



IRIS

Integrated and Replicable Solutions
for Co-Creation in Sustainable Cities

Project Acronym:	IRIS
Project Full Name:	Integrated and Replicable Solutions for Co-Creation in Sustainable Cities
Grant Agreement:	No 774199
Project Duration:	5 years (starting 1 October 2017)

Deliverable 3.8

IRIS exploitation plan and operations

Work Package:	WP3 Development of Bankable Business Models and Exploitation Activities
Task:	T3.5 Beyond Europe
Lead Beneficiary:	IMCG
Due Date:	30 September 2019
Submission Date:	7 October 2019
Deliverable Status:	Final
Deliverable Style:	R
Dissemination Level:	PU
File Name:	D3.8 Exploitation plan and operation



This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 774199

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Version History

Version	Date	Modifications made by
0.1	190829	Ulrika Wahlström, IMCG, Jonas Norrman, IMCG
0.2	190919	Ulrika Wahlström, IMCG, Jonas Norrman, IMCG
0.3	191002	Ulrika Wahlström, IMCG
1.0		Final version to be released to the EC

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Executive Summary

D3.8 Exploitation plan and operation, addresses all IRIS partners, sets the framework for how the consortium will exploit its results and reach the objective of recruiting 100 cities to follow IRIS. It also indicates what needs to be done and by whom. Several sets of questions are presented, and these are to be seen as tools that will enable all solution providers to make their individual exploitation plans. WP3 (Development of Bankable Business Models and Exploitation activities) is responsible for this report and IMCG, consultant bureau acting as a change agent supporting solution providers, solution managers and cities to become changemakers and adapt to new business models and implement integrated sustainable solutions, is main author. IMCG discussed the content of the plan – especially the IRIS’ offer - with WP8 (Replication), the project coordinator, WP10 (Communication) and the work package leaders of light house cities to get everybody on board early on (on-line meeting in April, 2019).

In order to attract the 100 cities, we need to activate IRIS collective network of cities outside of the project. The same way that you need to learn how to walk before you can run, the light house cities need to early on engage in activities benefitting scaling-up what’s being demonstrated (solution providers grow their business). This action prepares the consortium for the activities of replication of the IRIS business modes outside the project (a knowledge transfer to other actors regarding the business model of successfully demonstrated solutions).

You won’t do well in a marathon if you don’t train for it. In IRIS we intend to let cities outside the project benefit of our exploitable results. Before IRIS solutions can be properly promoted outside the project and beyond Europe, we have to prove that the LH cities are capable and willing to scale-up the solutions within the city – district by district. Furthermore, the credibility of the solutions’ value will be higher if the follower cities (FC) of IRIS replicate one or several of the solutions, which is one main objectives of the IRIS project. Therefore, the exploitation plan includes steps regarding this as well. This is very much aligned with the deliverable that WP8 Replication by Lighthouse regions, follower cities, European market uptake (Vaasa) is to produce by September 2020; D8.12 European level replication plan (M36).

The IRIS grant agreement states that this deliverable is to by describing exploitation plan and operations for the IRIS solutions that are born global, contribute to that a) Up to 20 companies representing IRIS solutions will have the opportunity to pitch to cities outside Europe that have the ambitions to deploy smart city solutions; b) There will be at least 20 official replication/deployment agreements; c) At least 5 installations of IRIS developed solutions will have started to be deployed. However, IMCG agreed to describe the steps that must come before replicating outside the project beyond Europe and therefore this deliverable includes; Scaling up within the LH city, Replicating from a LH city to a FC, Replication to cities outside the project – in Europe and beyond. The activities needed for this are summarized as to:

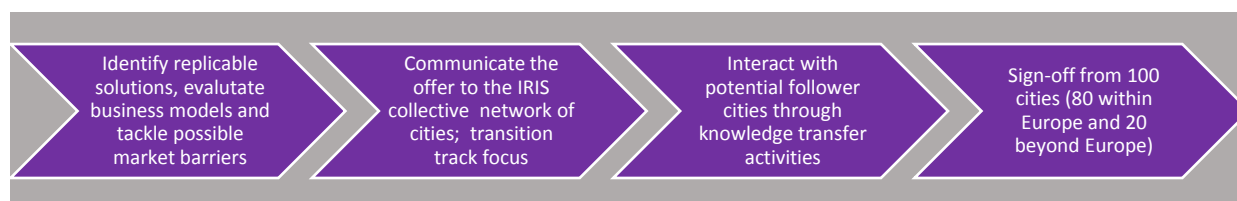


Figure Four steps of exploitation. Activities needed to exploit the results of IRIS, when having the ambition to recruit 100 cities.

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List of Abbreviations and Acronyms

Abbreviation	Definition
EU	European Union
WP	Work Package
LH city	Lighthouse city
FC	Follower city / Fellow city
IMCG	Innovation Management Communication Group
T	Task
D	Deliverable
M	Month (in the project)
IPR	Intellectual Property Rights
EIP-SCC	The European Innovation Partnership on Smart Cities and Communities
GA	Grant Agreement

1 Introduction

D3.8 is an exploitation plan and a first version to describe what most probably needs to be done and by whom in order for the IRIS solutions to replicate IRIS solutions to Follower Cities (FCs) and to reach the objective of recruiting 100 cities (80 within Europe and 20 beyond Europe).

We see the exploitation plan as a roadmap on how to succeed in a marathon race. In order to be able to run the whole way you will need to train. This is what the lighthouse cities (LH cities) are doing when they are scaling-up the implementation of IRIS solutions district by district within their own city. The solution providers and solution managers (see D3.3 European Market analysis for more information) play a very important role here as well.

To scale-up within the city is of course an excellent opportunity for the solution providers of IRIS to grow. But to take the step to deliver the solution to the follower cities (FCs) might not be part of a small IRIS solution provider's business plan. For the consortium it is important to realise that it is not necessarily these solution providers that will be responsible for replicating the solutions to FCs. That is why IRIS takes a large focus on business models. When identifying business models that are proved bankable, they will be of interest to other cities facing the same kind of challenges (within the same kind of transition tracks) as the cities of IRIS.

As a lesson drawn from IMCG's previous experience and from the IRIS project itself, a business model could be directly replicated to a city beyond Europe. However, it is more likely that the IRIS solution provider first will scale-up within the Lighthouse city. Another step could be to replicate the business model of the solution to Follower cities within the project. That action will call for an augmented amount of knowledge transfer if the solution provider will not be the one providing the solution in the FC. To replicate outside the project also demands great knowledge transfer, since it is more unlikely that especially start-ups and SMEs of IRIS will not have the capacity to start branches on the European market or beyond.

In this chapter we want to create a mutual IRIS vision on what we mean by "exploitation" and why there is a need for an exploitation plan. Exploitation is a word often used in EU projects and we find it that many people can't relate to the word or its meaning. Then we introduce you to the objective of the exploitation plan and the fact that the objective of this plan has been both altered and augmented to better fit the project's over all objectives regarding replication within the project, outside the project – both within and beyond Europe. Furthermore, this chapter also states that all IRIS partners are affected of the exploitation plan and are expected to act upon it. The deliverable is aiming at as clearly as possible, at this stage of the project, state who is responsible for doing what in order for the plan to be executed. If there are questions regarding this contact WP3 and the project coordinator to have a discussion on the topic.

1.1 Scope, objectives and expected impact

The GA of IRIS (page 89) points out that IRIS sets the foundations for wide and impactful exploitation of the project's research result in 4 distinct ways:

- It defines and improves IP management (IPR strategy, scientific publications, licensing, etc.) as part of the exploitation strategy;
- It improves networking (at local authority, research, business and civil society level) through the implemented dissemination activities;
- It delivers novel business model and exploitation plans along with commercialisation road-mapping (under alternative scenarios and innovation strategies) for the project results.
- It creates an initial ecosystem for post-project exploitation (the project consortium, and the exploitation team under joint exploitation

Parts of this will be covered in this deliverable. You will find that to handle IP is of utter importance when you want to exploit a result. Without dissemination activities – or communication – nobody will ever know about the results of IRIS. IP is covered by the D3.5 IP Landscape review, delivered by WP3 partners University of Brussels, VUB. D3.8 is an exploitation plan itself for the consortium and it provides several sets of questions for solution providers to exploit results. IMCG has suggested that this deliverable will be updated by WP8 which has a similar deliverable M36 (September 2020). Post-project exploitation is not addressed in D3.8.

The objective with the plan is to educate and show IRIS partners what is needed to be done in order to exploit the results, reach market impact and reaching smart cities with potential to implement IRIS solutions or replicate IRIS business models - not only within the project and within Europe, but beyond Europe.

The original objective of D3.8 IRIS exploitation plan and operations (part of Task 3.5 Beyond Europe) was that it should contain an exploitation plan for the IRIS solutions that are “born global”. The plan was to match the set objectives, which are to reach at least 20 replication / deployment agreements before end of project. See below.

Original exploitation plan objective

In this section we first describe how deliverable D3.8 IRIS Exploitation plan and operation (D3.8) first was intended to be designed. D3.8 is due 2 years into the 5-year project of IRIS. This deliverable is part of a Task 3.5 Beyond Europe, which is ongoing until the end of the project. In the work of the task WP3 will lead the work to:

- 1) Set the "born global" IRIS solutions as well as complementary interviews with 'LHs';
- 2) Run a workshop with the LHs, FCs and born global solutions to understand the market conditions for deployment, transferability of business models as well as any key learnings that can be published as a result of this project;
- 3) Match the "IRIS born globals" with external network of +100 cities that are dedicated to implement smart city solutions (the +100 cities are already established through earlier learning smart city projects, together with The Climate Group, C40, Living Labs Global);
- 4) Agree on an official replication, deployment agreement starting with detailed feasibility studies;
- 5) If necessary, connect the companies to local stakeholders to increase value for the city and speed of deployment.

D3.8 was destined to present an exploitation plan for IRIS solutions that are born global. Below you will see the original objectives. After that the augmented objectives are presented.

D3.8 IRIS exploitation plan and operations should contain an exploitation plan for the IRIS solutions that are "born global". The plan is matching the set objectives, which are to reach at least 20 replication / deployment agreements before end of project.

D3.8's main objective is to *contribute* to that:

- Up to 20 companies representing IRIS solutions will have the opportunity to pitch to cities outside Europe that have the ambitions to deploy smart city solutions;
- There will be at least 20 official replication/deployment agreements;
- At least 5 installations of IRIS developed solutions will have started to be deployed.

The objective with the plan is to educate and to show IRIS partners what is needed to be done in order to reach market impact and reaching smart cities beyond Europe with potential to implement IRIS solutions. IMCG acts as work package leader of WP3 and main contributor to this report. IMCG is a consultant bureau with the roll of a change agent and will by this report show examples for exploitation of IRIS solutions and explain useful tools and methods.

However, when we first started working on the exploitation plan and interacted with WP8 (Replication), we all draw the conclusion that it's not logical to start with replication activities outside of Europe attracting 20 cities, when WP8, having a target of exploiting the IRIS results by attracting 80 cities within Europe, has not yet commenced with the replication activities or finalized the replication tool box (finalized M25). Moreover, during fruitful conversations with the coordinators at the Lighthouse cities, the project coordinator, the communication manager and the replication manager we agreed to write this exploitation plan including the steps that need to be taken before replicating beyond Europe. So,

this exploitation plan, even though originally designed to exploit solutions beyond Europe, also includes the first, natural steps; scaling-up within the city and the IRIS objective of FC replicating the LH cities' solutions and replication to cities outside the project within Europe.

The exploitation plan takes off starting with scaling-up the IRIS integrated solutions within the LH cities and replicating the business models of the IRIS solutions within the project from LH cities to FCs and then goes to replicating within Europe and finally also replicating in the smart city community outside of Europe. This can be done simultaneously.

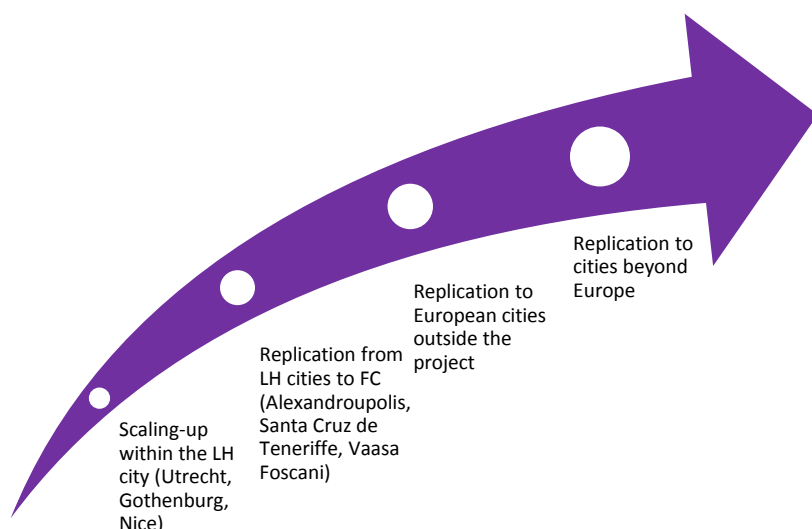


Figure 1 *The possible pathways for final replication outside the project. It is not necessary to go through all steps.*

We have identified three important pillars to build the exploitation plan upon:

- 1) The IRIS' offer
- 2) The internal market
- 3) The external market



Figure 2 *Three important pillars for replication outside the project – in Europe and beyond*

Needless to say, the success of the exploitation plan and operation is not only dependent on the outreach and dissemination activities to attract cities within and beyond Europe, but also on the IRIS

consortium members' dedication to the exploitation activities. By scaling-up within LH cities we practise replication. And replication is a huge challenge that needs a lot of practise to be successful. Let's get ready for this marathon race!

1.1.1 Relevance for different target audiences

D3.8 is written so that all partners of IRIS will understand their important and specific role in seeing to that the IRIS project's results make market impact. Note that there is not one single partner that is not affected by the plan. WP8 is lead of replication activities on the European market. WP3 is lead of replication activities beyond Europe. However, it is up to each partner to also push towards reaching the objective of reaching outside the project with our business models and solutions. Any questions regarding this is to be addressed to WP3 and the project coordinator. This plan will indicate what is expected of each of the different groups within IRIS and what can be expected from other project partners.

The Solutions Providers of IRIS

(For example Metry, Trivector, Vulog, Lomboxnet, Qbuzz, EDF)

Some of the solution providers might have the objective of only scale-up within their own city and some will want to replicate elsewhere. Depending on their interest and means for growing, the IRIS project and the lighthouse community provide a great platform for expanding the business. This will not happen by itself, You as a solution provider have to be dedicated to the task and early on state whether you are interested in growing your business or if it's your business model that is to be replicated.

There will be solution providers with no intention to scale-up nor replicate. Here, focus is on the business model which can be used for replication elsewhere by a local actor in that particular place. In the IRIS project we have several partners that can engage with different aspects on the business modelling aspect, such as Civity, HKU, University of Nice, IMCG, CERTH, Utrecht University, University of Brussels, Chalmers, Merinova and RISE.

