponsors and Innovators within each pilot. This profiling exercise helped users in understanding, which target individuals, and groups they need to approach and engage during the pilots. The results are outlined in Chapter 3: Pilot User Recruitment and Management.

- *“It is unclear in the long-term what methodology the consortium will use for engaging with new stakeholders during the project development. A methodology would help to identify the set of activities and channels that consortium partners will use for engaging with stakeholders in the different city pilots.”*

A common open user group methodology has been adopted for each pilot to follow to engage with stakeholders for each cycle. This methodology is outlined in Section 2.1.

Common Pilot Framework. Pilots then used this methodology to create their own framework of activities in Section 2.2 Individual Pilot Approach.

- *“At the end of year 3, each city pilot should have an OTN stakeholder community. Please make a plan including schedule and list of planned activities the partners will execute for engaging with stakeholders in the different city pilots during the next two years, before 31st July.”*

Each pilot produced a high level plan of suggested activities and events for engaging with stakeholders during each testing cycle. These activities and events are including in a Living document - the OTN delivery Roadmap, of which a current snapshot is provided in Chapter 6 Resources and Timeline. This roadmap will be regularly updated on pilot calls. Regular reporting will ensure OTN meets the stakeholder target, by reviewing which engagement tactics the pilots deploy are successful or not in attracting new users. These lessons will be invaluable in stimulating new outreach ideas.

- *“Bring domain experts into the lifecycle and involve them in the harmonization processes. Tools used by domain experts in other domains (e.g. Google refine) could be used by OTN experts to speed up the harmonization process, which is costly.”*

The pilots recognise that many of the innovators they may engage during the pilot could also be domain experts with valuable knowledge that could benefit the operational processes of the Hub. With this in mind, Partner iMinds (Ghent) has set up a GitHub page for OTN where developers can contribute to improving the open source Hub. This resource/opportunity will be advertised at each event where ‘innovators’ are present and any contributions/changes will result in a shout out on Twitter or LinkedIn so the contributors are give recognition. The aim is to make the community feel as though they own OTN. The process is outlined in Section 5.2 Change Control.

# 1 Introduction

This task develops a Pilot Operation Plan to ensure that the pilots deploy and test the OpenTransportNet Hub solution effectively. The Operation Plan will be discussed for each pilot separately, due to their particular focus that forms the core of their OTN Hub deployment and user engagement: (1) Issy les Moulineaux, France - Planning; (2) Birmingham, UK - Road Safety; (3) Liberec, Czech Republic - Crisis Management; (4) Antwerp, Belgium - Infrastructure maintenance.

The Pilot Operation Plan is designed to provide a high level manual for deploying a strong and effective pilot in each location. Typically, this plan encompasses a proposal that lists the objectives of the pilot and documents how the pilot will be carried out. The plan also provides a time-line and metrics for assessing how the success of the pilot will be determined. In short, the plan defines pilot main characteristics and identifies the activities, schedule, resource requirements, as well as risks (and risk mitigation) for the pilot.

To this end, the plan will include the following:

- Pilot objectives and success criteria
- Pilot strategy and timetable
- Approach to capacity-building and support
- Communication and engagement strategy
- Risk reporting and contingency plans
- Roles and responsibilities of project partners

The pilot plan includes a detailed definition of the phases and activities to be followed in order to achieve the desired results. Each phase and activity is described thoroughly, so as to act as a guide for the consortium partners, in order for the pilots to be successful. We foresee the following phases/activities in the pilot operation plan:

- Description of the pilot scope: this section clearly describes the pilot by outlining a framework for how the pilots will operate
- Description of the pilot user recruitment approach: this section states how the pilots will recruit and manage users during the pilot to meet the objectives in the previous section
- Description of the pilot implementation: this outlines the activities that will take place and the key resources needed for successful piloting
- Description of the pilot success criteria: this outlines how the pilots will measure success
- Description of the pilot resources/timetable: this section includes a schedule for the pilot implementation, including a list of planned key activities, their expected completion date
- Description of the pilot evaluation: this section outlines the approach and methodology taken in evaluating and assessing the success of the pilot implementation (on the pilot level). It describes amongst others which data will be collected and how the people data is collected from will be informed.
- Description of the pilot risks: this section describes what risks the key pilot activities entail and state how these risks can be mitigated.



## 2 Pilot Scope

### 2.1 Common Pilot Framework

The four pilots each seek to provide feedback on the development of the Hub and how it is used under four different scenarios. Hence, there is a need for a common approach to encompass the pilot specificities and differences. The deployment strategy therefore, is presented as a broad framework within which each pilot needs to operate.

The deployment strategy consists of five common action points:

- Number of phases and the aim of each phase;
- Number of cycles and the aim of each cycle;
- Overall timing framework of phases and cycles;
- Number of users participating;
- Data capture methodology and analysis.

The deployment and testing of each of the pilots builds upon the work done by the technical partners in taking the user requirements from the pilot cities to build the data analytics Hubs. The deployment and testing of each of the pilots will follow a common three-phased strategy:

- Phase 1: Closed User group;
- Phase 2: Open User group;
- Phase 3: Proof of Concept

Although continuity between and within the three stages is necessary given the iterative nature of the development of each pilot, each phase has its own finality and focus in order to take advantage of the Living Lab approach.

#### 2.1.1 Phase 1: Closed User Group (CUG) Description



**Phase 1: Closed User Group:** The commencement of this phase will signal that the OTN Hub has ‘gone live’. Each pilot will first be deployed in a limited, closed user group with a minimum of 8 users carefully selected by each Pilot Administrator. The goal of this phase is to make sure that the Hub services are, from a technical point of view really working, and meet user requirements. Unlike the technical testing undertaken within WP5 which investigates system stability of the Hub by the pilot technical teams; the main focus of the CUG is about initial functionality and usability testing. Each pilot will trial the Hub features and investigates its service compliancy with their particular scenario to test initial user requirements. The experiences of this test phase will flow back to the technical development teams in order to deploy each of the services in an open, larger community.

**Pilot Deployment Steps:**

The Closed User Group is all about testing the Hub for the purposes of evaluating usability and providing feedback to the technical partners for improvement of functionality. For this reason, the approach and methodology for the Closed User Group has been specifically created for OTN by evaluation lead partner iMinds. They have provided detailed instructions on how to run the Closed User Group workshops within Work Package 7’s Evaluation Plan. These instructions are not repeated here, rather, below is a series of high-level deployment steps:

1. **Identify Users:** At this stage of testing, ideally users should be sought who are familiar with the OTN project concept, and have potentially taken part in the user requirements gathering stage. It would be helpful to ensure participants also cover the different user groups defined by the Hub, i.e. Discoverers, Sponsors and Innovators. Users should be invited by personal invitation - preferably a phone call followed up with an email outlining the agenda for the workshop and link to OTN website and brochure.
2. **Personalise Hub:** Each pilot Hub should contain uploaded data sets, at least one test visualisation, a ‘dummy’ challenge in the marketplace, and ‘dummy’ forum threads. This population is important in order to enable the participants to follow a series of instructions to test the Hub features.
3. **Run Workshop:** There is the possibility that not all the Hub features will be ready by the time testing begins. If this is the case, paper prototypes should be used alongside the actual Hub.
4. **Capture Feedback:** Follow the iMinds instructions to ensure relevant information is captured for assessment and evaluation purposes.
5. **Review and Assess:** Alongside the participant feedback that will go to iMinds for official validation, it is important that each Pilot partner reviews their own experience of the Hub. Does it meet the expectations from the user requirements? Does the Open User Group approach need to be adapted based on what has been learned?

**2.1.2 Phase 2: Open User Group (OUG) Description**



**Phase 2: Open User Group:** Once the changes from the Closed User Group have been made the deployment of each Hub in an open, larger community - the Open User Group - phase starts. First each individual pilot will deal with the specificities of its corresponding scenario. Testing will focus on both the Hub service including data integration with the platform and its analytical performance. The activities of this community will be monitored and accompanying user research will be conducted. The experiences within each of the pilots will be exchanged on a permanent basis between the pilots themselves and the technical development team of the OTN platform. This dynamic interaction allows for adjustments and updates on the platform in an agile manner and immediate validation of the outcomes in the pilots itself. Each of these changes will be evaluated for each of the pilots.

### ***Pilot Deployment Steps:***

OpenTransportNet is designed to unlock the benefits of Geographical Information for all kinds of potential users, regardless of technical background. It enables a range of people to come together via the Hub to jointly produce value through new ideas and services that come from data insights. It goes beyond the state-of-the-art in analytics platforms, as it is more than just an advanced data portal, it is in fact a co-creation enabler. In order to validate the Hubs within each of the Open User Group cycles, the pilot cities must go through a number of steps:

1. **Frame the Need:** Firstly the ‘business challenge’ that you’d like Hub users to be addressed for that cycle needs to be selected. This challenge should then be posted on the ‘Marketplace’ section of the Hub along with pointers to relevant data sets that should be utilized for solving the challenge.
2. **Recruit End Users:** Identify a wide range of users depending on the challenge idea. For crowdsourcing ideas, they should contain a range of community groups and business users. For hackathon and service creation the audience should also include developers and designers to help build a solution. In terms of engagement, one-on-one personal outreach works best through telephone and mail, though promotion through local newsletters, and social media is also good technique to create conversations and invite a wider number of people.
3. **Crowd Source Ideas:** Share the challenge with your audience and use the Hub to engage them in conversations around ideas. If needed, create some data visualizations yourself that will help give them insights to form opinions. Respond to comments and questions quickly in order to keep folk motivated. Invite them to special sessions/workshops called Data Jams to meet each other in person and discuss the ideas more fully. The more ideas that are generated quickly the larger the portfolio of potential innovations may be.
4. **Co-Create Solutions:** Using the ideas and commentary from your online community as stimulus, bring developers together with the best idea owners to develop new product or service concepts (these could be new useful visualisations or apps) or propositions that fit with smart mobility objectives. Teams will use data and APIs from the Hub, however they can use any other development tools of their choice. Facilitate your communities work remotely via the Hub but be sure to bring them together at set times in Hackathons or similar events for agile development purposes. By the end of year 3 the Hubs should have generated 14 services or propositions (four of which will be developed internally by our own project team). It may be useful to have members of the project tech team help support these hack events.
5. **Test the Results:** Now expose the new prototypes back to the community via the Hub to validate, improve and prioritise via potential voting, ranking, and online discussion. If possible, with the help of iMinds, carry out quantitative and qualitative analysis to objectively evaluate which services should be adopted, or be taken to market. Remind your audience that there are Mentors on the Hub who can help them develop their business idea further.
6. **Recognize and Reward:** Once you have new products and services, use social media and

local community outlets to showcase the results and highlight the work of the volunteers on the Hub.