The Lighthouse Cities of IRIS

(Utrecht, Nice and Gothenburg (Johanneberg Science Park, Business Region Göteborg))

You as a LH city are in charge of providing a smart district for testing and demonstrating the IRIS solutions. Thus, you have a major responsibility to collect information from the solution providers and provide understandable, easy-access information to other districts within the city for scaling-up activities. This information shall be equally easy to access and understand for FCs and for cities outside the project (in Europe and beyond). The information should show what can be replicated, what problems the integrated solutions solve and who to contact to get further information. It could be presented as a fact sheet.

The Follower Cities of IRIS

(Vaasa, Foscani, Alexandroupolis and Santa Cruz de Tenerife)

You as a follower city will be one of the first cities to replicate IRIS solutions. This is a major milestone which will have a huge impact and will function as a symbolic inspirational journey for other cities interesting in replicating IRIS solutions. They will be great ambassadors for replication and you are in the

unique position to be able to give the LH cities input on possible adjustments needed to improve the knowledge transfer activity to ease the replication process.

The Solution Managers of IRIS

(For example, HSB, Riksbyggen, Akademiska Hus, BOEX, Stedin, Enedis)

You as solution managers are the first ones to implement the new solutions and you play an important role as you can speed up both scaling-up within your own property stock and being great ambassadors for cities that want to replicate what's being done in one of the IRIS LH cities. Knowledge-sharing is key.

1.2 Contributions of partners

IMCG acts as work package leader of WP3 (Development of Bankable Business Models and Exploitation Activities) and is the author of this report. IMCG is a consultant bureau with the roll of a change agent and will by this report show examples for exploitation of IRIS solutions and explain useful tools and methods.

A central part of an exploitation plan is the delivered value. Early on IMCG saw a need to discuss the IRIS offer with key partners of IRIS. IMCG has had several discussions with WP8 and the replication manager as well as WP10 and the communication manager as they are very much affected of the content of this report.

Also, a very fruitful on-line meeting on April 10, 2019, we had gathered representatives from LH cities (Nice was not able to attend, but had no comments on notes sent out), the project coordinator, the business model manager, the replication manager, (the communication manager could not participate, but we had had previous on-line meetings). The meeting was set to present a first version of the IRIS offer – what we can offer cities that we intend to recruit as followers. It was also during this meeting that it became obvious that we had to abandon the original purpose of this Beyond Europe deliverable and to include the steps of scaling-up and replicating within the project as well as replicating in Europe. See [Appendix 1 for further information](#).

The project coordination team as well as CERTH and ESCI have all contributed to push forward the need for an offer that is more than IRIS. WP2 (EU wide cooperation with ongoing projects, initiatives and communities) is also very much on board regarding this. We'll work for get more involved with the lighthouse community and through that involvement have a stronger offer to cities that wish to become smarter. See [Appendix 2 for more information](#).

1.3 Relation to other activities

This deliverable refers to the work of other deliverables and milestones;

D3.3 European Smart Cities and district overview and market analysis for IRIS integrated solutions (M12)
– indicates the potential European market and provides valuable information when working on recruiting 80 European cities. Describes the two different roles of a city, the roles of solution providers and solution managers. It also shows how IRIS is part of the lighthouse community.

D3.7 Financing solutions (which includes MS5 Financial Toolbox adapted for cities replication of IRIS IS) (M24) – presents different financial instruments which are of essence to know about in order to overcome one of the barriers of reaching the market; have enough funding.

MS4 Innovative Business Model adaptation tool for cities (M18) – knowledge transfer to the IRIS cities so that they can work with the solution providers and their business models, with the aim of being able to replicate bankable business models

D3.2 Sustainable Business Model Dashboard tool (M24)

IRIS Solution that is “born global” is a demonstrated and evaluated solution that has the potential to meet city challenges even outside the EU market. The solution is available for any solution manager and there are many available technology suppliers on the market. For a successful replication of IRIS solution to a new city there is need to understand the conditions and functions of the local market. The Sustainable Business Model Dashboard tool presented in report D3.2 have been used to diagnose the market conditions in Cities where the IRIS solution have been demonstrated and tested. The tool can be used to diagnose the market conditions in the new city to verify that conditions are suitable for the IRIS solution or if there is a need to strengthen the market conditions and functions.

D8.12 European Level Replication Plan (M36) – This deliverable is quite similar to D3.8. Therefore, IMCG has suggested that D8.12 should be an update of D3.8 and include a global perspective, not focusing only on 80 cities that is to be recruited in Europe, but also the 20 cities beyond Europe.

D8.3 Replication toolbox (M25) – as the name of the deliverable indicates, it will be a tool for enhancing the possibilities to replicate. Therefore, it is also a means for us to execute the exploitation plan reaching the targeted 100 cities.

1.3.1 Relation to other work packages

During the meeting referred to above, we initiated the discussion regarding the importance to clarify the different roles that we all need to engage in, in order to execute the exploitation plan.

WP1 Transition strategy: Five tracks to maximise integration synergy and replicability

On a consortium level the exploitation plan and operation are based on the transition tracks of IRIS. This will, as the name of WP1 suggests, create synergy and enhance replicability. The transition tracks are:

- Energy positive districts
- Smart energy management
- Smart e-mobility
- City innovation platform
- Citizen engagement and co-creation

WP1 has delivered several reports¹ that are valuable when looking into the possibilities for scale-up and replication.

WP2 EU wide cooperation with ongoing projects, initiatives and communities

EIP-SCC plays an important role for a lighthouse project like IRIS. To our knowledge, only one other lighthouse project has the objective to replicate outside of Europe (Smart City), which is why we believe that the competence we build up around this area, is something WP3, WP8, WP2 and WP10 can spread within the different task groups of EIP-SCC that we are being part of, such as the Business Model Task Force Group and the Replication Task Force Group. WP2 will be especially of use when it comes to the replication activity within Europe which is aligned to the work led by WP8 Replication.

WP3 Development of bankable business models and exploitation activities

IMCG, lead of WP3 is delivering this exploitation plan, D3.8, describing activities that needs to be done recruiting 100 cities, presenting tools to ease the exploitation activities. IMCG is also in lead of the development of the IRIS offer to cities beyond Europe and the recruitment of 20 cities beyond Europe. The University of Brussels, VUB, lead of IPR-related issues of WP3 will deliver D3.5 IP landscape and work with partners in order to secure that the solution providers do have the rights to exploit their solutions. The University of Nice, UNS, looks into the eco-system of the cities and how to improve them in order to better scale-up or replicate integrated solutions. D3.2 Sustainable Business Model Dashboard tool (M24) is aligned with this work and takes into account what integrated solutions the LH cities believe the FCs will be most likely to replicate. The University of Utrecht, UU, looks into cities support to entrepreneurs and the business development of incubated ideas. The IRIS project is expected to nurture new ideas and present new business models. Utrecht works closely with Chalmers and UNS in this aspect.

WP4 City Information Platform

The main objective of WP4 is to offer an open, reusable and reliable platform for sharing data, speeding up innovation, standardisation and implementation of smart applications, and lowering costs. WP4 will exploit the results of IRIS through joint exploitation, aiming at the adoption of IRIS CIP and related services and solutions by other cities in Europe (primary target) and around the globe (secondary target).

WP5 Utrecht Lighthouse City demonstration activities WP6/Nice Lighthouse City demonstration WP7/Gothenburg Lighthouse City demonstration activities

The lighthouse cities, City of Utrecht, City of Nice and City of Gothenburg are committed to:

- identify the solutions that are ready to be scaled-up within the LH city, the solutions that are ready to be replicated to FCs and to other European cities as well as identify the “born global” solutions of IRIS
- promote the IRIS offer to cities (within and) outside of Europe

¹ <https://iris-smartcities.eu/public-deliverables>

- provide the consortium with information on cities (within and) beyond Europe with replication potential
- be ready to host delegations from cities (within and) outside of Europe and provide these cities with information about the demonstrations on transition track level.
- be able to sign official replication agreements with cities (within) beyond Europe

WP8 Replication by Lighthouse regions, follower cities, European market uptake

This work package provides the replication toolbox, D8.3 (M25) that will be used both in the replication within Europe and beyond. Vaasa is head of the work package leading the exploitation plan and the operation on a European level, recruiting the 80 cities in Europe.

WP9 Monitoring and evaluation

WP9 sets Key Performance Indicators, KPIs on the execution of the solution providers individual exploitation plans.

WP10 Communication and dissemination

WP10, led by ESCI, has made a plan for dissemination of project results, which will be part of the IRIS consortia exploitation plan. Exploitation activities will link with replication activities carried out by the cities (preparing the market) and market-oriented activities carried out by business partners in order to create synergy. There will be clear separation of activities towards different target groups: City administrations/politicians - local knowhow-partners (universities-consulting) - local business sector – citizens. These exploitation activities will be an integrated part of IRIS's activities from the very beginning and will be further helped by targeted dissemination activities. ESCI supports the exploitation activities by communicating:

- the IRIS' offer to cities outside IRIS – within and beyond Europe
- transition track pitches
- pitches of “born global” solutions
- success stories of scaling-up and replication

WP11 Project management

WP11, led by Utrecht, is involved in IPR management, which is essential for a working exploitation plan. WP11 is also very important for making sure that partners contribute to executing the exploitation plan. Especially since many things described here are not tasks in anybody's work package.

1.4 Structure of the deliverable

The deliverable is structured the following way:

Chapter 2; Methodology

Chapter 3; Exploitation of IRIS results – consortium level

Chapter 4; Exploitation of IRIS results – solution provider level

Chapter 5; Exploitation plan – The IRIS’ offer and geographical road map

Chapter 6; Recommendations – consortium level

Chapter 7; Recommendations – solution provider level

Chapter 8: Output to other work packages

Chapter 9: Conclusions

2 Methodology

An exploitation plan can be built in different ways. IMCG works with exploitation in several different EU projects, such as United-Grid and InspireWater. The way IMCG constructed the suggested exploitation plan for IRIS is based on previous experiences, many IRIS internal discussions, IMCG's previous work in D3.3 (European smart cities and district overview and market analysis for iris integrated solutions, where some of the important roles partners in IRIS play were described) and on desktop research on the topic as well as discussions within the EIP-SCC Business Model Task Group trying to find similarities and engage in knowledge transfer. During the discussions in the task group IMCG has learned that so far the other projects, that have been running for a longer period time, have not been successful when it comes to replication. Here you will find a useful tool, namely a set of questions IMCG has listed as essential to be answered by this exploitation plan. It regards the IRIS offer, scaling-up district by district, replication from LH cities to FCs and replication from IRIS cities to other European cities and to cities beyond Europe.

The IRIS' offer

- What is the IRIS' offer? - Package the IRIS offer to LH cities' districts, to FCs and cities within as well as beyond Europe (LH cities, Vaasa, Utrecht, IMCG)

Scaling-up district by district – local eco system focus

- What solutions can be scaled-up within the LH city? - Identify the solutions having potential of being scaled-up at local level within the IRIS LH city eco-system (Nice University, LH Cities, solution providers)
- What solutions do we lack, but need to find? - Identify new incubated business models (Utrecht University)
- How to ease the possibility to replicate within the LH city? - Activate the business model adaptation tool for cities (IMCG, LH cities)

Replication from LH cities to FCs

- How to ease the possibility to replicate? - Activate the replication toolbox (Vaasa, LH cities)
- How to ease the possibility for a FC to finance replication? - Activate the financial toolbox for cities replication (IMCG, LH cities)

Replication from IRIS cities to other European cities and to cities beyond Europe

- What solutions are capable of going global? - Identify and highlight the “born global” IRIS solutions (LH cities, solution providers)
- What is the IRIS offer? - Package the IRIS offer to LH cities' districts, to FCs and cities within as well as beyond Europe (LH cities, Vaasa, Utrecht, IMCG)

- How are we going to let the world know about the IRIS solutions? - Set a yearly plan for dissemination activities to promote replication (ESCI, IMCG, Vaasa)
- How do we reach the world? - Activate IRIS's collective network of cities within and beyond Europe (LH cities, solution providers, IMCG)
- How is the world to get the IRIS information? - Allow prospect cities to take part of IRIS progress and results (LH cities, solution providers)

A key element of the methodology is that the exploitation plan needs to be step by step articulated, requiring the different inputs described in the sections below.

Connecting with WP with similar tasks and deliverables

Since WP3 (Business models and exploitation activities) is very aligned with replication, we started off by studying the content of the tasks and deliverables of WP8 Replication. We contacted WP8 for discussions regarding replication, different tools to be used for it and when in time their process of recruiting 80 European cities to become followers of IRIS would begin. As this comes later in the project than this exploitation plan, we will sometimes refer to the work that will come out of WP8.

2.1 Setting a baseline and understanding for the exploitation plan

Early on, it was clear to us that many of the tasks that come with the exploitation plan are not tasks defined under any work package in the IRIS project. Therefore, in April 2019, we gathered representatives from the LH cities, the project coordinator, the replication manager and some more for an on-line meeting, to shortly describe that the exploitation plan will contain tasks for all IRIS partners and the impact of the project is heavily depending on how well we execute the tasks. This meeting created an understanding and a baseline for the development of the exploitation plan and the IRIS offer. It was also during this meeting that IMCG accepted the altered and augmented objective of D3.8, which, originally was meant to be only about beyond Europe activities, but now contains the steps regarding scaling-up within the LH cities and replication to FCs and to European cities. See [Appendix 1](#) for further details on this internal sign off meeting.

2.2 Exploitation definition

In EU language exploitation is the use of results for commercial purposes or in public policy making. According to the EU commission exploitation is:



The utilisation of results in further research activities other than those covered by the action concerned, or in developing, creating and marketing a product or process, or in creating and providing a service, or in standardisation activities.²

Exploitation is to make use of results for scientific, societal or economic purposes. It is to recognise the exploitable results and their stakeholders. It could be to concretise the value and impact of the R&I activity for societal challenges and it can also be commercial, societal, political, or for improving public knowledge and action. Note that project partners can exploit results themselves or facilitate exploitation by others (e.g. through making results available under open licenses).

2.3 Identifying checklists for exploitation

The EU provides various checklists for exploitation³ and there are several different suggestions on the internet on how to build an exploitation plan in H2020 projects⁴. We have looked at some of the examples and adapted all this input to an exploitation plan that we believe fits IRIS. This exploitation plan reflects on a set of questions we have identified to be important in order to recruit the 100 cities. These questions are inspired by how EU describes exploitation and also of the work of other projects, such as CELSIUS5, that succeeded in their recruitment process.

2.4 Identifying the IRIS collective global network of cities

The IRIS grant clearly indicates that several of the IRIS partners have established connections with cities both in Europe and outside of our continent. These contacts are of utter importance for the success rate of exploiting the project results. This exploitation plan shows a start of how to collect information from different partners. There are also city communities in which IRIS play a part or could play a part. They are presented here.

2.4.1 Relation to the lighthouse community

When IRIS started, we were 12 lighthouse projects in Europe. By June 2019 there were 18 projects and we can expect the number to grow. All the projects have an ambition to replicate the solutions being demonstrated within the project. We all have more or less the same target groups. All of the partners engaged in EIP-SCC task force groups (such as WP2, WP3, WP8 and WP10) are addressing this issue at

² http://ec.europa.eu/research/participants/portal/desktop/en/support/reference_terms.html April, 2019

³ http://ec.europa.eu/research/participants/data/ref/h2020/other/events/2017-03-01/8_result-dissemination-exploitation.pdf April 2019

⁴ <https://europamedia.blogactiv.eu/2017/12/04/exploitation-plans-five-key-steps-for-horizon-2020-proposals/>

⁵ <https://celsiuscity.eu>

meetings in order to see if we can move towards working together with the ambition to have more of a lighthouse or Smart City Europe offer than 18 individual project offers. In the task groups there are on-going discussion on instead of large public procurement programs (which are costly) engage in a collective work of communication. Focus would be for cities to communicate what kind of smart city solutions they need and let the industry understand what there is a market for. A demand-driven scenario.

IMCG is part of the Business Model Task Group of EIP-SCC (The European Innovation Partnership on Smart Cities and Communities) and Vaasa is part of the Replication Task Group of EIP-SCC. In these constellations we get to interact with several of the 18 Lighthouse projects in Europe. It has come to our knowledge that few other projects have managed with the task to replicate. We have also learned that not all have a deliverable regarding exploitation plan. This has led us to believe that we need to work thoroughly with the IRIS exploitation plan. So, this exploitation plan, even though originally designed to exploit solutions beyond Europe, also includes the first, natural steps; scaling-up within the city and the IRIS objective of FC replicating the LH cities' solutions and replication to cities outside the project within Europe.

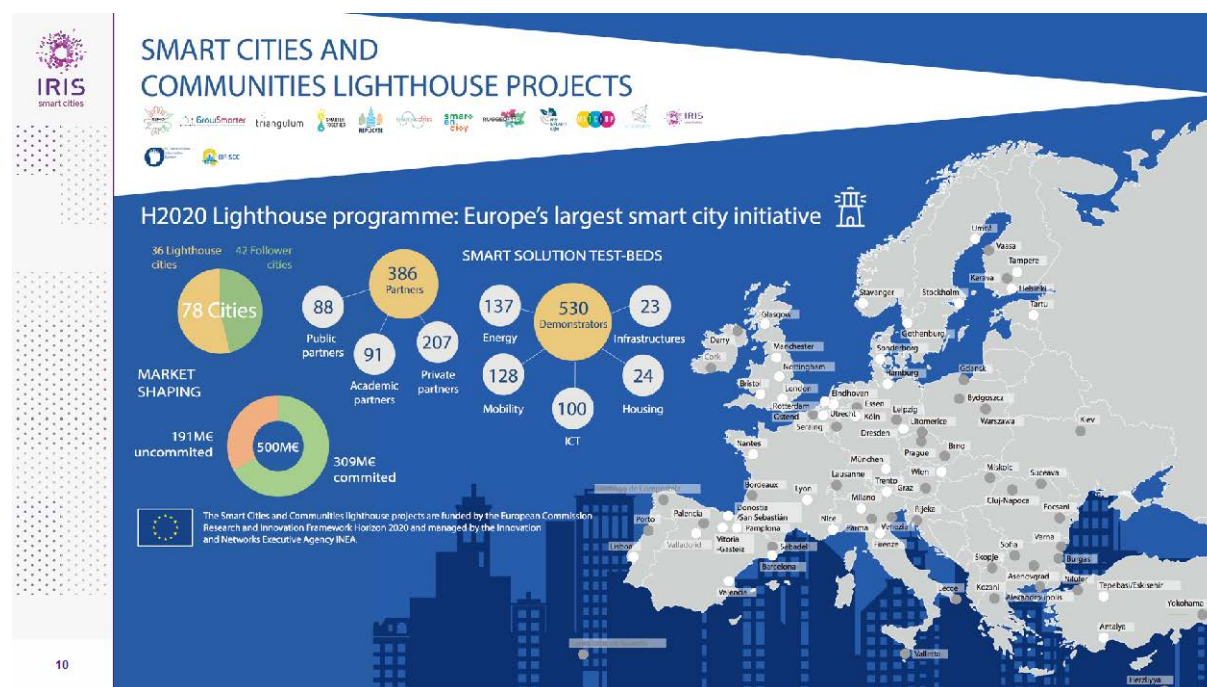


Figure 3 Smart Cities and Communities Lighthouse Projects

In June there we have had several discussions (project coordinator, leaders of WP3, WP8 and WP10) in order to see how to best set the scene for recruiting 100 cities. See also [Appendix 2](#) regarding recruiting cities and to create a joint Smart Cities Network with SCC-01-projects, SCIS and EIP-SCC.

2.4.2 International city networks

There are many international city networks focusing on sustainability and smart cities, such as the Climate Group, Living Labs Global, Renewables Cities, C40, Bloomberg cities, ICLEI, Global Covenant of

Mayors, Renewable cities, Rockefeller 100 Resilient Cities, New Cities Foundation, R20 network and Viable cities.

C40⁶

The C40 Cities Climate Leadership Group connects over 90 of the world's greatest cities, representing 700+ million people and one quarter of the global economy. Created and led by cities, C40 is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens.

The C40 networks facilitate dialogue amongst city officials. Current network initiatives of interest are "Energy & Building" and "Transportation & Urban Planning".

Example of African cities: Cape Town, Johannesburg (South Africa), Dakar (Senegal), Nairobi (Kenya). Example of Asian cities: Beijing, Hong Kong, Wuhan (China), Jakarta (Indonesia), Tokyo (Japan), Bengaluru (India), Dubai (United Arab Emirates). Example of Australian/New Zealand cities: Melbourne, Sydney (Australia), Auckland (New Zealand). Example of South American cities: Buenos Aires (Argentina), Curitiba (Brazil), Medellin (Colombia), Rio de Janeiro (Brazil), Santiago (Chile). Example of North American cities: Boston, Chicago, Los Angeles, San Francisco (USA)

Living Labs Global⁷

Living Labs Global is an initiative to build a global marketplace for mobility, an association of public and private actors with the common goal of delivering new services to users. mWatch Surveys have shown that users demand customised solutions, incorporating offers from a range of public and private sources. The mWatch Showcase today presents 230 such solutions in European communities alone.

Renewables Cities⁸

Renewable Cities is a global program of Simon Fraser University's Morris J. Wosk Centre for Dialogue in Vancouver, Canada. Their mission is to support cities through the transition to 100% renewable energy and increased energy efficiency. Using research-based dialogue, collaboration, and thought leadership we work towards urban energy solutions with cities, governments, the private sector, utilities, researchers, and civil society.

Bloomberg cities or The American cities initiative⁹

The American Cities Initiative is an expansion of Mike Bloomberg's support for U.S. cities at a time when they face steep challenges, and when the nation needs them to power solutions that move the country forward.

⁶ <https://www.c40.org> (September 2019)

⁷ <https://www.livinglabs-global.com/livinglabs.html> (September 2019)

⁸ <https://www.renewablecities.ca> (September 2019)

⁹ <https://www.bloomberg.org/program/funders-projects/american-cities-initiative/#overview> (September 2019)

ICLEI¹⁰

ICLEI – Local Governments for Sustainability is a global network of more than 1,750 local and regional governments committed to sustainable urban development. Active in 100+ countries, we influence sustainability policy and drive local action for low emission, nature-based, equitable, resilient and circular development. Our Members and team of experts work together through peer exchange, partnerships and capacity building to create systemic change for urban sustainability.

Global Covenant of Mayors¹¹

GCoM is the largest global alliance for city climate leadership, built upon the commitment of over 10,000 cities and local governments. These cities hail from 6 continents and 139 countries. In total, they represent more than 800 million people. By 2030, Global Covenant cities and local governments could collectively reduce 1.3 billion tons of CO2 emissions per year. That's the equivalent of taking 276 million cars off the road.

Rockefeller 100 Resilient Cities¹²

100 Resilient Cities—Pioneered by The Rockefeller Foundation (100RC) is dedicated to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century.

New Cities Foundation¹³

New Cities is a global non-profit committed to shaping a better urban future. They have a decade's experience curating and producing innovative content about the most important emerging urban trends. They do this through our events, our knowledge-sharing platforms, and actionable research.

New Cities brings a 'whole-city' approach – they convene and connect the key stakeholders of the urban ecosystem: the residents, governments, academic institutions, civil society organizations, and business communities of a city. The activities are inspired and supported by their global network of members, whose insights help us determine the most pressing topics in cities.

R20 network¹⁴

R20 – Regions of Climate Action, believes that cities and regions play a central role in the fight against climate change and its impact. In particular, that local and regional actors are uniquely positioned to implement the transition to a low-carbon green economy, whereby natural resources are conserved, fossil fuel use is limited, public health is protected and enhanced, while societies promote equality.

¹⁰ <https://www.iclei.org> (September 2019)

¹¹ <https://www.globalcovenantofmayors.org> (September 2019)

¹² <http://www.100resilientcities.org> (September 2019)

¹³ <https://newcities.org> (September 2019)

¹⁴ <https://regions20.org> (September 2019)

Viable cities¹⁵

Viable Cities – the strategic innovation programme for smart, sustainable cities – is the largest research and innovation initiative taken in Sweden so far in the field of smart, sustainable cities. Viable Cities is led by KTH Royal Institute of Technology and brings together around 60 stakeholders in various areas of research, industry, government, local authorities and civil society. The mission of Viable Cities is to achieve Climate Neutral Cities by 2030.

2.5 Learnings from other projects

We have looked into other projects to see if there is knowledge transfer to consider. We contacted the RUGGEDISED project¹⁶ and they were very willing to share experiences, but they do not have anything that resembles our deliverable within this field. We have had an initial meeting with CELSIUS, a project, that managed to recruit over 50 cities within the field of energy and is now working on CELSIUS 2. Within the exploitation plan we are to meet with CELSIUS again to allow valuable knowledge transfer regarding how to recruit cities.

2.6 Looking into EU provided exploitation services

Between June and August, 2019, we have been in touch with SSERR¹⁷, that provides exploitation services. However, they are running out of budget and are now trying to allocate resources to be able to assist us in workshops on exploitation strategy. Such a workshop will, if they can find the means to provide it, be held during a consortium meeting.

¹⁵ <http://viablecities.com/en/home/> (September 2019)

¹⁶ <https://ruggedised.eu> (May 2019)

¹⁷ <http://sserr.meta-group.com/SitePages/default.aspx>

3 Exploitation of IRIS results – consortium level

Exploiting the results of a project is highly depending on the ability of tech and non-tech partners to cooperate and to rely on each other's competences. The technical knowledge must be there, but without the understanding of how to communicate the customer value, the high-tech solution will never reach the market. And if the solution, product or service is a result of a collaborative work, it is of essence that somebody can state ownership of it. If not, nobody will be able to invest in it or buy it.

IMCG has chosen to look at exploitation on a consortium level and on a solution provider level. According to the IRIS grant agreement all partners are obliged to exploit the results of the project.

The building of an effective exploitation plan reflects the key exploitable results. In this chapter IMCG aim to go through these questions and suggest action on how the consortium should handle them:

- What are the different types of possible exploitable results?
- What are the barriers and risks for exploitation?
- How do you ensure that the results of IRIS meet real needs and will be taken up by potential users?
- Describe the roles and responsibilities of partners in exploiting the results?
- How does the project handle IPR?

Different types of possible exploitable results

In IRIS there are 16 integrated solutions being tested and there are several incubated ideas expected to evolve during the five-year project.

3.1 The 16 integrated solutions and the five transition tracks of IRIS

You see the 16 integrated solutions in the picture below. You also see within which transition track they're under. Often, we will have to speak about the transition tracks – the challenges cities have to deal with – rather than going into detailed solutions.



Figure 4 IRIS 16 integrated solutions

The IRIS Grant Agreement presents a list of exploitable results. When we are recruiting cities to follow the project these types of results are the ones that might be pitched.

Table 1 IRIS Exploitable results, from Grant Agreement, page 111 (page 298 in pdf).

EXPLOITABLE RESULTS	TYPE OF RESULTS	OWNERS	PROVISIONAL STRATEGY/ FORSEEN EXPLOITATION	IPR
CIM (City Information Model)	Other	Tyréns, Gothenburg, LH cities, CSTB	City traffic and planning tool. Open.	
CIP (City Innovation Platform) and CIP Market place (3rd party apps)	Product (Platform)	Civity, CERTH, Engie Cofely, Gothenburg, Nice, KPN, Metry, Utrecht, CSTB	Free for educational, academic and research purposes. Market place; Free/Freemium/Pay per app download (depending on the scope of each app, the type of user and the purpose of use)	
BIM & game-based VR Platform	Product (Platform)	Trivector, HSB, CERTH/ITI, LH cities, BOEX	Free for educational, academic and research purposes. SaaS for all other purposes	
Urban monitoring services	Product & Service	KPN, Stedin, ATMOSUD, Enedis, RISE, LH cities	Free for educational, academic and research purposes. Free/Freemium for all other purposes	



City management & planning services	Product & service	LH cities, BOEX, CAH, Nexity, Akademiska Hus, HSB	Free for educational, academic and research purposes. Free/Freemium for all other purposes
Mobility services	Product & service	Vulog, Trivector, CERTH/HIT, Lombboxnet, Eneco	Free for educational, academic and research purposes. Free/Freemium for all other purposes
Grid flexibility services	Product & service	Eneco, Stedin, Enedis, EDF, Chalmers, Lombboxnet, QBuzz, CERTH/CPEI, Riksbyggen, Engie Cofely.	Free for educational, academic and research purposes. Free/Freemium for all other purposes
Storage solutions (2nd life batteries, thermal storage)	Products	BOEX, QBuzz, Lombboxnet, Eneco, Stedin, CSTB, EDF, Akademiska Hus, CERTH/CPEI, Riksbyggen	Patent; Licensed use.
Replication tools (roadmap, replication wizard, training etc)	Other	CERTH, Utrecht University, HKU, Vaasa, CSTB, Chalmers, Riksbyggen, LH cities	The roadmap for replication activities will be public & provided for free. Provision of citizen engagement tools for free. The replication guide/wizard will be public & provided for free. Provision of training on a fee-basis.
IRIS business models	Other	IMCG, University of Nice, Utrecht University	Open to public

3.1.1 Incubated ideas

The University of Utrecht, together with Chalmers and University of Nice will assist with evaluation of the business models of incubated ideas. These ideas might come up during city innovation challenges that will be arranged by the University of Utrecht.

3.1.2 Next step

IMCG is producing business model fact sheets – on one solution within each transition track. These will be used when recruiting cities. There will be a documented evaluation of the business models of 16 integrated solutions and the business models of incubated ideas. The solution providers can ask for assistance with this from project partners in WP3; IMCG, Utrecht University, the University of Nice among others. This is an on-going action and the solution providers and LH cities should be drivers identifying when it's time to do. The information will be stored on Emdesk. Suitable material will be put on the IRIS web site as well, so that there will be official information to access.

3.2 Barriers and risks of exploitation

During our meeting in April 2019 with the LH cities, the project coordinator and replication manager we identified some risks of exploitation. Here we present the main ones.