### 2.1.3 Phase 3: Replicability Proof of Concept Description



**Phase 3: Replicability Proof of Concept:** The third and final phase is the overall evaluation phase which tests the replicability and scalability of the Hub network. Under the stewardship of CORVE, one or more of the pilot scenarios will be deployed in an open user group configuration with a new Hub location, as a proof of concept for the growth and sustainability of OTN.

#### **Pilot Deployment Steps:**

CORVE, and indeed all Partners, will during their dissemination and promotion of OTN's vision and achievements keep an eye out for potential new adopter cities. Upon engagement the partner who has generated the lead will pass the contact to CORVE. CORVE will set up a call with the potential pilot site to discuss what would be involved in becoming a new adopter. If the potential adopter decides to move forward, a meeting will be set up with the technical partners and an existing pilot partner as a mentor to plan the set up.

### 2.1.4 Testing Cycles

Within each deployment phase, a series of testing cycles will take place to analyse and adjust the platform in a series of iterations.

Within the Closed Group Phase, one test cycle is planned. The first will take place from August 2015. This builds on the testing carried out in WP5 and elaborates on issues of functionality and usability. A period of four weeks is foreseen to implement the changes based on these results and further develop the prototype prior to launch with a larger, open community.

Within the Open Group phase, all pilots will have three test cycles in order to improve the development of the pilot's as well as the Hubs themselves. Testing cycles will take place from November 2015, January 2016 and April 2016 as shown in the table below.

Table 1: Overview of the Pilot Phases, Cycles and Activities

Phase & Target	Cycle Date	Strategy/Activity
Closed User Group	<b>Cycle 1:</b> Start: 01 Aug 2015 End: 30 Sept 2015	<b>Usability Testing:</b> During interactive workshops. Feedback used to improve accessibility and usability of the Hub features before a wider launch
Open User Group	<b>Cycle 2:</b> Start: 01 Nov 2015 End: 31 Dec 2015	<b>Crowdsource Ideas:</b> Local launches of the Hubs based around a specific City challenge to be solved through data use.

	<b>Cycle 3:</b> Start: 01 Jan 2016 End: 30 Mar 2016	<b>Co-Creation of Solutions:</b> New service creation challenges via Hackathons
	<b>Cycle 4:</b> Start: 01 Apr 2016 End: 31 Jun 2016	<b>Test Results:</b> Validate impact of services generated by the Hub
<b>Replicability Proof-of-Concept</b>	<b>Cycle 5:</b> Start: 01 April 2016 End: 30 Sep 2016	New Hub to be set up in an as of yet identified location

### 2.1.5 User Numbers

A key goal of the project is to test the OTN Hubs in a real world setting with the potential of more than 500 users. The definition of a ‘user’ for OTN is someone who has participated in at least one of the Hubs key functionalities and who has provided some form of feedback. At least 30 of these will form part of the initial Closed User Group for testing prior to the wider launch with the Open User Group. This second phase will aim to recruit a minimum of 400 users. During the final ‘Proof of Concept’ phase OTN aims to work with a minimum of another 100 users. Additionally, stakeholders from city administrations and other stakeholder groups may carry out testing completing the evaluation phase.

### 2.1.6 User Roles and Engagement Channels

Each pilot is expected to test the Hub with a broad range of set user types listed below:

- **Discoverer:** a stakeholder who has an interest in exploring the ‘mash-up’ of different data sets to gain insights and knowledge about transport situations, locations, etc. Discoverers may be converted into sponsors and/or innovators
- **Sponsor:** a stakeholder from local authorities and business who have a transport related need that they would like to address. Sponsors will be able to help innovators shape their new services and will have the opportunity to enter into a business venture with the creator (→ this type of stakeholders uses the ‘challenge’ section on the hub)
- **Innovator:** a stakeholder (individual, SME, etc.) who has an idea for a new business application or services. Innovators will use the hub to gain insights from data, build a service, use the data and market it directly to sponsors or other markets.

All pilots have completed a localized stakeholder register for each of these stakeholder groups when undertaking the user requirements phase of the project. This register will be used, updated and maintained whilst entering the piloting phase. In addition recommended engagement channels include:

Discoverer	Sponsor	Innovator
<i>Most likely citizens and therefore often the hardest to</i>	<i>This group will mainly consist of city managers or influencers</i>	<i>These may be students, small businesses, employees in</i>

<p><i>access:</i></p> <ul style="list-style-type: none"> <li>• Contact your community engagement manager within the City and ask for their support and advice on groups they know who could benefit from the project</li> <li>• Call and write to relevant Community Groups asking to meet and discuss their involvement</li> <li>• Look for local blogs discussing transport issues and reach out to them through phone and email</li> <li>• Ask friends, colleagues and family to participate in your workshops and events and recommend the Hub to their friends</li> </ul>	<p><i>from businesses:</i></p> <ul style="list-style-type: none"> <li>• Look internally at your department and target to managers you think would benefit from OTN</li> <li>• Send a group email asking for challenge ideas for the Hub and a hackathon</li> <li>• Find event opportunities to recruit new sponsors in the city - advertise through internal newsletters, speak at internal meetings</li> <li>• Call and write to local businesses offering them the opportunity to sponsor a hack or data jam (for free or a fee) and ask them to help promote the event</li> </ul>	<p><i>larger corporates, volunteers</i></p> <ul style="list-style-type: none"> <li>• Search social media for existing developer meet ups and reach out to the organisers about using OTN</li> <li>• Attend existing hackathons and relevant conferences to hand out leaflets about your latest OTN event/challenge</li> <li>• Regularly post updates on Twitter and LinkedIn about the challenges and calls for participation</li> <li>• Ask the engaged developers what motivated them to participate and try to replicate the reason in your engagement material</li> </ul>
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## 2.2 Individual Pilot Approach

Whilst OpenTransportNet provides a common framework for the deployment of each pilot in order to ensure a systematic approach to validation of the open innovation ecosystem for transport data, the deployment also takes into account the variability of each pilot site in terms of its individual scenario needs and requirements. The differences between the pilot sites will help the Consortium use the evaluation feedback to identify the best conditions for deploying an impactful Hub programme.

A Logical Framework Approach (LFA) will handle the management of these differences within the scope. LFA is a management tool mainly used in the design, monitoring and evaluation of international development projects. OTN has adopted the following components from its basic structure to help define the rest of this plan:

- Long-term goal / social & economic impact (outcome) which describes the general goal of the pilot and the expected socio-economic impact they wish to achieve from the project
- Direct purpose of the pilot which includes a definition of potential products & services they wish to see generated by the pilot as well as a definition of the target user groups

During the Open User Group, in order to ensure the pilots definitely achieve direct impact, and ROI from the Commission funding, they will run a more controlled service innovation stream alongside the ‘open’ calls for ideas and solutions. These ‘**controlled innovation cases**’ are where the internal technical team will innovate using the Hubs to create apps (see each pilot objective/scenario in the next section) which will help provide templates and case studies for helping new users of the Hub.

### 2.2.1 Antwerp Pilot Objective

#### Long Term Goal:

Antwerp’s long-term goal for the Hub is to find innovative ideas and solutions to help the city better manage the road infrastructure in Antwerp, especially during high tourism season. The results should help planners make better decisions, improve traffic flow as well as boost the overall happiness of road users in Antwerp.

#### Direct Purpose:

A proof of concept solution for the Hub has been generated based on developments within the city since the project started. The city of Antwerp recently released a tender for a platform “Antwerpen Bereikbaar”, which should help commuters and visitors in reaching Antwerp during popular festivals. A feature of this platform will be a real-time route planner, which will utilise data on traffic, and public transportation purchased from private partners or be provided by the public transport company “De Lijn”. The vision for the route planner on Antwerpen Bereikbaar is for it to be multimodal, however there is a big gap in the data provision - bicycle data.

Therefore the goal of the OTN pilot will be to provide the missing bike data to provide an additional layer of information for Antwerpen Bereikbaar. This layer will be achieved by using OTN to create an app to collect crowd sourced cycling data. Besides delivering the layer with useful bike data, it is also important to attract users by giving them insight in their own collected data and give useful rewards. The city of Antwerp will receive very useful information on the popular biking routes (usage in time, speed information, quality of the track). Third parties can use the information to build new interesting apps with the specific OTN components (like the crowdsourcing functionality) and the data itself.

### 2.2.2 Birmingham Pilot Objective

#### Long Term Goal:

The long-term goal in Birmingham is to improve road safety through enhanced traffic information. A key objective is to be able to better inform citizens and decision makers about transport information in their neighbourhood.

#### Direct Purpose:

The pilot intends to provide citizens with the ability to record road safety and traffic issues that they are aware of, both for the attention of the council and for the benefit of other interested parties. The project will demonstrate a resolution to 3 key issues:

1. Citizens need to be better informed on road safety issues to enable them to lobby the council for changes

2. The council gets a lot of requests for data, which would be unnecessary if citizens could get this via the OTN portal
3. There is no mechanism to report accidents that only involve damage, and not injury. This gap in data could be filled by citizen voluntary info.

Once a solution for capturing road safety information is developed it is intended to test it with residents groups, council officers, councillors and developers to determine its effectiveness.

### 2.2.3 Issy les Moulineaux Pilot Objectives

#### Long Term Goal:

The city of Issy-Les-Moulineaux is facing traffic and public transport congestion, which needs to be solved. The long-term plan of Issy is to build a multimodal transport application, making it possible to have a quick and clear picture of the transport situation at any given moment, ideally with real time data.

#### Direct Purpose:

Issy wish to use OTN to help create service solutions that enable citizens to better plan his/her urban trip according to the real-time traffic situation on the roads and the whole transport network (train, tram, metro, bus). Because a majority of the travel within Issy is done by other means than the car, a routing planner should be multimodal by combining all transport modes (public transport, car, car sharing and bike sharing). The goal of the pilot is to see how the current available data can be combined to a smart multimodal route planner pilot application.

### 2.2.4 Liberec Region Pilot Objectives

#### Long Term Goal:

The Liberec region is an area that occasionally suffers from disasters such as for example floods or forest fires. The long term goal of the pilot is to keep up to date database of the road network (including forest/flooded tracks) with all live restrictions related to its' segments (impassable due to roadwork's/flooded/car accident etc.) so as to further solve certain tasks related to rescue operations such as to provide rescuers precise routing to the place of the accident etc.