- The IRIS' offer is either too general or too detailed
- LH cities saying no to delegation visits from other cities
- LH cities feeling that they don't have enough to show for delegations yet
- LH cities and solution providers not providing information to cities that signed up to follow IRIS
- Solution providers not interested in replication or scaling-up

3.2.1 *The IRIS' offer is either too general or too detailed*

The IRIS' offer was introduced as being:

- Insight to 5 key areas of transition
- Knowledge transfer regarding bankable solutions
- Invites to visit the demonstration sites showing smart city solutions
- Entrance to a network of cities in the European Smart City community

No doubt this is a rather general offer. However, during the initial meeting with key partners of IRIS in April, it was also clear that even though that there was a wish for being more specific, there wasn't anyone having the resources to live up to a more detailed offer. Note also that the consortium is working towards an offer that is more of a lighthouse city / Smart City Europe offer, than an individual project offer.

3.2.2 *LH cities saying no to delegation visits*

The IRIS consortium cannot take for granted that LH cities will say yes to delegation visits. The consortium already has had one of our LH cities claiming not having enough resources to host a delegation visit from one of our FCs with replication interest. In IRIS we are to attract 100 cities from outside of the project. This objective demands knowledge transfer and will most often require for LH cities to host study visits.

3.2.3 *LH cities feeling that they don't have enough to show for delegations yet*

When the integrated solutions are not fully implemented at a demo site, the feeling of having nothing to display could be overwhelming. Know then, that in innovative EU projects when integrated solutions are being tested, developed and demonstrated, that is a normal state of work. Note that often, what is of most interest to other cities, is how you achieve the results, not the actual results. They might want a knowledge transfer of the act of collaboration between academic partners, the industry and SMEs. Therefore, there are always things to show – from project start and throughout the project.

3.2.4 *LH cities and solution providers not providing information to cities that signed up to follow IRIS*

It is hard for a lighthouse city to provide potential replication cities with information if the lighthouse cities feel that there isn't enough information or the right information available. At the consortium



meeting in June 2019 in Vaasa we learned that there is already a lot more information available on Emdesk than what most partners know. This information needs to be made available and more accessible – both for project partners and for the cities we are to attract outside the project.

3.2.5 Solution providers not interested in replication or scaling-up

Solution providers that don't have an interest or the means to scale-up their solutions need to express that. This could be done at the regular Lighthouse city-meetings and the city coordinators would then, preferably, notify IMCG of WP3. What will be replicated are their business models, if they are positively evaluated. Replication calls for knowledge transfer, thus well documented information on the business models is needed.

3.2.6 Next step

IMCG suggests that when having monthly meetings within the LH node, have a short brainstorming session where you identify if there are any other barriers and risks. Also make some effort in figuring out how to tackle them and the barriers already addressed here in this section. Mitigation actions to avoid possible barriers are necessary. This information needs to be transferred to all WP-leaders and the project coordinator so that the right actions are taken.

3.3 Ensure that the results meet real needs and will be taken up by potential users

IRIS is, as shown above, addressing 5 transition tracks. The lighthouse community consists of 18 lighthouse projects engaging more than 100 European cities that are addressing the same type of transition tracks. That clearly indicates that there are many cities facing the same kind of challenges as we address in our project. In D3.3 European Smart Cities and District Overview and Market Analysis for IRIS Integrated solutions many of the European cities mentioned above are described according to their specific interest within issues regarding energy, mobility and/or ICT/open data.

Later in this chapter, there is a short description on what problems IRIS are trying to solve and the phrases, transition track pitches, that are used to communicate this. The information is from the general PowerPoint presentation (see Emedesk) of IRIS, produced by WP10 Communication.

3.3.1 Next step

The suggestion is to see that there are accessible information about the transition tracks and the solutions so that all partners can find it and that it is also within reach for cities interested in becoming one of the 100 targeted cities. To have the information on Emdesk is not sufficient.

3.4 Description of the roles and responsibilities of work packages in exploiting the results

This section gives an overview of responsibilities on a work package level regarding;

- Scaling-up to other districts in LH-cities

- Replication to FCs
- Replication to other EU cities
- Replication to cities beyond Europe

Throughout the document the description of partners' individual contribution to executing the exploitation plan will be found. Here is a table showing the contribution on a work package-level. The content of the table has been structured together with the project coordinator of IRIS.

Table 2 Overview of responsibilities on work package level

Level	WP5/6/7	WP3	WP8	Other WPs
Scaling-up to other districts in LH-cities	LH city-partners are responsible themselves for within their own city, engage in activities promotion scaling-up, replication and exploitation.	Support LH City partners on innovation framework and ways to improve, develop new and exploit existing business models (T3.2, T3.3). Support LH City partners with information on new financing options (T3.4)	Support with replication the replication toolbox.	All WPs: communicate the success WP4: Support with open data and ICT to enhance new business models
Replication to Fellow cities	LH City partners to provide WP8 with the necessary information on IRIS solutions: e.g. by completing documents, mentoring discussions, study visits. LH City partners to be willing to adapt solutions to FC-partners needs	Support LH City and FC partners to adapt and exploit existing IRIS business models to new Fellow-city contexts (T3.1, T3.3). Support FC-partners to adapt/develop new financing options for replication of solutions. (T3.4)	Provide framework for FC to assess their project, identify viable IRIS solutions and replicate them within their cities. (T8.1-T8.6). Provide framework (templates) for LH City partners to provide the necessary information	All WPs: communicate the success WP10: Communicate success WP4: Support with open data and ICT to enhance new business models



	if local context allows for this.		and knowledge to help FC to replicate their solutions (T8.1/8.2)	
Replication to other EU cities	<ul style="list-style-type: none"> - LHC-partners to provide necessary information to WP8 and to TG Replication and other EU bodies (e.g. SCIS) 	<ul style="list-style-type: none"> - Contribute to WP8 on IRIS offering and approach for EU replication Support LHC-partners/FC-partners on adapting IRIS business models and adapting financing solutions (T3.1, 3.4) 	<p>Lead the EU replication (T8.7)</p> <p>Collaborate with LH City-project / TG Replication</p>	<p>WP2: Support with contacts regarding European partnerships and Lighthouse community.</p> <p>All WPs: communicate the success</p> <p>WP10: Communicate success</p> <p>WP4: Support with open data and ICT to enhance new business models</p>
Replication to cities beyond Europe	Support WP3 with providing necessary information (contacts to cities outside of Europe) and willingness to participate in global replication	Lead the Global replication: find cities, match needs of cities with IRIS offerings (T3.5)	Support WP3	<p>All WPs: communicate the success</p> <p>WP10: Communicate success</p> <p>WP4: Support</p>

	activities (e.g. visits of delegations and talks at international events)			with open data and ICT to enhance new business models
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3.5 Description of the roles and responsibilities of partners in exploiting the results

At this stage in the project it is not easy to document the exact measures that need to be taken in order to exploit the results of IRIS in a manner that we need in order to reach the target of reaching 100 cities. IMCG proposes that WP8 (Replication) will up-date this information in the information presented in this report in D8.12 report M36. All partners of IRIS need to consider their role regarding:

- The IRIS' offer
- Scaling-up district by district in the LH cities
- Identifying new solutions within IRIS
- Make it easier to scale-up within the LH cities
- Make it easier to replicate
- Make it easier for FCs to see financing solutions for replication
- Identifying the IRIS born global solutions
- Communicating the IRIS solutions to the world
- Activating the IRIS' partners global network of cities
- Provide the information about IRIS solutions
- Presentation of IRIS results

In D3.3 European Smart Cities and District Overview and Market Analysis for IRIS Integrated Solutions (M12), we describe the crucial roles of cities, solution providers and solution managers. See below for main take-aways relevant to the exploitation plan.

3.5.1 Roles of the city, solution provider and solution manager

The two roles of a city

The initial workshops arranged in each IRIS Lighthouse City during spring 2018 led to the conclusion that the city authorities not are the key actors to replicate implementation of IRIS Solution. The most important actors are private and public companies which practically act as solution managers, purchasing solutions from suppliers on the market and offering services to end-users, i.e. citizens. The conclusion also implicates that the main audience for the smart solutions, are solution managers within the Lighthouse cities.

A city can play the role of an enabler or a buyer. The easiest assumption is to see the city as the buyer of integrated solutions that solve the challenges the city is facing. However, many times it is other actors,

such as property developers that play the crucial part as buyers, as they design and implement the solutions.

In the IRIS project we have 7 cities; the lighthouse cities Utrecht, Nice and Gothenburg and the follower cities Vaasa, Foscani, Alexandroupolis and Santa Cruz de Teneriffe. Gothenburg is represented mainly by Johanneberg Science Park. It's crucial for all these cities to understand the two different roles that they can play in the exploitation plan.

The city as an enabler or facilitator

The workshops WP3 (IMCG) held together with WP9 (RISE) in the lighthouse cities of IRIS, Gothenburg, Nice and Utrecht during spring 2018, clarified how cities prepare themselves for handling innovations. The most interesting discovery is that most often the city is not the potential buyer of the solutions provided by IRIS partners. Instead, cities often play the part of enabling the market for the solutions. E.g. by restricting the area for parking places there will be an increased demand for mobility services.

The city representatives in IRIS also often serve as facilitators for the other local partners. Assisting them with documentation and reporting, organising the local network and communicate with project coordinator. They are also requested to communicate results and market solution providers offerings.

The city as the buyer

The city authority can be the buyer and owner of an integrated solution when the solution is included in the city infrastructure and may generate value all over the city. Solution managers within the city are responsible administrations and municipality owned companies.

When the city is the buyer, represented by an administration or a municipality owned companies, purchase is publicly procured and there is sometimes also a public political debate before investments take place. These processes are often time consuming and private companies must be strict when establishing business plans which includes either the city as key partner (as infrastructure provider) or the city as a customer. However, the city can establish large markets for innovations when the necessary conditions are established.

Smart city solution manager

When a solution is to be replicated it is necessary for the solution provider to understand who is to handle the solution on the buyer side of the transition. At the workshops with IRIS lighthouse cities we made a first attempt to describe these actors – the solution managers - for each integrated solution. In this report it's sufficient to describe the solution managers as the actors that purchase solutions from suppliers and offer the solution service to their customers, or to the citizens if the manager is a city authority.

The objective for the IRIS project is to demonstrate integrated solutions which deliver services with new values. It is for example renewable electricity produced from solar cells instead of nuclear plants. The integrated solutions will thereby also be built on new value chains from production to end-consumers.

The value follows a value chain and business models demonstrated in the IRIS project covering one or more links in the value chain. Each link can also be described with key activities as well as cost and revenue models. For example, for short term storage with batteries in buildings, a key activity is the

maintenance of the batteries. A supply company has a business model that offer this value to building owners for a competitive price and with a sufficient profit for the company to survive over time.

An integrated solution is often a result of several value propositions and key activities and sometime several business models as a business model is related to one actor only. E.g. for mobility services there is one actor who supplies the building owner with an IT platform and an interface for the tenants to book mobility services. Other actors that operate the different services, such as bicycles and car sharing, are connected to the platform and convert bookings into mobility.

While some integrated solutions call for the city as a whole to be one of the actors in the value chain, other solutions call only for an individual building to be the actor, without any dependencies on any external infrastructure on district or city level. The demonstrated value generation and related business models can also be divided into three categories presented in the table below.

Table 3 Three categories of value generation

The value generation is at:	The Solution Managers are:	The integrated solutions are typically included:
City level	City authorities and the responsible administration	In the city infrastructure
District level	Infrastructure developers	A cooperation between several actors within a district
Building level	Property developers	And upgraded in individual buildings

By providing a documentation of the replication, with solid and useful information (and contacts to collaborate with) the effort and risk to try a new solution is reduced for the solution manager. This replication documentation serves as a basis for solution managers in other cities when producing purchase specifications. The replication documentation also serves as a basis for solution providers developing and expanding their business. The replication documentation describes the necessary conditions for a solution to be implemented. It can be used when priorities are made to target markets.

The property developers as the key solution manager

Real estate developers and owners proved being important and can often play the part of a buyer since they handle mobility, energy and ICT matters with focus on increased value creation related to their properties. Often, the property developers design and implement a solution while property owners use the solution or offer it to the tenants.

Together with developers and owners of new infrastructure for mobility, energy and ICT they also create new values on a district level which is positive for their property portfolios in the district. Property developers interact regularly with their tenants and through them they can engage citizens and move the tenants towards the necessary behavioural change needed for cities to become even smarter. Most of the integrated solutions demonstrated and replicated in IRIS are related to properties and tenants.



The property developers and managers are important actors for implementing solutions and to engage tenants (citizens) in embracing and using the new services.

For some solutions the scope is on the building level (e.g. solar cells for electricity production) while other solutions include infrastructure outside the building (electricity market). The infrastructure can be city wide or even international (as with digital services) However physical infrastructure benefit from district level cooperation. The more properties within the district that implement the solution and use the services the lower the cost for infrastructure will be.

Example of property developers participating in the IRIS project are; Riksbyggen, HSB, Akademiska Hus and Bo-Ex.

Solution providers

Needless to say, the solution providers are key to the results of the IRIS project. Through the exploitation plan they can either increase their business by start delivering value to other districts within their city and from there also start delivering to the follower cities and to cities outside the project and beyond. If this is not an option for the solution provider, the business model of the solution provider is the one that can be exploited and replicated in other cities.

Some of the solution providers in the IRIS project are; Metry, Trivector, Lombboxnet and Vulog.

3.5.2 Next step

All project partners are to understand their role in the operation of the exploitation plan. If questions arise, please address it to the project coordinator and IMCG as soon as possible, as the exploitation plan is a means to reach the IRIS objective of attracting 100 cities from outside of the project.

3.6 Handling IPR

In order to exploit results, it is necessary to know who the owner of the results is. The University of Brussels, VUB, is delivering a report, D3.5 IP Landscape Review, and is in lead of IP-related issues of IRIS. VUB has the role of guiding IRIS partners regarding questions on ownership. The European Commission also provides a European IPR Helpdesk¹⁸.

EU projects often present inventories of patents that participants individually hold entering the project. A consortium agreement regulates the rights and obligations among the partners and is signed at an early stage. With no details regulated among the partners and with the overall goal to reach market impact with the techniques being developed within the project, the risk for legal disputes is potential.

3.6.1 Collaboration fuels innovation

¹⁸ https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/FS-Plan-for-the-exploitation-and-dissemination-of-results_1.pdf , April 2019



Focus for many EU projects is to through fruitful cooperation, generate new learnings and develop techniques that in the end will reach market impact. The outcome of the work differs from the techniques brought into the project by the companies individually. The back-side of this is that ownership issues can arise. This is related to IPR management.

Characteristic for an EU project that focuses on innovation is that the outcome of the collaborative work differs from the techniques brought into the project by the companies individually. Often, large, global companies offer their facilities so that the more fast-moving, but less capital-strong, SMEs can test their techniques at large scale for a relative long period of time. This is positive for the SME, as investors tend to perceive it as a strength that a well-known global giant is willing to test and contribute to the development of a new technique.

3.6.2 A Consortium agreement is not sufficient

In EU project, all partners sign a Consortium Agreement (CA). It is a contract regulating the rights and obligations among the project partners regarding management structures and financial distribution but also concerning confidentiality, liability and Intellectual Property Rights (IPR). The CA is usually signed in the beginning of a project. The contract is often written in very broad terms, so that all partners can agree upon it within a fairly limited amount of time span. When an innovative collaborative project starts to show results that can be commercialized, a general agreement is not enough.

3.6.3 Clarify who has the exploitation right

IMCG works strategically with IPR management in several EU projects to encourage partners not only to rely on the Consortium Agreement, but to sign legal documents regulating details minimizing the risk for legal disputes and maximizing the possibility for the invention to reach market impact. The overall aim of an innovative Horizon 2020 project is to push innovative ideas all the way to the market. But when the EU project starts to show results that can be commercialized, it is important to understand that a CA is not enough. There is an enormous risk that it won't be clear what partner owns the outcome. A common scenario in EU projects is that small companies with no legal expertise collaborate with global giants that have a whole department dedicated to legal issues. These two partners will end up fighting about who has the exploitation right. Who do you think will win if there is no legal document regulating this?

A Non-Disclosure Agreement (NDA) can be used to regulate details. It's a legal contract between at least two parties outlining confidential information. It creates a relationship between the parties to protect for instance proprietary information. If intellectual property (IP) issues are solved with clarity early on in the project, potential future conflicts are avoided. Business angels, investors and financial institutions are the ones who can enable that the invention reaches the market, and they won't invest in your innovation if you might own it. They will want proof of that it yours.

3.6.4 Next step

To secure that one has the right to exploit project results is essential. If you, as a solution provider testing and demonstrating your solution in an IRIS lighthouse city, you need to see to that there is no



question whether it's you that own the solution or not if you are ready to scale-up. You can't scale-up using the solution, if you can't prove you own it. This is proven by for example patents. When questions arise concerning IPR, please primarily ask for assistance by University of Brussels (VUB).

3.7 Transition track pitches – the problems IRIS solves

On Emdesk there are great information that could be made more visible and accessible to both project partners and to the cities IRIS is to recruit. WP10 has provided some splendid material which is a good start material for the transition track pitches needed in the work of attracting 100 cities. The material below is partly taken from the official IRIS power point presentation.

3.7.1 Transition Track 1 - Renewables and energy positive districts

Concrete problems they solve:

- Reduces energy use and costs for industry and consumers
- Increased home comfort with fewer resources consumed
- Better air quality inside and out

Table 4 Solutions transition track 1

Solutions offered by IRIS within Renewables and energy positive districts:	Future proofing our energy supply
Positive energy buildings; Brf Viva Housing, Gothenburg Nexity Palazzo Meridia, Nice “Sun houses” in Gårdsten, Gothenburg	Making renewables easier to integrate for everyone provides energy savings, environmental benefits and diversifies our energy sources
Near zero energy districts; Pre-pilot Near Zero Energy District, Utrecht Smart street lightning, Utrecht Smart street lightning, Alexandroupolis	Decreasing energy consumption, CO2 emissions and improving quality of life with smart grid technologies and easy to control home energy management systems
Symbiotic waste heat; HSB FTX system, Gothenburg	Using waste heat streams and biofuels as an energy carrier provides environmentally friendly business opportunities and by-products in a circular economy

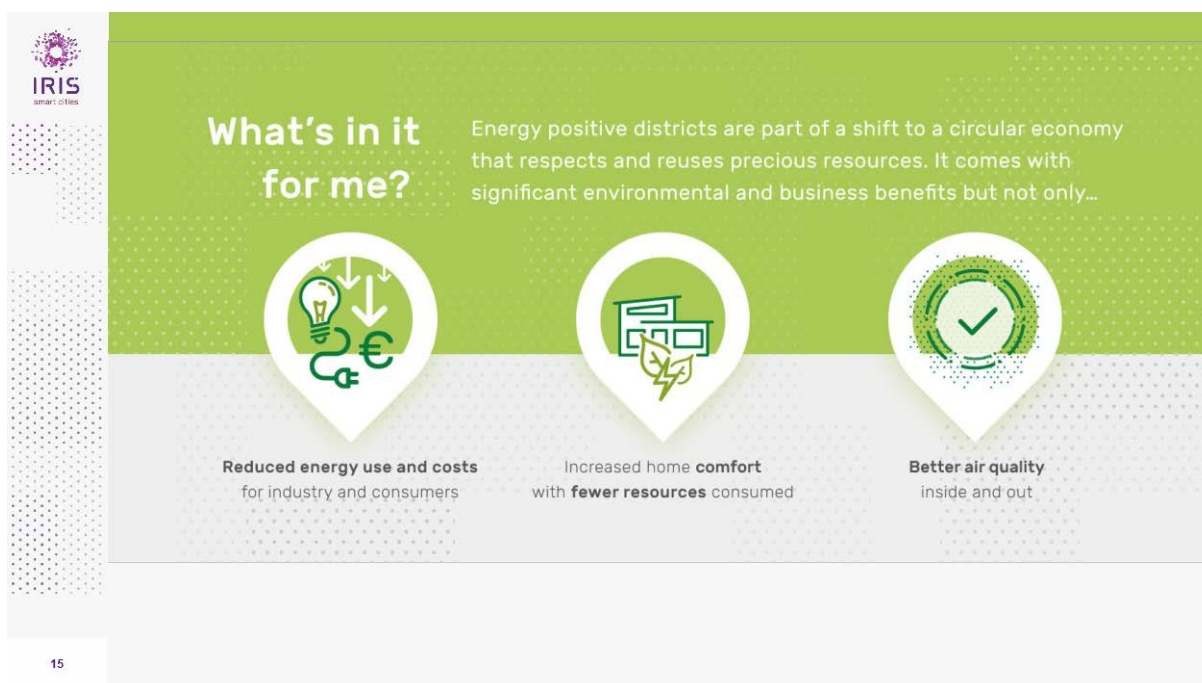


Figure 5 Transition track pitch 1

3.7.2 Transition Track 2 - Flexible energy management and storage

Concrete problems they solve:


- Unlocking new opportunities for renewable energy
- Avoiding power cuts, waste and shortages
- Cost savings for utilities and consumers

Table 5 Solutions transition track 2

Solutions offered by IRIS within Flexible energy management and storage:	Future proofing our energy supply
Flexible electricity grid networks; Distribution of 3 hierarchical zones for grid flexibility, Nice Eco Valley, Nice	Achieving more...with less! Energy management tools and new storage solutions make installation and use of renewables stress-free and more stable than ever before
Multi-sourced district heating; Geothermal heating & cooling innovations, Nice Merida District, Nice Geo storage with low temperature district	Low temperature district heating benefits from excess heat and consumes far less energy than traditional systems. Reduces carbon emissions and integrates well with renewable energy sources




heating, Gothenburg Multi-sourced medium temperature heating, Utrecht District heating & biogas system, Gothenburg	
2nd life batteries; Brf Viva with batteries from ElectriCity, Gothenburg	Batteries are reconditioned rather than disposed of. Using them in buildings boosts electricity grid flexibility promoting circular economy solutions with and a low environmental footprint




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What's in it for me?


A world of wonderful new appliances and electric vehicles is only possible with smarter and more flexible energy management. Replacing major infrastructure is extremely costly – and often passed onto the consumer.



Unlocking new opportunities for renewable energy use



Avoiding power cuts, waste and shortages



Cost savings for utilities and consumers

Figure 6 Transition track pitch 2

3.7.3 Transition Track 3 - Intelligent mobility solutions

Concrete problems they solve:

- Increased flexibility
- Reduced expenses
- Zero emission mobility and improved urban environment

Table 6 Solutions transition track 3

Solutions offered by IRIS within Intelligent mobility solutions	Intelligent mobility solutions
Vehicle-to grid and smart solar charging; Solar powered V2G car charger, Utrecht	Accommodating charging needs and energy consumption of a growing number of electric vehicles using flexible grid technology and harnessing the power of the sun – even overnight!
Innovative mobility services; Auto Bleu charging points, Nice ElectriCity (collaborative, cross-functional partnership, Gothenburg) EC2B mobility as a service, Gothenburg	Shared vehicles and Mobility-as-a-Service are a real breakthrough, providing a range of genuine alternatives to individual car ownership and a range of attractive and convenient choices for moving around

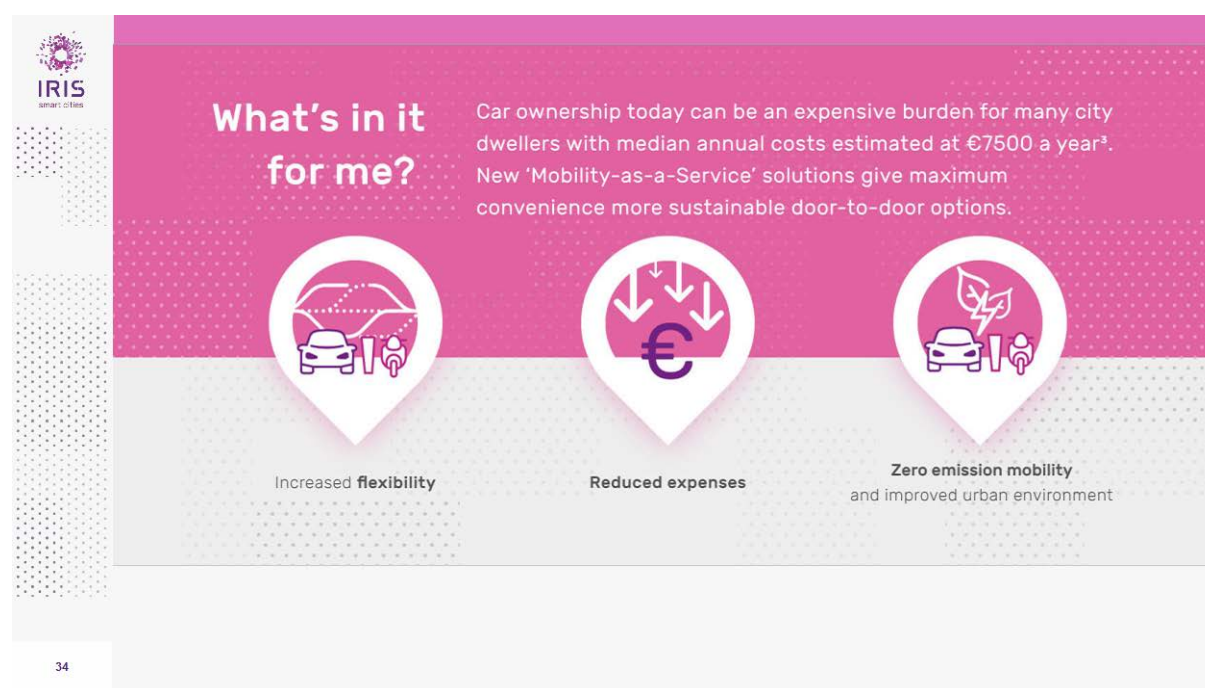


Figure 7 Transition track pitch 3

3.7.4 Transition Track 4 - Digital transformation and services

Concrete problems they solve:

- Better delivery and more efficient public services

- Saving time and money
- A marketplace for innovative new applications and services

Table 7 Solutions transition track 4

Solutions offered by IRIS within Digital transformation and services:	Meaningful data when & where it's needed
Urban monitoring; 3D district modelling Smart street lightning with multi-sensors e-mobility monitoring	Networks of micro sensors collect air quality, noise, water and energy, waste management data and more; processing it to improve living standards and optimise services to citizens
City management and planning: Long range (LoRa) IoT networks	Open data collaboration platforms allow city workers, construction companies, transport providers and more the power to consult, collaborate and plan interventions together, minimising disruptions and reducing costs
Mobility services; Peer-2peer service exchange	A new generation of real time data services integrating multiple modes and opportunities to travel provide a real alternative to the car and promote access over ownership
Energy management; Energy mapping, Gothenburg Klimaträtt/Climate Right application, Gothenburg	Multiple applications and real time analysis of energy production and consumption from monitoring grid flexibility to smart street lighting systems and visual displays for consumers fighting energy poverty



Figure 8 Transition track pitch 4

3.7.5 Transition Track 5 - Citizen engagement & co-creation

Concrete problems they solve:

- Be part of the solution and shape your own city
- A positive impact on people and the planet
- Connect with others and nurture new skills

Table 8 Solutions transition track 5

Solutions offered by IRIS within Citizen engagement & co-creation	Defining the future... together!
Changing everyday energy use; Identifying change agents	A set of effective citizen engagement approaches mapped onto each different context to help adoption of smart city solutions and move towards sustainable behaviour change
Participatory city modelling; Creating local innovation hubs	Diverse stakeholder groups brought together using design-thinking approaches to seek the most effective way to tackle often complex problems
Living labs; HSB Living lab, Gothenburg	User-centred, open-innovation spaces to shape social, technical and political innovation and dialogue
Behaviour changing information; Min Stad/My city, Gothenburg	Apps and interfaces giving information at identified key touch points where citizens interact with smart city solutions



What's in it for me?

Citizens with a sense of ownership and initiative are a powerful force for good. Unlock your local knowledge and insight to help design solutions and spaces that meet real needs.



Be part of the solution & shape your own city



A positive impact on people and the planet



Connect with others and nurture new skills

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Figure 9 Transition track pitch 5

4 Exploitation of IRIS results – solution provider level

If you are a solution provider that want to grow your business by scaling-up within the LH city or by replicating to FCs or to cities outside the project – in Europe and beyond, you need to ask yourself;

- Who is the end-user/customers and what problem are you solving for them?
- What value do you deliver?
- What is your business model? How scalable is it?
- How do you handle ownership/IPR?
- How do you involve end-users/handle innovation management?

The questions, which can be used as a tool to construct your individual exploitation plan, are very similar to the ones you need to answer in order to make a business plan. Part of costs of scaling-up and replicating your solution is of course covered by the IRIS project through yours and others' participation and contribution. But you also need to allocate resources for the scale-up and replication activities. If you plan is to replicate outside the project in Europe and/or beyond, you need to have a budget and a plan for this.

In the end of this chapter you will find a checklist for exploitation plan for solution providers.

4.1 Identifying the end-user and the problem that you are solving for them

You as a solution provider of IRIS need to consider who your end-users and customers are, what the use of the solution is and what problem is being solved by the solution. It should also be clear how the solution is better than existing ones. As partner of the IRIS project, you as a solution provider get the benefit of being able to test and demonstrate your solution in direct contact with end-users. This gives you the possibility to evaluate if this is the right target group or not or/and if adjustments of the solution is need to fulfil the needs of the end-users. For instance, Trivector in Gothenburg is testing their mobility services in connection with Riksbyggen and the house association company Brf Viva. Through the feed-back they get from end-users, the residents of the building, they can adapt their solution to better suit the audience. They should also take the opportunity to study the market regarding what other options that are available for the end-users. Through IRIS you have the possibility to not only look at the local market but learn from the markets in the other LH cities and the FCs.