#### Direct Purpose:

The problem that pilot is trying to solve is to create routing service based on actual information in cases of emergencies such as flood, that in perspective will be used by emergency forces. The service will run on the transport network enriched by the forest tracks and will use volunteered data such as (flooded areas, destroyed bridges and other impassable places) as well as some data, that are publicly available i.e. data from Road and Motorway Directorate of Czech Republic that show current events (roadwork's, car accidents, traffic jams) on the roads. Secondary pilot scenario is to create tools that will help flood commission to distribute volunteers and humanitarian help among affected citizens efficiently.

The main purpose thus is to help emergency management with the abovementioned services and data.



## 3 Pilot User Recruitment and Management

This chapter details how the pilots will select and recruit end users from their communities and manage them throughout the phases and testing cycles to meet their pilot goals. The following areas are common to all pilots:

- Profiling of users
- Recruitment and selection
- User requirements and participation
- User retention, support and training

### 3.1 Antwerp Pilot

#### 3.1.1 User Profiling

Antwerp's profiling focuses on users with an interest in cycling as this fills a gap in their existing open data provision within their city portal. Understanding the profile of each stakeholder group will help in identifying relevant groups to target, the crafting of specific engagement messages for recruiting Hub users, and the shaping of the overall pilot activities.

Table 2: Antwerp Stakeholder Profiling

	Discoverers	Sponsors	Innovators
<b>Who</b>	<p><i>Name:</i></p> <ul style="list-style-type: none"> <li>• Data volunteers use app to track cycle use</li> <li>• Local press (GvA, Sasha van Wiele)</li> <li>• Local blogs like Antwerpenize</li> <li>• Cycle taxi companies</li> <li>• Bike tour companies</li> <li>• Cycle couriers (like Bubble Post)</li> <li>• Public transport comps De lijn</li> <li>• Fietsersbond</li> </ul>	<p><i>Name:</i></p> <ul style="list-style-type: none"> <li>• City of Antwerp / Mobility Department</li> <li>• Province of Antwerp Bike sharing systems=</li> <li>• Velo / Clear Channel (Bike sharing system)</li> <li>• BlueBikes (nmbs)</li> <li>• Fietshaven (bike rental)</li> </ul>	<p><i>Name:</i></p> <ul style="list-style-type: none"> <li>• Student / app developers</li> <li>• Makers of touting planner</li> <li>• City of Things test community</li> </ul>
<b>About</b> <i>i.e. expertise, tech skills, business background?</i>	<ul style="list-style-type: none"> <li>• Knowledge about cycling needs in the city</li> <li>• Communication network</li> </ul>	<ul style="list-style-type: none"> <li>• Insight in cycle policy</li> <li>• Data owners</li> </ul>	<ul style="list-style-type: none"> <li>• Programming /</li> <li>• Setting up test cases</li> </ul>

<p><b>Why?</b> <i>What is the value proposition for them?</i></p>	<ul style="list-style-type: none"> <li>Keep track of personal bike use</li> <li>Play with the data</li> <li>Improve their expert status</li> <li>Access to quality data</li> </ul>	<ul style="list-style-type: none"> <li>Use for own work</li> <li>Reach own targets</li> <li>Build partnerships</li> <li>Measurement of cycle policy</li> </ul>	<ul style="list-style-type: none"> <li>Practice technical skills</li> <li>Access data more easily</li> <li>Networking</li> <li>Use in own work</li> </ul>
<p><b>Incentives?</b> <i>How will you encourage them to take part? Gamification?</i></p>	<ul style="list-style-type: none"> <li>Post monthly challenge, reward use of the app with A-card points</li> <li>Crowdsource info and give users the opportunity to rate and categorize their routes</li> </ul>	<ul style="list-style-type: none"> <li>Improve the info they have about cycle infrastructure</li> <li>More open data</li> </ul>	<ul style="list-style-type: none"> <li>Have access to more quality data sets and services</li> </ul>

### 3.1.2 Phase 1: Closed Group Recruitment

Antwerp has invited the following named users below to their CUG workshop to guarantee they meet their target of involving a mix of 8 stakeholders of different types:

Table 3: Antwerp Closed User Group Stakeholders

Stakeholder Name	Stakeholder Role Type	Engagement Method
Sammy Cappaert	Sponsor	Focus Group
David van Proeyen	Sponsor	Focus Group
Dietmar Bosmans	Innovator	Focus Group
Stijn Wens	Discoverer	Focus Group
Dirk van Eycken	Discoverer	Focus Group
Michael Thuy	Innovator	Focus Group
Sasha van Wiele	Discoverer	Focus Group
Greet Steynen	Discoverer	Focus Group

### 3.1.3 Phase 2: Open Group Recruitment

Antwerp's plan for Open User Group recruitment follows very closely to their profiling table above:

**Table 4: Antwerp Open Group Recruitment**

Cycle Elements	Discovers	Sponsors	Innovators
Targeted Groups	Cyclists who will use OTN created apt o track their it	Colleagues in the Antwerp mobility department	Students at local universitys, schools and innovation centers
Engagement Tactics	Advertise the app for free on the council site, the Hub Portal. Reach out to local cycle groups and inform them of the free app	Give them the opportunity to post their own challenges on the Hub - potentially save money and Crowdsourc ideas	Invite to data hacks where they can co-create ideas from the cycling data and other Antwerp transport data on the Hub
Gamification Ideas	Run competitions and consultations around real issues the cyclists care about.	Showcase benefits/business case of using OTN	Send updates about the data and new competitions

### 3.1.4 User Requirements & Participation

#### Closed User Group

The closed user group will consist of an internal workshop to test the Hub and a prototyping workshop to test the cycling app features. iMinds will help Antwerp run the workshops/focus groups.

#### Open User Group

The plan for the Open User Group that follows the common framework is:

**Cycle 2: Crowdsourc Ideas:** The pilot will be launched in Antwerpon October/November in a workshop, with a press release. The Antwerp pilot team with the help of technical partners will create some visualisations using already available cycle data (not from the app, which will still be under construction at that time) and will pose a consultation type question around these visualizations. For example: how would you map the main bottlenecks for cyclists? Which cycle lanes are the most popular? Answer submissions could consist of a technical or non-technical solution but should involve the using and visualising of data in creating the solution.

**Cycle 3: Co-Create Solutions:** Cyclists will begin using the tracking app. They will be encouraged to do so, by a media campaign and monthly "challenges" / "games" that will be promoted through the app. A first "testing" group would be about gathering a group of about 10 volunteers, having them ride specific routes, monitoring how they use the app and evaluating it. In a second phase, more users would start using the app, and so we will be able to organize some workshops where either app users study "their" data, and cycling "experts" analyse the new data, in combination with existing datasets, to gain new insights.

**Cycle 4: Test Results:** The app will move from beta to fully functional, and will be released and promoted for general use and feedback. Meanwhile, the gathered data will get richer, creating the possibility to create a "report" about cycle use in Antwerp, built based on the insights gained from the hub (and visualised through it).

### 3.1.5 User Retention, Support & Training

It is anticipated that user training may be required to use the Hub as mashing geo-data can be a very complex issue. The form of this training will include demonstrations at Data Jam events in the city, along with help on the platform in the form of FAQs and video support. Decisions on what should be included in the training will be made after the 'internal testing' of the Hubs by the pilots themselves at the end of August.

In terms of incentives, Antwerp is exploring a system where Hub participants could be rewarded with A-card points, which they can redeem for various prizes in the city. This form of gamification is being explored over the Summer months and if approved would be put in place shortly after the launch of the OUG. More incentives will be discussed as the planning for the OUG evolves.

## 3.2 Birmingham Pilot

### 3.2.1 User Profiling

From the table below Birmingham has a clear idea of the kind of end users they wish to be targeting across all three-stakeholder groups. Networking, capacity building and status boosts appear to be important to each group, which provides important insights in developing ways to incentivise Hub use.

**Table 5: Birmingham Stakeholder Profiling**

	Discoverers	Sponsors	Innovators
<b>Who</b>	<i>Name:</i> <ul style="list-style-type: none"> <li>Local Councillor</li> <li>Road Safety officer</li> <li>Cycle Group member</li> </ul>	<i>Name:</i> <ul style="list-style-type: none"> <li>Head of Transport</li> <li>ROSPA</li> <li>Women on Wheels Leader</li> </ul>	<i>Name:</i> <ul style="list-style-type: none"> <li>Student Groups</li> <li>SME</li> <li>Tech Enthusiast</li> </ul>
<b>About</b> <i>i.e. expertise, tech skills, business background?</i>	<ul style="list-style-type: none"> <li>Non technical</li> <li>Curious</li> <li>Active in the community</li> <li>Potentially people with spare time (i.e. folk waiting at bus stops)</li> </ul>	<ul style="list-style-type: none"> <li>Big picture folk</li> <li>Have budgets to use wisely</li> </ul>	<ul style="list-style-type: none"> <li>Technical</li> <li>Understand Open Data</li> <li>Like a challenge</li> <li>Are innovative</li> </ul>
<b>Why?</b> <i>What is the value proposition for them?</i>	<ul style="list-style-type: none"> <li>Personal goals/needs</li> <li>Status or fame</li> <li>Meet folk with common interests</li> </ul>	<ul style="list-style-type: none"> <li>Attain policy goals</li> <li>Access to new skills / tools</li> <li>Build partnerships</li> </ul>	<ul style="list-style-type: none"> <li>Focal point</li> <li>Gain status/fans</li> <li>Specific purpose</li> <li>Learning/networking</li> <li>Mentoring/sharing</li> </ul>
<b>Incentives?</b> <i>How will you encourage them to take part? Gamification?</i>	<ul style="list-style-type: none"> <li>Respect and feedback</li> <li>Early visualisations - create something quickly</li> <li>Easy to share</li> <li>Feel like achieving collective good</li> </ul>	<ul style="list-style-type: none"> <li>Good publicity from the tool</li> <li>Opportunity to gather feedback</li> </ul>	<ul style="list-style-type: none"> <li>Business potential</li> <li>Showcase for work/skills</li> <li>Early visualisation</li> <li>Easy to share</li> </ul>

### 3.2.2 Closed Group Recruitment

Birmingham has identified individuals who will participate and provide feedback in the CUG.