Make sure that you can pitch your solution. The better material you have for this, the easier it will be for other partners in the project to help you reach the market and thereby move a towards forward the 100 cities we are to recruit together. Your pitch could be a short movie clip that could be put on the IRIS website, for instance. It could be a one-pager, which can be used in meetings. This is your value proposition and part of your business model.



4.2 Delivered value

You have to be able to describe what value you are delivering. Does the end-user understand the solution's purpose? If it's a new innovation the potential user might not have any prior knowledge of what this should be useful for. What is most important for the end-user? Is it that you provide a sustainable solution? Or is it to be able to say that they are the first one to have bought this solution, being a forerunner? Does your business plan describe the value and the way you will scale-up?

The delivered value is directly linked to the need for a pitch described above. It is also to understand who the buyer is. Is it the city or is it a property developer? Or somebody else? You need to tune your message for the audience.

4.3 Know your business model and the ability to scale it

The project coordinator of IRIS states that first of all, a distinction on what type of business models there are in IRIS must be done. There are business models from solution providers, from incubees and start-ups and there are societal value models. Here are some examples:

- Business models of solutions providers (SMEs, LSEs), e.g. Lomboxnet, EDF, Tyrens and Vulog.
- Start-up business models developed through incubation processes, most importantly the data driven service build on CIP (see also the 250k Challenge budget in Task 11.4)
- Societal value models, e.g. social housing corporation (BOEX) needs to take care for energy efficient and affordable housing for tenants

Through the IRIS project you as a solution provider get to exploit your existing/new business models through scale-up. You will have to see if there is a business case and that there is an actual market for the product. You will have to consider through what way will you provide the customer with the solution – sales, licences subscription? Needless to say, you will need a clear business plan before you get started. The business model support needed differs from case to case, but here are some examples of the support you can get through the IRIS project (mainly by WP3):

- Improve the existing business models to make them more bankable
- Develop new (smart city) business models for the new IRIS services
- Adapt existing business models to new contexts through replication

A successful demonstration of an innovative solution contributing to solving a city defined problem, needs to be followed by a city-wide scale-up in order to transform the local market. To support this process, IRIS introduces the Business Model Adaptation Tool (see Milestone 4, MS4). It helps the cities, solution providers and solution managers of IRIS to understand their individual roles in the process of scaling up the solutions being demonstrated within the project; to go from having one smart district to become a smart city.

The innovative Business Model Adaptation Tool is designed to adapt business models in a value chain for an integrated IRIS solution to the city district specific context, aiming at a city-wide scale-up. It is useful for obtaining especially three objectives. It will help:

- the city partners in understanding their individual role in the process of scaling up demonstrated IRIS solutions, in the IRIS smart district and throughout the city.
- the process of producing roadmaps for the scaling up of demonstrated IRIS solutions, in the IRIS smart district and throughout the city.
- to identify necessary support from city authorities to stimulate the market.

The Business Model Adaptation Tool is designed so that it easily can be understood and used as a useful tool and it's based on three different steps;

- 1) The business model canvas methodology - to describe the value chain relations
- 2) A discussion on Porter's Five Forces - to describe the market competing alternatives
- 3) An Impact Mapping - to describe the city scale-up process

The business model adaptation tool is easy to understand and to apply as it is designed as a workshop. It's based on three steps; the business model canvas, Porter's five forces and impact mapping. The tool will be used through a workshop on one integrated IRIS solution in each Light House City during early autumn 2019 to early spring 2020.

Two processes will support city-wide scale-up. If the property owner demonstrating the solution has a larger property portfolio in the city, the property owner can contribute to local up-scaling of the solution. If the property owner does not own more buildings, the city should make sure to disseminate knowledge from the demonstration project to other relevant property developers.

Take the opportunity to take part in the workshop IMCG arranges together with LH cities. There will be one in each city and we believe it will be very useful for the project partners participating. You will become aware of the value chains of business models, that exists due or thanks to your business model. Maybe your business model could be altered in a good way by adjusting one of piece of the value chain? Also, the LH city partners will by M24 completed deliverables that will be useful in the LH cities. And IMCG/WP3 will prepare business model fact sheets of selected integrated solutions.

4.4 Handling ownership/IPR

As stated earlier in this report, it's the IRIS project partner University of Brussels, VUB, that is handling IPR-related support needed by project partners. VUB is part of WP3 and are producing the report D3.5 IP Landscape review. Things that you ought to consider are;

- IP Background (ownership you brought into the project)
- Contribution to foreground (what you have created together with others in the project)
- Ownership of results
- Exploitation interests

Not handling Intellectual Property Right (IPR) issues can be a barrier when it comes to entering the market. If it's not clear what you own, nobody will buy your technology or invest in it. Therefore, not handling IPR can also inhibit you to scale-up and to replicate your solution in other cities.

Make sure that you have the right to exploit the results that you believe are yours. Make sure to protect your solution. Be sure of that not all legal aspects are covered by a general agreement in an EU project. If you need advice regarding IP, please contact University of Brussels, VUB, project partner of IRIS partner responsible for IP related issues. There is also the EU IP Helpdesk¹⁹.

4.5 Involving end-users and handling innovation management

In the IRIS project we have a high degree of citizen engagement and co-creation. For instance, in Gothenburg, Riksbyggen and the social housing BRF Viva uses an app to engage the tenants in the use of energy. Several of the integrated solutions are also demonstrated together with solution managers. Both of these categories will be able to give you input on your solution. The degree of how you involve the end-users in the project will have a high impact on the outcome of your ability to exploit your results. Project partner HKU is an expert within end-user engagement and is also part of WP3.

If your solution could be strengthened by the direct input from citizens, you need to state your needs for this. Address them in the consortium and make sure you make the most of IRIS. To involve the competence of HKU could be one way to go.

4.6 Checklist for exploitation plan

Here is a checklist for exploitation plan for solution providers. As a solution provider you fill it in. This will make it easier for you to show the consortium your intentions regarding exploitation and how prepared you are to exploit the results. This exercise might show you that you are not ready to scale-up, but instead, the consortium is to look at the business model of your solution so that it can be replicated elsewhere.

Table 9 Checklist for exploitation

CHECKLIST FOR EXPLOITATION PLAN	
Name of solution (exploitable result)	
Transition track this solution applies to	
Indicate how interested you are in exploiting the result (not at all, yes within the LH city, yes to	

¹⁹ <http://www.iprhelpdesk.eu>



FCs, yes to cities in Europe, yes to cities beyond Europe)	
Do you own the exploitable result or are you a beneficiary, someone who wants to exploit somebody else's result?	
Describe your exploitation strategy	
Describe your customers, your target group	
List competitors	
What is your sales pitch? What added value does your solution provide?	
What market barriers do you foresee?	
What is the timeline for the exploitation?	
What impact does this solution have on other products/services that you provide?	
What are your actions regarding IPR?	

5 Exploitation plan – The IRIS’ offer and geographical road map

The outcome of inputs from the internal sign-off meetings and the informal dialogue with project partners during consortium meetings together with all information in the grant, has led us to see that we in IRIS need to identify what solutions that can be replicated. Business models need to be evaluated and market barriers must be identified in order to make replication possible. An IRIS offer must be expressed, and it needs to be attractive on a European as well as on a global level. To reach global attention we also need to activate all IRIS partners’ international city relations. Our relations with other lighthouse projects clearly show us that it is not sound to focus on merely a single solution, but rather on transition track level – cities’ shared challenges – in order to reach the 100 cities (80 within Europe and 20 beyond) we’re aiming to attract.

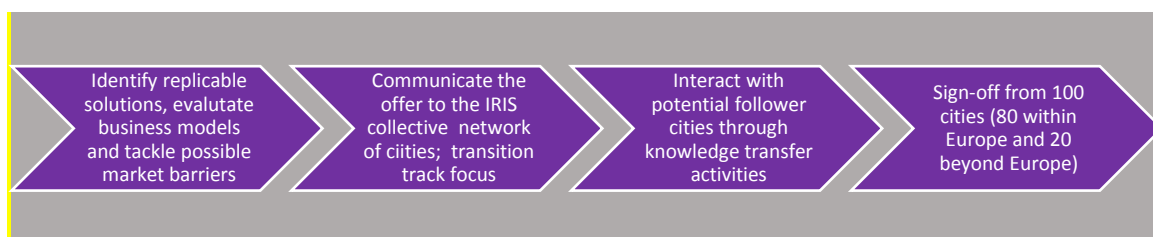


Figure 10 Four steps of exploitation. Actions needed for recruiting 100 cities outside the project to follow IRIS

The exploitation plan and operation of IRIS is to be seen as a geographical road map. We look at it at two different steps; first, the potential market within the project, and then, the potential market outside the project. The potential market within the project is mainly scaling up district by district in LH cities and scaling-up and/or replicating from LH cities to FCs. The potential market outside the project is primarily replicating from IRIS cities to other European cities and cities beyond Europe.

5.1 The IRIS’ offer to different target groups

There is a need to package the IRIS offer to LH cities’ districts, to FCs and cities within as well as beyond Europe. Below you will find an overview of the offer suggested we will use to different target groups. A suggestion of the IRIS’ offer was introduced during the sign-off meeting (see [Appendix 1](#)). This suggestion was not made out of the blue, but we had gone through the websites of other lighthouse projects in order to see what they are offering.

Table 10 The IRIS offer and its different target groups

Target group for offer	Offer involves	Call to action	Responsible
Districts within the LH-city (Utrecht, Nice and	Some kind of standardisation of a solution so that it	Scale-up IRIS solutions demonstrated in the home city, ex) Real	LH cities to work closely with the solution providers in the city to



Gothenburg; district by district approach)	can easily be scaled-up – for instance a mobility or energy service	estate companies scaling-up energy and mobility solutions in buildings in other districts within the city	identify scale-up possibilities within the city. Here the LH cities' individual communication hub is very important as well as ESCI .
FCs within the project (Vaasa, Alexandroupolis, Foscani and Santa Cruz de Tenerife)	Will get all information needed to be able to replicate. This will be found on Emdesk.	Replicate IRIS solutions from one/more of the LH cities	Vaasa (WP8) is replication manager and works closely with LH cities, solution providers and FCs to identify IRIS solutions that can be replicated. Utrecht University to contribute with information regarding incubated business models. Here the LH cities' communication hubs play an important role as well as ESCI .
Cities outside the project (80 cities within and 20 cities beyond Europe)	Insight to 5 key areas of transition; -Energy positive districts -Smart energy management -Smart e-mobility -City innovation platform -Citizen engagement and co-creation Knowledge transfer regarding bankable business models Invites to visit the demonstration sites showing smart city solutions. Entrance to a network of cities in the European Smart City community	Sign letter of intent to follow and/or replicate IRIS solutions	LH cities, solution providers, Utrecht University, Vaasa, IMCG all work closely to Here ESCI plays a central role in communicating the offer on IRIS platforms.

Table 11 Selected partners' responsibility regarding the IRIS offer

Selected partners' responsibility:	<p>IMCG – in this deliverable IMCG has developed the IRIS offer and we have gotten approval from both Vaasa, CERTH, Utrecht (project coordinator), Utrecht and Gothenburg, and ESCI on this.</p> <p>Utrecht, Nice and Gothenburg (Johanneberg Science Park through Green Gothenburg) – providing demo visits for international delegations and secure that all information needed regarding transition tracks and specific solutions are given to the delegates</p> <p>ESCI – will see to that information will be published on the IRIS Smart Cities website. Will also together with Utrecht look into the possibilities to communicate the offer together with the Lighthouse community.</p> <p>CERTH – will see to that the menu bar on the website is complemented with a button “Join us” or create a function of similar character.</p> <p>Vaasa – will see to that FC cities within the project are aware of what the LH cities offer and will see to that IRIS is aligned with the other Lighthouse projects to get maximum impact.</p>
Deadline:	The first version of an offer was set during spring 2019 . It will be published on the IRIS website and it will up-dated throughout the project. In M36 WP8 has a deliverable in which this task fits perfectly.
Interactions:	It was presented in April 2019 at the at the go-to-meeting where WP3 had invited the LH cities, the project coordinator, WP8 (replication manager) and WP10 (communication manager).
Result:	The offer will be published on the IRIS Smart Cities web site. It will be a one-pager displayed on the IRIS web and spread on IRIS' and partners social media. (see dissemination activities below)

5.1.1 The offer of other lighthouse projects

IRIS is not the only European Lighthouse project with the objective to replicate outside the project. In June 2019 there are 18 projects involving more than 40 LH cities and 50 FCs. We can either see them as competitors when going outside the project looking for cities that would want to replicate IRIS solutions. Or, we could see them as a strength, and that's what we do. H2020 lighthouse programme is Europe's largest smart city initiative. The offer to be part of that is greater than each individual project. Here the alignment with WP2, which handle EU wide cooperation with ongoing projects is especially essential for Vaasa (WP8) handling the replication activities in Europe. See also [Appendix 2](#) for further information and notes on creating a joint Smart Cities Network with SCC-01-projects, SCIS and EIP-SCC.

Figure 11 The European Light house cities. This view of European Lighthouse cities shows all the cities that are within the twelve first lighthouse projects. Six other projects have been added to the project since then.

Both WP3 and WP8 have looked into some of the other EU projects to benchmark regarding what would be a good way to present the offer to other cities. By checking several lighthouse projects' websites our project can see how the other projects with replication objectives present (or not present) their offer to other cities. One exception could be Grow Smarter as they actually present the opportunity for study visits and workshops. Below you see some of our findings regarding what some of the projects present.

No concrete offer is presented on website

- IRIS Smart Cities – H2020 for Research and Innovation under grant agreement no 774199, <http://www.irissmartcities.eu>
- Match up – H2020, research and Innovation programme under grant agreement no 774477, <https://www.matchup-project.eu>
- Stardust – H2020, research and Innovation programme under grant agreement no 774094, <http://stardustproject.eu>

Promotes workshops and study visits on website

- Grow Smarter – H2020, research and innovation programme under grant agreement no 646456, <http://www.grow-smarter.eu/lighthouse-cities/>

Promotes the SSC1 network community on website

- Triangulum- H2020, research and innovation programme grant agreement no 656578, <http://triangulum-project.eu>



- Ruggedised - H2020 research and innovation programme under grant agreement no 731198, <http://www.ruggedised.eu>
- Replicate – H2020, research and innovation programme under grant agreement no 691735, <http://replicate-project.eu>
- Remourban – H2020, research and innovation programme under grant agreement no 646511, www.remourban.eu

Promotes their own network of cities on the website

- MySmartLife – H2020, research and innovation programme under grant agreement no 731297, <https://www.mysmartlife.eu/mysmartlife/>
- SmartEnCity - H2020, research and innovation programme under grant agreement no 691883, www.smartencity.eu

Promotes workshops and study visits and their own network of cities on the website as well as promoting the SSC1 network community

- Smarter Together – H2020, research and innovation programme under grant agreement no 691876, www.smarter-together.eu

Promotes knowledge platform that needs login

- Sharing Cities – H2020, research and innovation programme under Grant Agreement no 691895, <http://www.sharingcities.eu>

With this information and with the IRIS partners' perspective in mind, WP3 presented, at the already mentioned meeting April 10 2019, what the IRIS offer could look like. The meeting provided an opportunity to LH cities as well as project coordinator and replication manager to agree or disagree with the suggested offer. A conclusion from this meeting is that there is a wish for a clearer, more detailed offer, but there is not anyone ready to live up to specific details promised in an offer. Therefore, at this fairly early stage in the project, the offer to cities outside the project (within and beyond Europe) is not that detailed. You will see the general IRIS offer below and it is suggested that it will be presented on IRIS's website and social media channels. It should be widely spread by all IRIS partners. WP3 has proposed to the project coordinator and WP8 that this deliverable is to be updated in WP8's deliverable in M36.