**Table 6: Birmingham Closed User Group Stakeholders**

Stakeholder Name	Stakeholder Role Type	Engagement Method
<b>Andrew Radford</b>	Sponsor	Focus Group
<b>Anne Shaw</b>	Sponsor	Focus Group

<b>Stuart Lester</b>	Innovator	Focus Group
<b>Steve Loh</b>	Discoverer	Focus Group
<b>Steve George</b>	Innovator	Focus Group
<b>Councillor Trickett</b>	Discoverer	Interview
<b>Councillor McKay</b>	Discoverer	Interview
<b>Steve Cross</b>	Innovator	Focus Group

### 3.2.3 Open Group Recruitment

Birmingham’s plan for starting to engage wider users in their Open User Group activities is outlined in the table below. In order to initially focus communications, the team will focus on three districts within the city - Sellyoak, Moseley and Kings Heath.

Table 7: Birmingham Open Group Recruitment

Cycle Elements	Discovers	Sponsors	Innovators
Targeted Groups	<ul style="list-style-type: none"> <li>Residents Forums - Sellyoak, Moseley and Kings Heath</li> <li>Road Safety Community Groups</li> <li>Local Schools and colleges</li> </ul>	<ul style="list-style-type: none"> <li>Birmingham City Council Transport Department</li> <li>Birmingham Council CRM Department</li> <li>Local Councillors</li> </ul>	<ul style="list-style-type: none"> <li>Podnosh - Open Data Surgeries</li> <li>Digital Birmingham Group</li> <li>Dr Rick Robinson - Smart Cities Group</li> </ul>
Engagement Tactics	<ul style="list-style-type: none"> <li>Participation in Resident Forum meetings</li> <li>Meetings with Road Safety Groups</li> <li>Calls and flyers to schools and colleges</li> </ul>	<ul style="list-style-type: none"> <li>Meetings with key members of the Council</li> <li>News stories in the Council internal newsletter</li> </ul>	<ul style="list-style-type: none"> <li>Attendance at local events and workshops</li> <li>Invite contacts to an OTN event</li> <li>Social Media updates</li> </ul>
Incentive / Gamification Ideas	<ul style="list-style-type: none"> <li>Community Awards</li> <li>New skills/tools to help with lobbying</li> </ul>	<ul style="list-style-type: none"> <li>Show cost savings</li> <li>Publicity from press releases and social media</li> </ul>	<ul style="list-style-type: none"> <li>Hack competition to showcase skills to potential clients</li> <li>Networking opportunities</li> </ul>

### 3.2.4 User Requirements & Participation

#### Closed User Group

For the CUG, two modes of participation will be utilized:

- 1) *Interactive Workshop*: Participants will be required to attend a workshop at Birmingham City Council. At the workshop participants will receive a short presentation about OTN and the Birmingham pilot aims before being set 2-3 tasks to try and complete using the Hub before being asked to complete a questionnaire about their experience. In addition to the usability testing, participants may be asked to take part in a short proto-typing session around the potential apps/visualisations that can be co-created using the Hub
- 2) *Private Demonstration*: For time pressured local councilors who may not be able to make a focus group session, a one on one demonstration of the Hub will take place, followed by a direct interview to capture feedback.

### Open User Group

The Open User Group will consist of a series of different activities that follow the objectives of the overall testing cycles:

- **Cycle 2: Crowdsourcing Ideas**: The pilot will be launched in Birmingham in conjunction with an October hack day that is being set up in the city with the support of the Council.

The Birmingham pilot team with the help of technical partners will create 2 - 3 visualizations using the hub data and will pose a consultation type question around these visualizations. For example, how to reduce accidents at a particular time in a particular area. Answer submissions could consist of a technical or non-technical solution but should involve the use of data in creating the solution.

The competition will be advertised through (i) personal invitations to local businesses and community groups as outlined in the project Stakeholder Register, (ii) hosting of networking events or data jams - as described in D7.1 Evaluation Plan - to find out more about OTN and the potential of transport data (ii) social media outreach and (iii) traditional press through flyers, newsletters and a press release.

The Ideas for road safety will be collected through the Hub, and will be promoted via social media to raise additional awareness about the competition. Participants will be asked to vote for the top 5 ideas generated.

- **Cycle 3: Co-Create Solutions**: Idea owners and developers will be asked to come together at a hack weekend and build a prototype for the most popular ideas using the data in the Hub. The results will be filmed and each group will be asked to make a presentation to a Dragons Den panel comprising of local business icons. The Dragons will decide on the best business or social innovation and will award the winning team a cash stipend to further develop the prototype for the city.

At the same time, the internal project developers will be working on developing Birmingham's 'accident data capture' proof-of-concept innovation to ensure at least one solution is built using the Hub which can be tested in the following cycle.

In addition to the adult hack competition; Birmingham will run a series of educational hack days, or Data Fests, with local schools to help embed the value of data and entrepreneurship in the younger generation to show them the importance of business skills for innovation. Local businesses will be asked to sponsor the prizes for the youth data fests.

- **Cycle 4: Test Results:** The resulting services and apps will be released and promoted for general use and feedback. The data generated by the ‘accident data capture’ app will be released as a new data set on the Hub. A case study will be generated by the Birmingham pilot team to be used as a catalyst/hook to engage more people on the Hub.

The detailed nature and timing of the activities will be prepared in advance of each cycle.

### 3.2.5 User Retention, Support & Training

At the start of the project, the Birmingham Pilot Team hoped that the use of OTN would be intuitive, however the complex nature of the data sets being utilised means that this may not be the case. Instead, to turn a weakness into a strength the pilot team are focusing on setting up skills events for beginners (Data Jams) and co-creation workshops (Hack Days) during the Open User Group stage, where people with different skills will be able to come together to use the Hub. In addition Consortium members themselves will be able to be hands on and help end-users with less technical experience.

Experience has shown the Birmingham team that project technical manuals are rarely read by the majority of remote end-users. This being the case, Birmingham would like to have a short general video on the Hub to explain the purpose of the different features, with potentially a more detailed video for creating the data visualisations. By the end of the project, a simpler solution for data mash-ups should be available for people with a less technical background.

With regards to incentives for participating in the Hub the Birmingham pilot will deliver:

- 1) **Recognition:** an award scheme will name participants who have entered the hack day with different categories ranging from best economic idea to most innovative social solution. Birmingham will provide winning participants with a certificate, exposure through a press release, social media and on the Hub itself. The participants will be filmed for a short video case study about the experience.
- 2) **Reward:** through prizes, a small cash prize will come from the project for the overall hackathon, and local businesses will be approached to sponsor other prizes for the student data fests.
- 3) **Relationships:** networking gatherings and workshops will be held for community members who wish to find out more about the potential of OTN and meet other people interested in road safety.



## 3.3 Issy les Moulineaux

### 3.3.1 User Profiling

Issy has a very focused need in mobility planning, but one that potentially covers every citizen or visitor to the city. User profiling below reveals that the Hub needs to focus on providing an easy way for users to create their own routing solutions using different data parameters within the city.

Table 8: Issy Stakeholder Profiling

	Discoverers	Sponsors	Innovators
<b>Who</b>	<i>Name:</i> <ul style="list-style-type: none"> <li>• Citizens</li> <li>• Public employees</li> </ul>	<i>Name:</i> <ul style="list-style-type: none"> <li>• Transport AGE</li> <li>• Local Authorities</li> <li>• Data Providers</li> </ul>	<i>Name:</i> <ul style="list-style-type: none"> <li>• SMEs</li> <li>• Start ups</li> <li>• Citizen Developers</li> <li>• Other companies</li> </ul>
<b>About</b> <i>i.e. expertise, tech skills, business background?</i>	<ul style="list-style-type: none"> <li>• Varied</li> </ul>	<ul style="list-style-type: none"> <li>• Open data focused</li> </ul>	<ul style="list-style-type: none"> <li>• High tech / App skills</li> </ul>
<b>Why?</b> <i>What is the value proposition for them?</i>	<ul style="list-style-type: none"> <li>• Improve quality of life</li> <li>• Detecting citizen needs</li> <li>• Protecting environment</li> </ul>	<ul style="list-style-type: none"> <li>• Deliver better services</li> <li>• Stimulate new services</li> <li>• Find solutions to reduce traffic jams</li> <li>• Promote multi-modal model</li> </ul>	<ul style="list-style-type: none"> <li>• To grow/build business</li> <li>• To contribute to local development</li> </ul>
<b>Incentives?</b> <i>How will you encourage them to take part? Gamification?</i>	<ul style="list-style-type: none"> <li>• Being involved in decision making process</li> <li>• Interactive sessions</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive sessions with potential customers</li> <li>• Raising customer base</li> </ul>	<ul style="list-style-type: none"> <li>• Hackathon style events</li> </ul>

### 3.3.2 Closed Group Recruitment

Issy has recruited a smart mobility transport group to help with the roll out and testing for OTN. However, in order to not lose members of this group at an early stage due to system bugs etc., Issy are using an internal panel for CUG testing.

Table 9: Issy Closed User Group Stakeholders

Stakeholder Name	Stakeholder Role Type	Engagement Method
1. Susie Ruston	Discover	Personal invitation
2. Aneta Rapacz	Discoverer	Personal invitation

3. Pavel Kogut	Innovator	Personal invitation
4. Eric Legale	Sponsor	Personal invitation
5. Pascaline Jay	Sponsor	Personal invitation
6. Guillaume Esteves	Sponsor	Personal invitation
7. Camille Ledoux	Sponsor	Personal invitation
8. Nadège Moreira	Sponsor	Personal invitation

### 3.3.4 Open Group Recruitment

Issy’s plan for starting to engage wider users in their Open User Group activities is outlined in the table below.

Table 10: Issy Open Group Recruitment

Cycle Elements	Discovers	Sponsors	Innovators
Targeted Groups	<ul style="list-style-type: none"> <li>• Citizens</li> <li>• Public employees (City, Grand Paris Seine Ouest Urban Agglomeration, other cities in the surrounds of Issy)</li> </ul>	<ul style="list-style-type: none"> <li>• Transport Agencies (STIF, SNCF, RATP...)</li> <li>• Data Providers (Mediamobile, JOUL...)</li> <li>• Companies (to be defined)</li> </ul>	<ul style="list-style-type: none"> <li>• SMEs and Start-ups (Opendatasoft, JOUL...)</li> <li>• Citizen Developers</li> </ul>
Engagement Tactics	<ul style="list-style-type: none"> <li>• Call for testers on Smart Mobility Testers Group</li> <li>• Articles on <a href="http://www.issy.com">www.issy.com</a></li> <li>• Social Networks activity</li> <li>• Local events dissemination</li> </ul>	<ul style="list-style-type: none"> <li>• Personal invitations</li> <li>• Grand Paris Seine Ouest Smart Mobility Group</li> <li>• Local Events</li> </ul>	<ul style="list-style-type: none"> <li>• Personal invitations</li> <li>• Articles on <a href="http://www.issy.com">www.issy.com</a></li> <li>• Social Networks activity</li> <li>• Local events dissemination</li> <li>• Grand Paris Seine Ouest Smart Mobility Group</li> </ul>
Gamification Ideas	<ul style="list-style-type: none"> <li>• Community Awards</li> <li>• New skills/tools to help with lobbying</li> </ul>	<ul style="list-style-type: none"> <li>• Show cost savings</li> <li>• Publicity from press releases and social media</li> </ul>	<ul style="list-style-type: none"> <li>• Hack competition to showcase skills to potential clients</li> <li>• Networking opportunities</li> </ul>

### 3.3.5 User Requirements & Participation

#### Closed User Group

For the CUG, two modes of participation will be utilized. The selected people will be invited with personal invitations and they will interact with a moderator in two sessions: a group will interact

remotely and a group will work with the moderator in a focus group (date to be confirmed). Actually, the activities will be centered on two main streamlines:

1. Presenting the Hub of OTN to show to the users how it works to let them be able to react and give their feedback on that.
2. Showing a mock-up of the multimodal planner that the project will create with the help of Issy Data

All users will answer to some questions, in an interview mode, about their needs and vision of Open Data in general to pass later on to their impressions about the Hub and the multimodal planner.

### Open User Group

The Open User Group will consist of a series of different activities that follow the objectives of the overall testing cycles:

- **Cycle 2: Crowdsourcing Ideas:** The pilot will be launched in Issy on October/November in a workshop that will be held at the Town Hall. The idea is also to exploit the events of the period that are really common in Issy (as an example, Associations' Forum).

The Issy pilot team with the help of technical partners will create some visualizations using the hub data and will pose a consultation type question around these visualizations. For example, how to find transport solutions in a common daily situation in Issy's area. Answer submissions could consist of a technical or non-technical solution but should involve the use of data in creating the solution.

The competition will be advertised through (i) personal invitations to local businesses and community groups as outlined in the project Stakeholder Register, (ii) social media outreach, (iii) Call for Testers for the Smart Mobility Testers Group in Issy and (iv) articles and information on the City website and newsletter.

- **Cycle 3: Co-Create Solutions:** as per Birmingham pilot, idea owners and developers will be asked to come together at a hack weekend and build a prototype for the most popular ideas using the data in the Hub. The results will be published and each group will be asked to make a presentation to a technical and non-technical panel. The Panel will decide on the best business or social innovation and will let the winning team keep collaborating with the project, also through a financial allocation to be defined, to further develop the prototype for the city.

At the same time, the internal project developers will be working on developing Issy's 'multimodal planner' proof-of-concept innovation to ensure at least one solution is built using the Hub which can be tested in the following cycle.

- **Cycle 4: Test Results:** The resulting services and apps will be released and promoted for general use and feedback. A case study will be generated by the Issy pilot team to be used as a catalyst/hook to engage more people on the Hub.

The detailed nature and timing of the activities will be prepared in advance of each cycle.

### 3.3.6 User Retention, Support & Training

Issy recognise that as the use of Geo-Data is new to many people some hand-holding and training will be needed to help potential users feel comfortable with using the Hub. Therefore effort will be spent on setting up skill building events, co-creation workshops and Hack Days during the Open User Group stage, where people with different skills will be able to use the Hub.

As with Birmingham, Issy too has experienced that general and training videos can be a real opportunity to attract people and involve them, consequently this channel would let the Hub be explained in its different features, with potentially a more detailed video for creating the data visualisations.

With regards to incentives for participating in the Hub the pilot will deliver:

- 1) **Recognition:** an award scheme will name participants who have entered the hack day with different categories ranging from best economic idea to most innovative social solution. Issy will provide winning participants with an interview to be published on the local newsletter “Point d’Appui”. The installation of such a reward scheme will be discussed with the technical partners, though could form the basis of its own Hack.
- 2) **Reward:** through prizes, a small cash prize will come from the project for the overall hackathon, and local businesses will be approached to a possible sponsorship for other prizes.
- 3) **Relationships:** networking gatherings and workshops will be held for community members who wish to find out more about the potential of OTN and meet other people interested in multimodal planner application.

## 3.4 Liberec Region: Crisis Management

### 3.4.1 User Profiling

Liberec's user profiling below reveals that as the Hub is focused on better crisis management, it needs to be used by people with limited tech skills, and be able to generate trust. This building of trust potentially involves many face-to-face events.

Table 11: Liberec User Profiling

	Discoverers	Sponsors	Innovators
<b>Who</b>	<i>Name:</i> <ul style="list-style-type: none"> <li>Honza</li> <li>Irena</li> <li>Pavel</li> </ul>	<i>Name:</i> <ul style="list-style-type: none"> <li>Flood crisis management committee</li> <li>Regional Gov Member</li> </ul>	<i>Name:</i> <ul style="list-style-type: none"> <li>HSRS</li> <li>CCSS</li> <li>BOSC</li> </ul>
<b>About</b> <i>i.e. expertise, tech skills, business background?</i>	<ul style="list-style-type: none"> <li>Casual citizens</li> <li>No GIS expertise or limited GIS expertise</li> <li>Curious about their city</li> <li>No business or limited business background</li> </ul>	<ul style="list-style-type: none"> <li>Expertise in governance and management</li> <li>Limited business background</li> <li>Limited tech skills</li> </ul>	<ul style="list-style-type: none"> <li>Experts in IT</li> <li>High tech skills</li> <li>Some business background</li> </ul>
<b>Why?</b> <i>What is the value proposition for them?</i>	<ul style="list-style-type: none"> <li>Free high quality services from PC and smart phone</li> <li>Visualisation tools</li> <li>Access to data in a popular format</li> </ul>	<ul style="list-style-type: none"> <li>Prompt reaction to crisis events</li> <li>Build citizen trust</li> <li>Reduce budget but raise efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Cooperation on interesting projects</li> <li>\$ from sponsors</li> <li>Learning new skills</li> </ul>
<b>Incentives?</b> <i>How will you encourage them to take part? Gamification?</i>	<ul style="list-style-type: none"> <li>Upskilling of aspiring and active users</li> <li>Virtual prizes on user forum</li> <li>More free services for all</li> </ul>	<ul style="list-style-type: none"> <li>Seminars and demonstration of use</li> <li>Recognition of contributions</li> <li>Discounts for services</li> <li>Faster services</li> </ul>	<ul style="list-style-type: none"> <li>Recognition for contributions</li> <li>Common tech meetings (code camps with prizes)</li> <li>Cooperation with other IT companies</li> </ul>

### 3.4.2 Closed Group Recruitment

At the time of preparing this plan Liberec have not yet identified the specific individuals who will be asked to participate in the Closed User Group, however, they have pinpointed the profile of each user they will recruit.

Table 12: Liberec Closed User Group Stakeholders

Stakeholder Name	Stakeholder Role Type	Engagement Method
Citizen of Liberec without background in GIS	Discoverer	Personal invite

Citizen of Liberec without background in GIS	Discoverer	Personal invite
Citizen of Liberec with limited background in GIS	Discoverer	Personal invite
Regional government member	Sponsor	Personal invite
Member of flood crisis management committee	Sponsor	Personal invite
Secretary of flood crisis management committee	Sponsor	Personal invite
HSRS developer	Innovator	Personal invite
CCSS developer	Innovator	Personal invite

### 3.4.3 Open Group Recruitment

Liberec's plan for starting to engage wider users in their Open User Group activities is outlined in the table below.

**Table 13: Liberec Open Group Recruitment**

Cycle Elements	Discovers	Sponsors	Innovators
Targeted Groups	Citizens of Liberec	Flood crisis management committee, Regional government	HSRS, CCSS, BOSC and other IT companies
Engagement Tactics	Depends on the selected form of the meeting. Can be either remote testing (i.e. banner will be placed on the webpage of the Liberec geoportal and other official Liberec webpages to ask people to participate in remote testing) or some big workshop devoted to the portal (can be for instance part of a GIS day)	Again depends. Can be either remote testing or smaller workshop devoted to how the new functionality can be used to optimize flood crisis management tasks.	The remote testing will be held.
Gamification Ideas	If it will be remote testing - there can be made quiz in the end - how good people are at	The questionnaire/quiz for this group of people can be made as a simulation of flood event	No gamification is planned.

	<p>understanding new functionalities. If it will be big workshop as part of GIS Day - it can be some live quiz with people (usually the participants of GIS Day are secondary school pupils) getting small symbolic prizes for the correct answer.</p>	<p>- and they need to solve it with the help of the platform.</p>	
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### 3.4.4 User Requirements & Participation

As described in the above table the Liberec Team foresees that the CUG testing will be done remotely (testing functionalities on PC and filling in questionnaire) whereas the OUG will be done in two ways (either remotely or at specific workshops that will be held as part of some related event such as GIS Day).

### 3.4.5 User Retention, Support & Training

Liberec anticipates that training will be needed for users of the Hub. However the extent of such training depends on feedback from the CUG. In the case of public workshops, full training on all the aspects of the Hub will be delivered at the event. In case of remote working and filling in feedback questionnaires - limited documentation of the functionalities will be provided.

With regards to user incentives, Liberec envisages developing a fun game/quiz that simulates an emergency flood event. Gamers will be expected to solve a series of challenges using the Hub. These participants will be virtually rewarded for their activity (uploading datasets/map compositions) whilst also being part of a service co-creation stream.

## 4 Pilot Implementation

The main purpose of OTN is to be a data analytics Hub that allows the creation of geo-data mashups and the development of more complex services that help users understand the data. As outlined across the previous chapters there are two strands of testing (1) the Hub features for generating insights, and (2) the creation of pilot service apps to validate the concept. The Closed User Group and the Open User Group implementation scenarios align with these strands.

### 4.1 Closed User Group Focus Group

#### 4.1.1 Format

During this initial testing phase, each pilot follows the same approach as each pilot shares the same features. The primary purpose of the CUG is to focus testing on the data upload and mash-up elements of the platform and the user interface. This is done by asking each participant to complete a task related to each module as outlined below, after they have received a short presentation about the OTN Hubs vision and purpose. An overview of the workshop/focus group would be:

**Step 1: Introduction to OTN (5 - 10 mins)**

Interactive presentation outlining the purpose of OTN and introduce everyone to the Hub. Ask participants questions as you go along (such as - who knows what geo data is?) to warm them up and relax them into participating in the workshop.