In [Appendix 2](#), also see discussion notes regarding recruitment of cities.

The IRIS offer is intended to create an interest in replication of IRIS solutions. The IRIS offer needs to be packaged to suit the different target groups. The IRIS' offer could be categorized by being intended to districts within the LH-city, to FCs within the project and to the 80+20 cities outside the project.

These target groups need different types of information in order to comprehend the offer.

5.1.2 The IRIS' offer to districts within the LH-city

If we don't scale-up the demonstrated and tested IRIS solutions ourselves, it will be hard to convince cities outside the project that these are the solutions solving tomorrow's challenges. The fast way for a city to get smarter is to replicate what other cities already have tested and proved sustainable and bankable. As stated in the introduction, the objective of this exploitation plan is originally to reach

beyond Europe. However, as concluded during the WP3-LH cities-project coordinator-WP8-meeting during spring 2019, there is a need to start it all within the LH city. If we don't scale-up the solutions, we demonstrate in one district – how are we going to replicate them to FCs or to cities outside the project? Therefore, the way to handle the IRIS offer as a first step, is that LH-city smart districts need to communicate their offer to other districts within their city. This is a way to make them scalable at district by district level.

5.1.3 The IRIS' offer to FCs within the project

Vaasa (WP8) has the role of replication manager and is the one to lead the replication process between LH cities and FCs. All solutions demonstrated in IRIS are being thoroughly documented on Emdesk. WP8 and WP1 can guide you into finding the deliverables describing relevant solutions. It's up to the FCs of IRIS to pay interest and carefully study the LH cities in order to be able to identify which solutions that will be relevant for the FCs to replicate. As the replication results within the project are inspiring for cities outside the project, WP10 leads the work of communicating these results externally.

5.1.4 The IRIS' offer to cities outside the project, within and beyond Europe

The EU-project IRIS includes a special offer for cities outside of the European Union. WP3 in close collaboration with a majority of the IRIS WP leaders, is leading the work of stating this offer in close collaboration with a majority of the IRIS partners. At least 20 cities outside of Europe, after signing a letter of intent, will get to implement the solutions and get the business models adapted to their city's specific needs. IRIS also has an objective to attract, on equal grounds, 80 cities within Europe. The cities already participating in the IRIS project will share their experience and know-how regarding our focus areas (Energy positive districts, Smart energy management, Smart e-mobility, the City innovation platform and Citizen engagement and co-creation).

The IRIS' offer has two layers. If you focus on one transition track, for instance mobility, you can compare it to a pomegranate. The peel of the fruit is symbolizing transition track layer. This layer addresses challenges faced by cities regarding, in this case, mobility. The small kernels inside symbolize the different solutions within the track; different types of integrated mobility solutions. It is easier to talk about the fruit as a whole then to go into every little kernel.

The IRIS' offer includes several transition tracks and each track has two layers. The first one is the transition track layer itself and inside of it you will find the layer of integrated solutions. In this section we let a pomegranate symbolize the two layers.

Therefore, the IRIS' offer will be presented in a broad context and focus on transition tracks; the challenges. When cities outside of Europe have showed interest for a specific track, we can go further and present the specific "born global" solutions within the chosen track.

To have a spokesperson for each transition track will ease the handling of specific questions cities might have regarding a certain transition track. Here is the list from the IRIS Grant Agreement, that presents what companies and organisations that have expertise in the different transition tracks.



Table 12 Transition tracks – and the solution providers; two different layers of the IRIS offer to cities outside the project (within and beyond Europe), from IRIS Grant Agreement, page 122.

CITY/ TRANSITION TRACKS	ENERGY	MOBILITY	ICT/CIP	CITIZEN	GENERAL
UTRECHT	Stedin Enec Utrecht University	Lomboxnet QBuzz	KPN	HKU	Boex
NICE	Enedis EDF CSTB CDA Nexity Engie Cofely	Vulog ATMOSUD	NCA	CSTB CAH	University of Nice
GOTHENBURG	Chalmers Metry HSB Riksbyggen	Trivector	Metry Tyréns	HSB	Johanneberg Science Park Akademiska Hus RISE

By signing a letter of intent, the cities outside the project (both within and beyond Europe) will state willingness to follow IRIS to learn more about the specific challenges (transition tracks) that are relevant for them. They will get:

- Insight to up to 5 key areas of transition
- Knowledge transfer regarding bankable business models
- Invites to visit the demonstration sites showing smart city solutions
- Entrance to a network of cities in the European Smart City community

Several of the other Lighthouse projects have used letter of intent and it is of great value to look at some examples of this when designing the letter. As stated earlier there are many Lighthouse projects in Europe that all have the mission to replicate. That means that there are going to be many offers to cities that want to become smarter. One way to communicate the offer could be to not emphasize the IRIS project as the sender, but the Lighthouse project community of Europe. Also see the [Appendix 2](#) regarding discussion notes about this.

5.2 Scaling-up – district by district in LH cities

Each city ecosystem will exploit IRIS at local level. That includes identifying the solutions having potential of being scaled-up at local level within the IRIS LH city eco-system. During the meeting with project partners (April 2019) from the LH cities, project coordinator, managers for replication and business models and exploitation already referred to, we all agreed upon the need of starting scaling-up within the city as a first step. A set of questions regarding scaling-up are addressed in this section;

- What solutions can be scaled-up within the LH city?
- What solutions do we lack, but need to find? Identify new incubated business models
- How to ease the possibility to scale-up within the LH city?
- How do we inform each other within the project of these developments?

Note that in some cases solutions are already being scaled-up within the LH cities. One example is city wide smart charging network Utrecht based on Lomboxnet's innovation. This is also a part of a webinar taking place September 23 2019.

5.2.1 What solutions can be scaled-up within the LH city?

This step includes identifying the solutions having potential of being scaled-up at local level within the IRIS LH city eco-system (Nice University, LH Cities, solution providers). This is in line with what is said in the Grant Agreement; one of the three levels of IRIS results that can be exploited is in each city's local ecosystem. The table above is showing the solution providers that provides solutions within a specific transition track and city. Which of their solutions are ready to be scaled-up?

Table 13 Selected partners' responsibility scaling up district by district

Selected partners' responsibility:	<p>Nice University – expert at the LH cities' eco-system; contributes with input from outcomes of D3.2 Sustainable Business Model Dashboard tool (M24)</p> <p>Utrecht, Nice and Gothenburg (Johanneberg Science Park) – identify what solutions have potential of being scaled-up within the city – district by district</p> <p>Solution providers – indicate to the IRIS LH city representatives if they are able to scale-up within the city</p> <p>LH cities – city representatives gather the information and present a result, so that the results become visible to all partners</p> <p>ESCI – highlight good examples in the communications</p> <p>Project management, Utrecht – provides a place on Emdesk where this information is gathered</p>
Deadline:	This is to be on-going work throughout the project (but naturally more work can be done if solution providers discover early on in the project that they are ready to scale-up within the city)
Interactions:	As soon as a solution has been scaled-up within the city, LH cities should be informed. This information will come well in hand when ESCI is to communicate the possibility to replicate IRIS solutions
Result:	A list of IRIS solutions that has scaled-up within the city – this will be updated throughout the project.

5.2.2 What solutions do we lack, but need to find? Identify new incubated business models

Main responsible is Utrecht University. This step involves a description on how we in IRIS can identify new incubated business models, as that is one of the project's objectives.

Table 14 Selected partners' responsibility identifying new solutions within IRIS

Selected partners' responsibility:	<p>Utrecht University – expert at incubation programmes responsible, with the involvement of Nice University and Chalmers</p> <p>– identify what new solutions within the IRIS transition tracks that have a potential of being scaled-up within the city – district by district</p> <p>Utrecht, Nice and Gothenburg (Johanneberg Science Park) – identify what solutions that there might be a need for, but that is not yet one of the IRIS solutions – inform Utrecht University</p> <p>ESCI – to communicate potential innovation challenges – also something that should be done by the LH city communication hubs.</p> <p>Project management, Utrecht – Need to set a detailed plan for the administration of this.</p>
Deadline:	This is to be an on-going work throughout the project (but if it involves for instance an innovation challenge, maybe it could be more of a sharp deadline?)
Interactions:	As soon as there is a new IRIS solution identified, ESCI is to be informed so that it can be communicated and added in the public IRIS presentations.
Result:	A list of new IRIS solutions – this will be updated throughout the project and is preferably presented under the relevant transition track on the IRIS website.

5.2.3 How to ease the possibility to scale-up within the LH city?

Activate the business model adaptation tool for cities (IMCG, LH cities).

This step is prepared by WP3 and presented as milestone 4, (MS4 Business model adaptation tool for cities), in March 2019 after a sign-off from the lighthouse cities agreeing upon using this model for adaptation of business models.

Table 15 Selected partners' responsibility to scale-up within the LH city

Selected partners' responsibility:	<p>IMCG – will have training sessions in how to use the Business model adaptation tool for cities for the LH cities of IRIS where focus will be on one solution in each city.</p> <p>Utrecht, Nice and Gothenburg (Johanneberg Science Park) needs to engage</p>
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	in the training sessions (workshops) together with the specific solution providers and stakeholders that are selected for the specific business model session
Deadline:	The Business Model Adaptation Tool workshop was held in Gothenburg during spring 2019 The sessions in Utrecht and Nice will be held early autumn 2019 .
Interactions:	During the consortium meeting in June 2019 a workshop introducing the Business Model Adaptation Tool was held. Representatives from the cities of Utrecht, Santa Cruz de Tenerife, Nice and Vaasa were present. It was concluded that the business model adaptation tool could be very useful in creating a “joint language” on business models and that requires a more detailed analysis for a number of case studies. IMCG is working on business model fact sheets for some selected solutions. This will be input for the training sessions.
Result:	The LH cities will, after having attended the training session, be able to on their own arrange similar sessions with the other solution providers in their city. This is a step to ease both scaling-up and replication activities.

5.3 Replication from LH cities to FCs

WP8 is lead of replication to the FCs and the replication manager will present a thorough replication plan. This section deals with a set of questions regarding replication from LH cities to FCs;

- How to ease the possibility to replicate?
- How to ease the possibility for a FC to finance replication?

5.3.1 How to ease the possibility to replicate?

To ease the possibility to replicate, we are to activate the replication toolbox (Vaasa, LH cities).

This step includes activating the replication toolbox. Vaasa (WP8), responsible for the replication within Europe, will have produced a replication toolbox (D8.3 Replication toolbox) by October 2019 (M25).

This toolbox will be of value for the IRIS LH cities as they are to scale-up within their own cities and replicate to FCs within IRIS and outside the project. The toolbox will also be used in the beyond Europe activities, led by WP3 and IMCG.

Table 16 Selected partners’ responsibility to ease the possibility to replicate

Selected partners’ responsibility:	<p>Vaasa – will provide the replication toolbox and plan for how knowledge transfer within the project will take place</p> <p>IMCG – the business model adaptation tool for cities (MS4, to be found in D3.7. M24) helps evaluate the value chain that surrounds a certain solution</p> <p>UU/UNS – the Technical Innovation System (TIS) analysis (to be found in D3.2, M24) – indicates what in a city’s ecosystem that is working well and what</p>
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	needs to be improved in order to nurture an environment that could adopt new solutions.
Deadline:	The replication toolbox, D8.3, will be ready by October 2019. The training period will be set by Vaasa.
Interactions:	It was partly introduced during the consortium meeting in Vaasa, June 2019.
Result:	A toolbox to ease replication.

5.3.2 How to ease the possibility for a FC to finance replication?

To ease the possibility to finance replication, there is a need to use the financial toolbox provided by WP3 in D3.7 and MS5. Activate the financial toolbox for cities replication (IMCG, LH cities).

Table 17 Selected partners' responsibility to ease the possibility to finance replication

Selected partners' responsibility:	IMCG – will through D3.7 Financing Solutions present financial instruments that will be helpful when overcome the barrier of lacking funding for a solution that is to be replicated,
Deadline:	D3.7 Financing Solutions is ready September 2019.
Interactions:	Knowledge transfer sessions for this we be arranged if there is an interest. A suggestion is to present this at the following consortium meeting.
Result:	Tool presenting financing solutions.

5.4 Replication from IRIS cities to other European cities and to cities beyond Europe

WP8 is lead of reaching the objective of recruiting the 80 cities within Europe and WP3 is in lead of recruiting the cities beyond Europe. This section deals with a set of questions regarding replication outside the project within and outside the project.

- What solutions are capable of going global?
- How to communicate the IRIS solutions to the world?
- How do we reach the world?
- How is the world to get the IRIS information?
- How are we going to present a result?

5.4.1 What solutions are capable of going global?

There is a need for Identifying and highlighting the “born global” IRIS solutions. LH cities and solution providers play crucial roles here, also see below for who is responsible for executing.

IRIS has a high set replication objective both within and beyond Europe. As mentioned earlier this report takes into account the activities on European level even though this exploitation plan was originally expected only to focus on beyond Europe activities.

The IRIS “born global” solutions will either be identified by the LH cities’ authorities in Utrecht, Nice and Gothenburg (WP5/6/7) or be identified by the solution providers themselves. Most commonly will probably be a combination of the two. Each solution will have proved having a bankable business model (WP3).

After the consortium meeting, in the end of October 2018 in Nice Côte d’Azur, WP3, contacted the leaders of the lighthouse city nodes in IRIS in order to get them to indicate which solutions in their lighthouse city that they believe are “born global” and are moving towards getting ready to be replicated. We also asked the lighthouse cities to keep us up to date of foreign delegations showing interest for IRIS solutions. By April 2019 no obvious lists of born global candidates had been presented, but during meetings solution providers such as Metry (Gothenburg), Trivector (Gothenburg) and Vulog (Nice) have been mentioned.

Note that the solution providers that believe that they are ready to go global can act immediately. By contacting Vaasa, replication manager within Europe or IMCG, head of IRIS beyond Europe activities, they will get input on how they can proceed.