**Step 2: Testing Time (60 - 90 mins)**

Get everyone on to laptops (the request to bring them should be in their invitation to participate) and set them a scenario, such as:

“You are a city manager responsible for transport. You have to make tough mobility decisions daily, which are easier said than done. Your decisions are not always popular with citizens and you spend too much of your time having to deal with Freedom of Information requests. Your line manager has heard about a brand new tool called OTN, which will make it easier for you, to make evidence based decisions to support your work. Not having a strong technical background, you are a little worried that it may be too complex for you, but you decide to give it a try...”

Once you have set the scene. Give the participants a series of short tasks via a script to complete based on the scenario. After each task ask them to write down feedback of their experience. At the end of all the tasks they will be asked to complete a longer survey as outlined in an Annex in the OTN Evaluation Plan (D7.1). Pilots should tailor the tasks and scenario to fit their pilot needs. Example tasks are as follows:

**Task 1:** To use OTN you need to be a confirmed user on the site. Please go to <OTN URL> and register your details and set your user profile.

Feedback:

.....  
 .....  
 .....



**Task 2:** You are interested in finding out what local transport data is on the Hub. Find your city Hub and have a look through the data catalogue to find data related to <dataset name>.

Feedback:

.....  
 .....  
 .....

**Task 3:** You wish to mash-up the <dataset name> data with <datasetname> data to get some understandable information and insights from the data. Visit the map screen to view your two chosen datasets as visualization. Then save the visualization for future use.

Feedback:

.....  
 .....  
 .....

**Task 4:** Seeing the potential that OTN offers, you decide to run a consultation with citizens on where a new <car park> should be located. Go to the marketplace and set a new challenge.

Feedback:

.....  
 .....  
 .....

**Task 5:** Whilst in the marketplace you see another challenge that a colleague of yours has set. This is related to your work so you decide to answer the challenge.

Feedback:

.....  
 .....  
 .....

**Task 6:** During your time on the Hub you come up with a question about the data that you wish to be answered. You decide to pose the question to the OTN Hub community so you go the Forum and start a new thread. Feel free to answer other questions whilst you are there.

Feedback:

.....  
 .....  
 .....

**Task 7:** Finally, you think you may have a great new idea for a business, but you wish to get some advice from an expert before you decide to pursue further. Go to the Mentor section, identify and contact someone who you think could help you with a technical question around your business idea.

Feedback:

.....  
 .....  
 .....

The tasks above should take around one hour to an hour and a half. During the session facilitators should also be capturing information based on their observations. These observations will be captured in a log to be shared and discussed with the delivery partners.

At the end, the questionnaire provided by iMinds in the Evaluation Plan should be given to each user for completion. The completed questionnaires will be shared with iMinds for joint analysis.

### 4.1.2 Installation Needs for the Closed User Group

- **Data Catalogue:** Each pilot needs at least two datasets uploaded to the Hub to enable the creation of at least one mash-up / data visualization.
- **Marketplace:** Each pilot needs at least one ‘dummy’ challenge posted in the marketplace for testers to respond to
- **Forum:** Each pilot needs at least two ‘dummy’ threads in the forum section for testers to address
- **Mentors:** during the first three testing cycles for OTN members of the Consortium will populate the business mentor section. This decision enables the Consortium to better monitor the use of the mentor feature and understands how it could be used to generate income. Towards the end of the project a decision will be made, based on business planning, whether to keep partners as mentors or whether city’s wish to establish their own local mentor scheme.

After the Closed User Group testing the pilot and delivery partners will make a decision as to whether the Hubs should be cleaned of the test information before opening for wider testing.

## 4.2 Open User Group Piloting

### 4.2.1 Data Hubs

For the co-creation strand to begin within the Open User Group cycles the Hubs need to be populated with additional data sets. The aim is not to constrain creativity so the more data on the Hub, the more potential innovation there could be. A list of available open datasets for each pilot along with their formats and location were already created in two project documents Current Situation Analysis (D2.1) and the Data Collection and Sharing Plan (D4.2) and its these datasets that should be migrated to the Hubs so the Pilots can run their data jams and hack days to stimulate innovation.

As with the Closed User Group, the aim is for all the features of the Hubs to be used and improved throughout the pilot.

**Table 14: Components to be Tested in Each Open Cycle**

Component to be Tested	Open Group (Cycle 2) Crowdsource Ideas	Open Group (Cycle 3) Co-create Solutions	Open Group (Cycle 4) Validate Services
<b>Data mash-up</b> - combine two or more data sets and create a visualisation	✓	✓	✓
<b>Data Upload</b> - upload a data set and see it on the map interface	✓	✓	✓
<b>Data Search</b> - find a particular dataset in the Hub catalogue	✓	✓	✓
<b>Data Analysis</b> - create an insight or new piece of information from the visualisation	✓	✓	✓
<b>Visualisation</b> -get ideas by searching through the saved visualizations of others	✓	✓	✓
<b>Market place</b> - find and respond to a challenge that has been posted on the Marketplace	✓	✓	✓
<b>Forum</b> - use forum (or data jam or data hack) to help co-create a new service		✓	✓
<b>Market place</b> - upload the new service or visualisation to the marketplace			✓
<b>Mentor</b> - choose and email a mentor based on a specific need			✓

### 4.2.2 Proof of Concept Apps

As mentioned at the start of this plan, along side each ‘open’ track for innovation, each Pilot has already started working with the Hub to co-create a specific service/app ‘proof of concept’ solution for its scenario. The implementation specificities of these proofs of concept solutions are detailed in through functional analysis documents for each pilot, a brief snapshot of which are provided in the rest of this chapter. A more detailed description in how the pilot app compliments and links to the Hubs will be provided in D6.2 Pilot Personalisation report.

#### 1. Antwerp

Antwerp is creating a mobile crowdsourcing ‘Cycling App’ on Android that will:

1. Collect Data (bike routes, point of time, etc.)
2. Collect Data about quality of the roads via gyroscopic functions (in mobile)
3. Reporting issues (paths, photos, send to city admins, etc.)

The data needed to make this App works is as follows:

**Table 15: Antwerp App Data**

Name	Short description	Source (reference)
Cycle usage map (aggregated data) - See 4.3.2.	Vector Data Layer containing line objects with information about cycle tracks (for every road segment): <ul style="list-style-type: none"> <li>• Average speed per segment</li> <li>• Minimum speed per segment</li> <li>• Maximum speed per segment</li> <li>• Cycle lane quality per segment</li> <li>• Density per segment</li> </ul>	Generated by the Crowdsourcing Engine
Cycle tracks (raw data)	Raw Data Layer containing individual track data and vibration measurements	Received from Crowdsourcing App
Issue hotspots map (aggregated data) - See 4.3.3.	Vector Layer which represents the hotspots of reported issues. A separate layer is available for each type of Issue. A separate layer is available for the aggregation over all issue types.	Generated by the Crowdsourcing Engine
Issue Notifications (raw data)	Raw Data Layer containing individual Issue Notifications: <ul style="list-style-type: none"> <li>• Issue location (lat/lon)</li> <li>• Issue type</li> <li>• Reporting time</li> <li>• (Description)</li> <li>• (Media information)</li> <li>• (User ID)</li> </ul>	Received from Crowdsourcing App
OSM	Open streetmap	
MRD Roads (Middenschalig wegenbestand)	The MRD-Roads is a mid-scale reference database of the roads in Flanders. It should contain all Flanders roads, together with their matching attribute data. The database will have mid-scale precision. This database is being developed based on request on the part of the SDI-Flanders Steering Committee, in collaboration with other government partners. The MRD-Roads can develop into a new authentic, geographical data source.	SHP
LRD (GRB) Large scale reference database (Grootschalig Referentie bestand)	The Large-scale Reference Database (LRD) is an object oriented reference map of Flanders with precise and current information on buildings, administrative parcels, roads and their lay-out, watercourses, railroads and works of art. The data is integrated in detail so that it is usable in a large-scale presentation with scale range between 1/250 and 1/5000.	OGC WFS - OGC WMS - GML - SHP
Digital Height Model Flanders	The Digital Height Model Flanders is the umbrella term for all Flanders area covering height data available at the FGIA. This height data can be subdivided into 3 groups: <ul style="list-style-type: none"> <li>* Standard products:</li> <li>* Source data:</li> </ul>	GML3 - GEOTIFF

	* Test data:	
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A 55 page co-created functional analysis for this service that includes service flows, interface design and screen mock-ups can be found on Google Docs at:

<https://docs.google.com/document/d/1AVui7qZtROMOAP6iXTONeYMyU9oCMChup-lfgb5llag/edit#>

## 2. Birmingham: Road Safety

Birmingham is creating a crowd sourced road safety app, which collects previously undocumented road safety information and feeds it back into the Hub so users can better explore road safety conditions. The data needed to make this App works is as follows:

Table 16: Birmingham App Data

Name	Short description	Source (reference)
Road Network with Traffic Flow	This data layer is derived from the UTM Traffic Flow data provided by the BCC. Based on this point layer, enriched with an OSM way ID, a road network with traffic flow (intensity/density) is created	
Road Accidents w/o casualties	Currently the BCC CRM holds information about certain road incidents/accidents. The processed data from the crowdsourcing app will also be a source of information for the other accidents data layer.	BCC CRM OTN crowdsourcing app
Road Accidents Heat Map	A derived map indicating road accident hotspots which can be used as a background layer in the application	

A 29 page co-created functional analysis for this service that includes service flows, interface design and screen mock-ups can be found on Google Docs at:

[https://docs.google.com/document/d/1ZMlb1w4J2Ex5\\_UZdcXaG6L-7WvyYZ8R7fmRBzzQF2q8/edit#heading=h.9wvm52yh9q6g](https://docs.google.com/document/d/1ZMlb1w4J2Ex5_UZdcXaG6L-7WvyYZ8R7fmRBzzQF2q8/edit#heading=h.9wvm52yh9q6g)

## Issy les Moulineaux: Mobility Planning

Issy’s proof of concept app focuses on using data in the Hub to create multi-modal route apps. The data needed to make this App works is as follows:

Table 17: Issy App Data

Name/Link	Frequency	Open?	Source	Format
Train Information				
Paris regional train time-tables	Real-time	OPEN	SNCF	API
Paris regional train time-tables (Transilien)	Week	OPEN	SNCF	GTFS
Regional train line time-tables (TER)	Month	OPEN	SNCF	GTFS

Intercity train line time-tables	Month (every 2)	OPEN	SNCF	GTFS
Map of railway stations and stops (Paris region)	Year	OPEN	SNCF	GIS File - OSM based
List of railway stations and stops (Paris region)	Year	OPEN	SNCF	GTFS
Map of railway stations (Paris region)	2012 Update?	OPEN	Ile de France	GIS File
Number of passenger per station	Year	OPEN	SNCF	DATA File
Train / metro / bus				
Train, metro, bus information (schedules, stops, transfers) (Paris region)	Year	OPEN	RATP	GTFS
Public transport map (Paris region)	?	OPEN	Ile de France	GIS File - Map?
Car sharing				
Car sharing spots - Autolib (Paris region)	Month	OPEN	Ile de France	GIS File
Bike sharing				
Bike sharing spots - Velib (Paris region)	Real-time	OPEN	Issy Les Moulinaux	API
Available bikes (bike sharing)	Real-time	API	Paris Region	API
Other alternative transport				
Commercial transport activities (car sharing,...) (Issy Les Moulinaux)	Monthly	OPEN	Issy Les Moulinaux	GIS File
Road works				
Road works (Haute de Seine roads - South/West side of Paris)	Month (every 3)	OPEN	Conseil general HS	GIS File
Road works (Ile France)	Real-time	OPEN	Ile de France	API
Traffic model data				
Traffic calculation data	Year (Every 6 months)	NOT OPEN	Conseil general HS	API
Main streets	?	OPEN	Ile de France	GIS File

A 41 page co-created functional analysis for this service that includes service flows, interface design and screen mock-ups can be found on Google Docs at:

[https://docs.google.com/document/d/1Mfi\\_UhoL7zAicnlxNeqGP4SA0PQowFbeQuEBFnAPOHY/edit#heading=h.9wvm52yh9q6g](https://docs.google.com/document/d/1Mfi_UhoL7zAicnlxNeqGP4SA0PQowFbeQuEBFnAPOHY/edit#heading=h.9wvm52yh9q6g)

### Liberec Region: Crisis Management

The Liberec App is designed to be used during emergency floods, to show where there are impassable places, where there are demolished bridges and which areas are flooded. Through the application it is possible to propose how to get to people using detours - the shortest/quickest/fastest way or to guide off-road vehicles through the forest roads. Authorized personnel can find (ascertain) via the app where vulnerable people live (e.g. the elderly, disabled...) and can prioritize repairs.

The data needed to make this App works is as follows:

Table 18: Liberec App Data

Name	Short description	Source (reference)
Navigable network for Liberec region	For the routing application, an integrated data set covering both the road network and forest roads will need to be compiled	OSM, StreetNet and Forest Department data sets

A 20 page co-created functional analysis for this service that includes service flows, interface design and screen mock-ups can be found on Google Docs at:

[https://docs.google.com/document/d/1NF\\_hCkQmmZnY59eqLLDIlmygdVrkjPXXdTlj4\\_OCwlo/edit](https://docs.google.com/document/d/1NF_hCkQmmZnY59eqLLDIlmygdVrkjPXXdTlj4_OCwlo/edit)

## 5 Pilot Success Criteria

### 5.1 Impact

Work package 7 is producing an evaluation plan that describes a ‘common evaluation framework’ for the Hubs. Pilots will be asked to follow the evaluation plan in order to capture and collect relevant user information from online logs, as well as direct feedback, to assess many different facets of the Hubs from usability to the usefulness of specific features and functions. This collated information will be analysed by the evaluation, pilot and technical partners to make Hub adaptation decisions.

However, success for the pilots goes beyond creating perfect technical hubs. Success is defined by the impact that can be generated for each city.

Table 19: Pilot Success Criteria

Success criteria	Metric	How will it be measured?	What will success be each cycle?	What KPI does it support?
More and greater GI is made available to the public domain	Datasets	Number of datasets uploaded	<ul style="list-style-type: none"> <li>• Cycle 2: 100 datasets</li> <li>• Cycle 3: 150 datasets</li> <li>• Cycle 4: 200 datasets</li> </ul>	IN4
Increases transparency and access to public GI information	Visualisations	Number of visualisations created	<ul style="list-style-type: none"> <li>• Cycle 2: 200 visualisations</li> <li>• Cycle 3: 400 visualisations</li> <li>• Cycle 4: 500 visualisations</li> </ul>	IN14
Discoverers and Innovators participate in sponsor challenges	Hack Days and Competitions	Discoverers, Sponsors and Innovators engaged on Hub during testing	<ul style="list-style-type: none"> <li>• Cycle 2: 200 users</li> <li>• Cycle 3: 400 users</li> <li>• Cycle 4: 500 users</li> </ul>	n/a
Facilitates greater co-creation of services	Services and Visualisations	Number of new service ideas	<ul style="list-style-type: none"> <li>• Cycle 2: 4 new ideas</li> <li>• Cycle 3: 8 new ideas</li> <li>• Cycle 4: 14 new ideas</li> </ul>	IN17
Capacity of local businesses to use GI increased	Attendees at events and businesses mentored	Number of businesses mentored	<ul style="list-style-type: none"> <li>• Cycle 4: 3 businesses mentored</li> </ul>	IN18



Capacity of citizens to benefit from GI increased	Positive Feedback	User performance rates	<ul style="list-style-type: none"> <li>• Cycle 2: 60% performance</li> <li>• Cycle 3: 70% performance</li> <li>• Cycle 4: 70-90% performance</li> </ul>	n/a
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To help measure progress towards the pilot success criteria, pilot lead (CEN) will send out a bi-weekly table showing the number of new users on the platform and their actions. Accurate numbers will be gleaned from the Google Analytics account on the Hub. The pilots will review the numbers on bi-weekly pilot calls to discuss which tactics they deployed so the whole team can see what has worked, what hasn't and can adapt engagement tactics accordingly.

**Table 20: Proposed Weekly Monitoring Plan**

	Engagement Activities	Hub User Numbers	Data Used	Features Used	No. Evaluations Completed
Date					
Date					
Date					
Target					
Total Reached					
% Achieved					

## 5.2 Change Control

Technical issues gleaned during feedback cycles will be logged in an issue management system called Redmine<sup>1</sup> set up by the technical team. For issues that the pilot team do not understand how to describe in effective terms, technical lead Intrasoft will undertake the logging in order to record the issue. Anticipated user feedback will include bugs, user ability issues, changes in functionality and enhancements. Technical partners will analyse the logged issue/requirements internally before presenting a solution for discussion to a Committee who will decide which changes should be made. The Committee will include technical, pilot cities and WP6 leaders. Decisions will be made during regular calls between teams.

Changes to the Hub though may not always come from internal sources. Pilot partners will be spending much time and effort in engaging potential domain experts as service or app 'innovators' who could be a valuable source of innovation for the Hubs themselves. In order to try and harness this talent, partner iMinds (Ghent) has set up a GitHub repository for the open source components of the Hub (nb. Not all of the Hubs components are open source). GitHub contains key coding/elements for the Hub that is open for anyone to amend and improve using a system called 'forking'. The GitHub page has specific sections for Hub Components including

<sup>1</sup> <http://www.redmine.org>

Liferay, OTN-MP (URIs) Dcat-merger and Hub replication. Whilst iMinds manages the promotion of OTN's GitHub on wider social media and blogs, pilot partners can support this process by:

- Adding the GitHub link to all promotional material and give-aways
- Promoting GitHub at the end of all Hack events - asking for innovators help in improving their city Hub as an open resource for the whole community
- Adding community challenges to the Hub around data harmonisation procedures to try and stimulate interest from innovators who don't attend hack days
- Ask specific innovator contacts to test the platform and suggest changes on GitHub that the internal team can potentially utilise
- Sending follow up emails to all participants who participate in events with links to GitHub
- Personally writing to and thanking GitHub contributors via social media to give them public recognition (iMinds will notify the Consortium when changes are made)

The engagement of domain experts on GitHub will be measured during the cycle reporting.

## 6 Resources and Timeline

This table below is a snapshot from a collaborative delivery Roadmap shared by the Consortium to ensure a common understanding of all processes and delivery deadlines - both technical and pilot based. This Roadmap is a living Google document continuously updated by all on the project to ensure everyone has a clear understanding of the work ahead.

At the time of this snapshot, the majority of focus is on technical work and preparation of the CUG activities. During August and September focus will move to more detailed preparation of OUG activities include a shared launch to kick off the Open User Groups with a bang across social and traditional media platforms from October.

To check out the live version for the Roadmap visit:

[https://docs.google.com/document/d/18D\\_gTL5VzsPZvOzML6C8DgdhvonL7-fxZfVP9M3JwYc/edit#](https://docs.google.com/document/d/18D_gTL5VzsPZvOzML6C8DgdhvonL7-fxZfVP9M3JwYc/edit#)

Table 21: Part of the OTN Delivery Roadmap

M/Y (project month)	DOW	Technical Roadmap	Pilot Roadmap	Events
July 2015 (M18)	D5.3 Technical Testing Report (INTRA) D6.1 Pilot Operations Plan (CEN) D7.1 Strategic Evaluation Methodology (iMinds)	<ul style="list-style-type: none"> <li>D5.3 finalisation</li> <li>Test the current HUB functionalities (especially data-upload) before CUG testing - ISSUE REPORTING IN REDMINE- Susie to send test scenarios for internal testing - in D6.1</li> <li>Documentation for the HUB functionalities (focussed on CUG testing) - Irene (also in D5.2)</li> </ul>	<ul style="list-style-type: none"> <li>30/07: WP6 and WP5 call on Pilot Personalisation (21c &amp; INTRA)</li> <li>31/07: D6.1 and D7.1 finalised (21c, CEN &amp; iMinds)</li> <li>31/07: Data upload to Hubs (HSRS + PILOTS)</li> <li>31/07: Provision of content for the CUG for the Hubs (CEN &amp; INTRA)</li> </ul>	
August 2015 (M19)	D6.2 Personalised Instances of the Hub (CEN)	<ul style="list-style-type: none"> <li>Pilot apps development (EX, UWB, HSRS)</li> <li>25/8 Data Integration (list of data in D2.1 and D4.2 (HSRS, UWB)</li> <li>25/8 CKAN integration (INTRA/ATC)</li> </ul>	<ul style="list-style-type: none"> <li>01/08: Closed User Group cycle 1 testing period begins (Pilots to add their workshop dates to this plan)</li> <li>25/08: Internal testing of the Hub at Brussels meeting and training of backend use so pilots can manage their content</li> <li>31/08: D6.2 finalisation</li> </ul>	25/8 Pilot-Technical meeting in Brussels, CORVE
September 2015 (M20)	D6.3 Periodical Validation Report (CEN)	<ul style="list-style-type: none"> <li>Pilot apps development (EX, UWB, HSRS)</li> <li>30/9 - Improved version of fully functional Hubs after CUG feedback &amp;</li> </ul>	<ul style="list-style-type: none"> <li>01/09 Begin preparation for OUG Cycle 2 (Pilots to add their event dates into this plan as and</li> </ul>	

	D8.4 Market Analysis (21c)	<p>Rollout of the personalised hubs to the cities (INTRA/ATC)</p> <ul style="list-style-type: none"> <li>30/9 Refined UI for data visualisation and creating mash-ups + more data formats supported for upload - HSRS</li> <li>30/9 - Feasibility study for Issy app completed (INTRA/ATC)</li> </ul>	<p>when they are finalised)</p> <ul style="list-style-type: none"> <li>20/09: CUG evaluation analysis and D6.3 drafting (iMinds, CEN, Pilots)</li> <li>27/09: Populate Hub with challenge for OUG cycle 2 - Crowdsourc Ideas (Pilots)</li> <li>28/09: Preparation of Press Release for launch of OTN OUG (Issy, 21c)</li> <li>30/09/15: Official end of the CUG. Pilots to send update to all participants</li> </ul>	
October 2015		<ul style="list-style-type: none"> <li>01/10 - First prototypes of Birmingham and Liberec apps ready for OUG testing (start collecting data)</li> <li>01/10 - 1st s/w version of Antwerp Mobile App (data collection) -EX</li> </ul>	<ul style="list-style-type: none"> <li>01/10: Start of Open user group cycle 2 with joint event and individual Press Release and social media campaign (including domain expert engagement)</li> <li>Hosting of DataJam workshops in each pilot city &lt;Pilots add key dates here&gt;</li> </ul>	<p>GA Pilsen Meeting 07-09/10/2015</p> <p>09/10 Presentation of OTN at ITS World Congress, Bordeaux</p>
November 2015 (M22)	D7.3 GI Innovation Whitepaper 1 (iMinds)	<ul style="list-style-type: none"> <li>30/11 - Birmingham and Liberec improved versions of Mobile Apps</li> </ul>	<ul style="list-style-type: none"> <li></li> <li></li> </ul>	<p>16/11 Presentation of OTN at European Data Forum, Luxembourg</p>

## 7 Pilot Evaluation

The OTN Hub & services will be tested, evaluated and co-created in four pilot cities through the outlined evaluation framework of WP7 (See D7.1). Therefore, the Living Lab methodology was chosen that systemically investigates the usability and user satisfaction aspects of the OTN solution through a set of ten defined evaluation measures, and following a gradual and iterative approach of testing through the setup of five testing cycles (during CUG, OUG and POC) and four technical iterations. The objective of the pilot evaluation is to ensure that the OTN Hub is user-friendly and accessible for different stakeholder groups (technically and non-technically skilled), users are able to gather insights or knowledge from the visualisations and that service challenges can be co-identified and solved. The collected user feedback will be summarized through the WP6 periodic validation reports, which in turn flow back to the technical team and feed the overall impact assessment of the project (D7.2). The following Table is a summary of the evaluation activities, which are split into an evaluation (focusing on Hub) and co-creation track (focusing on Hub & services):

**Table 22: Summary of evaluation activities for pilot evaluation.**

User group	Testing cycle	Pilot methodology	
		Evaluation track	Co-creation track
<b>CLOSED USER GROUP</b> (Min. 30 users in total)	<b>CYCLE 1</b> (01/08/2015 - 30/09/2015)	<ul style="list-style-type: none"> <li>• Testing task with after-scenario interview</li> <li>• Logging</li> </ul>	Prototyping session of Hub and services (min.1)
<b>OPEN USER GROUP</b> (min. 100 users / pilot)	<b>CYCLE 2</b> (01/10/2015 - 31/12/2015)	<ul style="list-style-type: none"> <li>• Think aloud protocol</li> <li>• Logging</li> </ul>	Prototyping session of Hub & services  AND/OR  Data jams/hacks  (min.2)
	<b>CYCLE 3</b> (01/01/2016 - 30/03/2016)	<ul style="list-style-type: none"> <li>• Survey</li> <li>• Focus group/interviews</li> <li>• Logging</li> </ul>	
	<b>CYCLE 4</b> (01/04/2015 - 30/06/2016)	<ul style="list-style-type: none"> <li>• Survey</li> <li>• Participation observation</li> <li>• Logging</li> </ul>	
<b>PROOF-OF-CONCEPT</b> (Min. 100 users in total)	<b>CYCLE 5</b> (01/04/2015 - 30/09/2016)	<ul style="list-style-type: none"> <li>• Survey</li> <li>• Focus group</li> <li>• Logging</li> </ul>	Workshops: data jams/hacks (min. 1)

For the evaluation activities, a close collaboration will be set up with WP7. In each testing cycle this will include the following steps and processes:

**Table 23: Collaboration between WP6 and WP7 for evaluation activities.**

Start testing cycle	<ol style="list-style-type: none"> <li>1) Start preparing questions for the evaluation tools (WP7 in collaboration with pilot leads)</li> <li>2) Begin user recruitment and user engagement (WP6)</li> <li>3) Collection of direct (surveys) and indirect (user logs) end user feedback (WP6)</li> <li>4) Chase users who have not provided feedback and find a way for them to do so easily (WP6)</li> <li>5) Collection of technical performance feedback (WP5)</li> <li>6) Start analysis of end user feedback through delivery of WP7 templates (WP7 in collaboration with pilot leads)</li> <li>7) Share and discuss analysis findings with pilots and technical delivery team (WP7)</li> <li>8) Start drafting of periodic evaluation report (WP6)</li> <li>9) Start outlining/updating strategy for the next cycle in the periodic validation reports (WP6)</li> <li>10) Final periodic evaluation report with final feedback and recommendations (and preferably discussion through meeting online or face to face) to delivery partners</li> </ol>
End testing cycle	<ol style="list-style-type: none"> <li>11) Agreement and timing on delivery of next version in terms of user requirements of the Hub or pilot apps (technical partners and WP6)</li> </ol>

This workflow will guarantee that each partner has a predefined responsibility: pilot leads in terms of user recruitment and engagement, feedback collection and analysis, agreement with technical partners on user requirements for technical iterations of the Hub & services (change management), and iMinds for the research design, and validity and reliability of the testing results. WP6 and WP7 will therefore organize monthly conference calls during the testing period, and before the release of a next iteration, workshops can be organized by iMinds to guide pilot leads in the setup of their evaluation tools.

The user feedback will flow back to the technical team that will respond to encountered issues, bugs or requests for new features. After each testing cycle, a thorough assessment will be made with the technical team to see what is feasible in terms of effort and planning, balanced with the priority and severity ratings of the pilot team. This should result in a clear **technical roadmap** that schedules the technical iterations with related issues, bugs or requests. This will ensure transparency in feedback between pilot and technical team (through e.g. issue tracking system), but also from the pilot leads towards their users and triggering the users' intrinsic motivations of 'help and problem solving'.

Last, it is advised to work with **predefined release dates** of the Hub, this to encounter possible drop-out of users (e.g. a new release of the Hub is delayed, while the user recruitment is already done), and to only start testing the Hub when the version is **stable**, i.e. no major updates of the Hub may be put in place during testing as this may cause invalid user feedback.

## 8 Pilot risks

This section provides a basis for risk management and contingency planning. It supplements the risks initially collected and monitored by the OTN project manager at the start of the project.

Table 24: Pilot Risk Log

Risk	Impact	Prob.	Mitigation	Owner
Portal tools are too complicated for the average user	High	High	The user requirements analysis specified the importance of usability, however, the complex nature of the data means that the first version of the Hub ‘map maker’ is too complicated for the average user, so pilot partners need to create the initial visualisation interfaces for their pilot testing. A feasibility review into providing an additional simpler tool is pending.	CORVE
Users do not understand the value of the portal and the data	High	Med	This risk is to be expected with a new concept. The pilots and consortium need to work to physically introduce the Hub to people face to face to help establish a connection with the new tools. Workshops, networking events and demos at other events will be crucial in establishing trust and comfort with using the Hub.	ISSY
Users visit portal once, and once only	High	High	OTN is a new concept and many people are not used to working with data so it will take time to build value and regular use of the Hub. The ability to push out news and updates about new challenges or data will along with a link back to the Hub will help encourage users to return more than once.	CEN
Sponsors and data owners are worried about negative exposure	High	Med	Leadership is a crucial factor here. Pilots are encouraged to hold meetings and workshops with internal council staff and businesses to introduce them to the powerful benefits of using GI data. Show examples from other projects and show them how OTN can deliver these benefits for them and their own particular pain points.	CEN
Innovators may be disappointed that there is not enough bad data to get their teeth into	Med	Med	This is a hard one to mitigate. Though the project plans to use GitHub to engage domain experts in deeper levels of problem solving around data harmonisation.	ATC
Portal may not work without financial incentives from Sponsors	High	Med	Pilots should investigate a range of incentives for take-up, these could range from playing on social responsibility values, to community awards and recognition to tapping up sponsorship from companies for prizes or financial incentives.	CEN

Users may be frustrated that the data sets they need are not on the portal	High	Med	Set up a function on the portal, either in the Marketplace or the Forum where users can put in a request to the city for specific data. What would they like to see here?	CEN
Features on the Hub do not work properly and frustrate users	Med	Med	We need to make it clear to early adopters that OTN is in beta and therefore not entirely perfect/ They are helping develop the Hub through their actions and feedback	CEN
Technical partners cannot make the changes/adaptations requested by the users	High	Med	The pilots are being run in agile cycles so the development team can prepare for specific periods of adjustments. Changes will be discussed and negotiated between the pilot partners and the technical partners to understand and rank which adaptation are most crucial and therefore take a higher priority in the change period.	ISP



## 10. Conclusion

This document provides a concise overview of OTN's approach to deployment and testing. However, it should be noted that this task is a continually evolving process and that pilot planning, development and logistics are taking place by Consortium members continually. With this agile and fast pace of working in mind, partners are reminded to use the OTN Roadmap in Google Docs as a central point of reference for inserting key dates for both technical and piloting activities. This document will be reviewed monthly with the whole consortium, and on a more frequent basis on weekly pilot calls.

Readers are also reminded not to read this document as a standalone piece of work. Every single partner on the project should also refer to D7.1 Evaluation Plan in order to have a complete overview of piloting work for the remaining two years of the project.