Table 18 Selected partners’ responsibility identifying born global solutions

Selected partners’ responsibility:	<p>Utrecht, Nice and Gothenburg (Johanneberg Science Park) – identify “born global” solutions and give input to Vaasa (Europe) and IMCG (beyond Europe)</p> <p>Solution providers – see above.</p> <p>Vaasa and IMCG – gather the information and present a result, coach the solution providers and cities on how to use the right tools</p> <p>ESCI – communicating potential success stories</p>
Deadline:	This is to be an on-going work throughout the project (but naturally more work can be done with a “born global” solution discovered early on in the project)
Interactions:	As soon as a solution has been validated as “born global”, Vaasa and IMCG should be informed. When a solution provider is ready, has the means, to go abroad, beyond the borders of the project and beyond Europe, then it’s time to contact WP8 and WP3. It will also be a topic on 2-3 go-to-meetings with relevant partners a year and sessions at consortium meetings .
Result:	A list of IRIS solutions ready to go beyond the project; within and beyond Europe – this will be updated throughout the project. Together with the “born global” solutions individual exploitation plans will be developed.

5.4.2 How to communicate the IRIS solutions to the world?

There is a need to set a yearly plan for dissemination activities to promote replication in order to feed into the communication needed to succeed in reaching the 100 targeted cities Main responsible; ESCI, IMCG, Vaasa. See Table 19 for who is responsible for executing.

With the great objective being replication, there is great need for communication. The IRIS offer is to be clearly displayed on the IRIS website. Gothenburg, Nice and Utrecht and all relevant partners (solution providers) are to share this information with their networks, on their websites and social media. The communication material is to be prepared by ESCI (WP10) with the support of IMCG (WP3), Vaasa (WP8), relevant IRIS cities and solution providers. The need for communicating the IRIS offer will change over the years, which is why the dissemination activities regarding this will be updated yearly.

The IRIS offer is enhanced by both transition track pitches and individual pitches for the “born global” solutions. The transition track pitches will be made by city representatives or anyone in the consortia who is suited for it – the transition track spokesperson. The pitches regarding the solutions are naturally made by the solution providers themselves.

The dissemination will involve one-to-one-meetings to attract cities outside of Europe. These are part of the planned operation and will take place at the Barcelona Smart City World Expo in November 2019 (most probably we’ll attend this exhibition the years to come too, since it gathers smart cities from around the globe). Here the transition tracks of IRIS will be highlighted and there is a need for each city to step up and highlight the transition track that they want to be associated with.

February 26, 2019, WP3 got a signoff from WP10 (Communication) regarding WP10’s dedicated roll in the dissemination part of the exploitation plan and operation of IRIS. WP10 will support the task of going beyond Europe (here we also include outside of project, but within Europe, WP8). WP10 also believes it will be beneficial to have transition track spokespersons.

Individual pitches: there are not enough resources to help all partners with individual pitches, but WP10 can during spring 2020, get the film crew to go visit 1-2 of the leading born-global solutions and cover them like news items.

Furthermore, WP10 offers to make:

- 3 infographics
- 5 interviews – with each transition track spoke’s person
- 3 written independent articles

There is a possibility to create a micro site – a landing page – where we can campaign the beyond activities. One can also address the possibility to replicate on a new button on the menu. It’s CETH handling the website structure, but they are open to suggestions. As of now, the site is mainly a description of the project proposal and not showing benefits for cities. The new button could be named “Join us”.

Table 19 Selected partners’ responsibility to communicate the IRIS solutions to the world

Selected partners’ responsibility:	The dissemination plan is to be set by ESCI, IMCG and Vaasa. All partners are to spread the offer in their dedicated channels; especially ESCI, Utrecht, Nice, Gothenburg (Johanneberg Science Park, Business Region Göteborg), IMCG and Vaasa . All partners to give input on relevant places to spread information. Input is to be given to Vaasa (Europe) and IMCG (beyond Europe)
Deadline:	On-going throughout the project, yearly updated plans

	<u>Dissemination Plan Autumn 2019 – Spring 2020</u> Focus will be on: <ul style="list-style-type: none"> - district level within the LH cities and on FCs. Here the LH cities communication hubs play an important role.
	<u>Dissemination Plan Spring 2020 – Spring 2021</u> Focus will be on: <ul style="list-style-type: none"> - district level within the LH cities and on FCs. - cities within and beyond Europe
	<u>Dissemination Plan Spring 2021 – Spring 2022</u> Focus will be on: <ul style="list-style-type: none"> - district level within the LH cities and on FCs. - cities within and beyond Europe
	Interactions: At consortium meetings , the Dissemination plan is presented and input is being collected
Result:	A dissemination plan that is being executed by all partners.

5.4.3 How do we reach the world?

To be able to reach cities in Europe and outside of Europe we need to activate IRIS' collective network of cities within and beyond Europe. Main responsible; LH cities, solution providers, Vaasa, IMCG.

Utrecht, Nice and Gothenburg has provided WP3 with information of different quality regarding previous delegation visits. Some of the content is also labelled confidential.

In a previous chapter several of different city initiatives were listed such as Living Labs Global, C40 etc. IRIS is represented by 7 cities and it is not clear how each city might be related to the different groups. How to go about this matter is a strategical matter that could be discussed at a WP-leaders meeting with the project coordinator. Below you see the responsibilities of different partners.

Table 20 Selected partners' responsibility to activate the IRIS global network of cities

Selected partners' responsibility:	All partners to contribute with contact list to potential cities; especially Utrecht, Nice, Gothenburg (Johanneberg Science Park, Business Region Göteborg), IMCG and the "born global" solution providers . Input is to be given to Vaasa and IMCG Vaasa to use the report D3.3 European smart cities and district overview and market analysis (finalized M12).
Deadline:	By the end of 2019 (up-dates throughout the project)
Interactions:	During autumn of 2019 IRIS partners individual relations to cities outside of Europe is being scanned. E-mail conversation with each partner.
Result:	A list of cities (and contacts) that IRIS partners already have a relation with. It will be available on Emdesk by the end of 2019. (see example

below). This will be used when Vaasa and IMCG are working with the activities outside the project and can also be used by solution providers who want to move faster on their own, but with the strength of the project.

Across the EU and the globe, the concept of smart cities, from energy management and smart grids, to public transport, healthcare, information services, intelligent buildings, is gaining momentum, while it has transformed the way governments approach public service. The market landscape has changed.

D3.3 European smart cities and district overview and market analysis for IRIS integrated solutions (M12) provides valuable information for the assignment WP8 Replication by Lighthouse regions, follower cities, European market uptake, has.

Furthermore, WP2 EU wide cooperation with ongoing projects, initiatives and communities will be of value for WP8 and Vaasa which has European focus.

The lighthouse cities of IRIS already have established relations with several cities outside of Europe that are continuously showing interest for the sustainable solutions that are being demonstrated in the cities. WP3 is gathering information on which these cities are. In collaboration with WP5/6/7, WP3 has worked horizontally in the project with task 3.5, Beyond Europe, in order to identify foreign delegations interested in the integrated solutions of IRIS. We have received great information from Utrecht and some information from Gothenburg and Nice. At the third consortium meeting in Nice, October 2018, WP3 presented the work of finding cities beyond Europe. Santiago in Chile was given as an example of a city outside of Europe that has shown great interest for IRIS solutions (late spring, 2018 and summer of 2019). Also, India Smart Cities (late spring 2018) and the US Embassy of Stockholm (early fall 2018) have shown interest. The embassy informed us that out of four focus areas, one is on smart cities. A European project offering benefits for US cities was very appealing to them.

Furthermore, the solution providers of IRIS also have established connections beyond Europe. One example is VULOG, who is active in Las Vegas, the US. Another example is IMCG who has several international interactions with cities such as Santiago, Chile and San Diego, the US. Partners' international network as stated in proposal;

When the objective is to recruit 100 cities outside the project, all of our international city contacts play a crucial role. The IRIS Grant lists partners with a global network (2.2.1.6). Here are some examples;

- VULOG dissemination channels: As a mobility expert, we have a strong policy in marketing and communication, and participate actively to more than 20 events, such as Las Vegas CES, World Mobile congress, Smart cities events.
- UNS dissemination channels: community conferences like GCW (Governance of a complex world)
- Alexandroupolis: EU's mission is to foster multilateral exchanges throughout Europe, but also with other continents, about locally-developed practices and experiences.
- CERTH will focus its activities on disseminating IRIS innovative technologies through: presentations in major European and international conferences/ exhibitions/ workshops;

- IMCG has a global reach of cities, states and regions as well as corporate and TRL7 solution providers.
- VUB cooperates actively with many leading universities outside Europe. Its researchers are also active in international organizations such as the UN, OECD, international humanitarian organizations, and others. VUB coordinates CPDP, a world-leading multidisciplinary network, which offers the cutting edge in legal, regulatory, academic and technological development in privacy and data protection. Within an atmosphere of independence and mutual respect, CPDP gathers academics, lawyers, practitioners, policy-makers, industry and civil society from all over the world in Brussels, offering them an arena to exchange ideas and discuss the latest emerging issues and trends.

WP3 propose that we make one list of city prospects. Below shows an example. We have gotten information from Utrecht and Gothenburg on delegation visits the last year. Some of the information is confidential, why we can't publish it here.

Table 21 City prospects - example list

City	Area of interest	Country/Continent	IRIS partner with contact input
Santiago	Energy, IoT	Chile, South America	IMCG
Las Vegas	Mobility	US, North America	VULOG
Shanghai	Mobility	China	Utrecht
.....			
.....			

5.4.4 How is the world to get the IRIS information?

In order for cities around the globe to get access to the IRIS information we need to allow prospect cities to take part of the progress and results of IRIS. Main responsible: LH cities and solution providers. See below for who is responsible for executing.

This step includes making the LH cities of IRIS(WP5/6/7) to be aware of the need to be ready to host visits when delegations from cities both within the project (the FCs) and cities outside the project, both within and beyond Europe that want to make study visits. This was thoroughly discussed during the meeting in April 2019 that we have referred to earlier on in this exploitation plan. It was also discussed at the consortium meeting in Vaasa, June 2019. Note that every lighthouse city in IRIS is responsible for actively promoting this activity themselves. This will not only be promoted on the IRIS website, but should naturally be very visible in the communication of the LH cities.

Table 22 Selected partners' responsibility to see to that the world get the IRIS information

Selected partners' responsibility:	Utrecht, Nice, Gothenburg (Johanneberg Science Park, Business Region Göteborg) to be prepared to welcome delegations from both within and outside the project. And also, to inform ESCI about these delegations so they can be widely communicated. The individual communications hubs in the LH cities are also very important.
Deadline:	On-going throughout the project
Interactions:	LH-city representatives, if not handling delegations themselves, to interact with the part of the city that does. Provide them with information needed and make sure that they have all available facts that are on Emdesk regarding the transition tracks and solutions.
Result:	A list of performed delegation visits. This will be used when Vaasa and IMCG are working with the activities outside the project.

"What is helpful to our international affairs colleagues is an information packages with clear information on IRIS project, e.g. infographic, factsheets on the LHC demonstrators, PowerPoint presentation to use. We have the EMDESK communication material folder in which this is stored."

Roel Massink, Project coordinator of IRIS

Gothenburg

In Gothenburg both Green Gothenburg (which is part of Business Region Göteborg and the City of Gothenburg) and Johanneberg Science Park handle delegations and have structures for that. March 13, 2019 IMCG had a meeting with Green Gothenburg/Business Region Göteborg to discuss the needs for being prepared to take care of delegation visits. June 25, 2019 we had another meeting and after that we received a list of delegation visits that had occurred so far during 2019. It's partly confidential, but we will be able to use parts of it.

Nice

May 27, 2019 we received information on foreign delegations that the University of Nice is handling. We learned that the universities they have worked on the theme of smart cities are:

- Hong Kong Polytech (the city of nice has also some links with Hong Kong)
- Nanyang Technological University in Singapore (relations with France since it is a nation)
- Luxembourg Institute of Technology (relations between Cote d'Azur and Israel)
- New York University – Centre for Urban Science Progress
- Technion in Israel (relations between Cote d'Azur and Israel)

- Universidad de Los Andes in Bogota (potential project with the city of Nice)
- University of Danang, Vietnam (common International Institute of Technology. Danang has a strong on smart city focus)

The university of Nice also has a good relationship with University of Torino, Italy (which is a sister city of Nice). We haven't yet gotten the information on how Nice is organised to handle delegations. Research on the internet indicate that Invest in Nice Côte D'Azur 20 handles delegations.

Utrecht

In April 2019, Utrecht informed about how the delegation visits in Utrecht are being handled by the International department, where the project coordinator of IRIS is also stationed. Utrecht has provided us with a list of cities that Utrecht has a relation to – both within and outside of Europe. The information is partly confidential, but we'll be able to use parts of it.

5.4.5 How are we going to present a result?

The result of our efforts to execute the exploitation plan will be through achieving letters of intent from 80 cities in Europe and 20 cities beyond Europe (LH cities, Vaasa, IMCG, ESCI) see below for who is responsible for executing.

This step will take a lot of effort from many project partners. Together we are to attract 100 cities outside of the project – 80 within Europe and 20 beyond Europe. Cities beyond Europe that show interest for official replication agreement for any IRIS solution is to be guided within the LH cities to the right person to sign the document. This is, as stated in the beginning of this document, a too high threshold for cities to enter the project and/or the light house community. A letter of intent or a yes to follow a newsletter is more likely to happen.

Table 23 Selected partners' responsibility to present a result

Selected partners' responsibility:	IMCG with the support of Vaasa will draft a letter of intent, Utrecht, project coordinator needs to be the one settling the final version (perhaps in coordination with the other Lighthouse projects) LH-cities, Vaasa and IMCG are to, together with ESCI work together on communicating the results
Deadline:	On-going throughout the project
Interactions:	There will have to be a discussion on this topic at each consortium meeting. IMCG, Vaasa and project coordinator as well as ESCI and Utrecht need to also have meeting discussing progress. Every third month.
Result:	A set of documents which in the end will aim at 100 signed letters – or should we lower the threshold? That's what WP3 strongly suggests.

²⁰ <http://www.investincotedazur.com/en/> and also Nice Côte d'Azur CCI <http://www.cote-azur.cci.fr>

6 Recommendations – consortium level

This chapter is emphasizing the fact that we all have to act upon the exploitation plan and providing recommendations for the consortium.

6.1 Practice what we preach

By scaling-up district by district in the LH cities and by replicating the solutions to the IRIS FCs, we show that we believe in the solutions we are aiming for 100 cities to adapt to or be interested in. We are making it easier to understand the replication process (which will be thoroughly described and guided by WP8 Replication).

The LH cities; Utrecht, Nice and Gothenburg, will work closely in their own city hubs and eco-systems with their local project partners in order to encourage for instance real estate companies to standardise the mobility and energy services in a way that enables the real estate companies to replicate the solutions in buildings in other districts within the city. This should already be an on-going activity and is most likely arranged by the LH city and FCs nodes.

WP3 has introduced a business model adaptation tool for cities (Milestone 4, MS4). IMCG has had a workshop in Gothenburg and has offered to have it in each LH city of IRIS to allow knowledge transfer to the cities business models of the solutions of IRIS. Nice and Utrecht are ready for this in the fall of 2019. In each city one case will be used. During spring 2019 we held a workshop in Gothenburg gathering all stakeholders regarding the energy storage solution 2nd life batteries. The city representatives of Gothenburg (Johanneberg Science Park) got key takeaways and knowhow so that they can arrange similar workshops with focus on the other solutions demonstrated within the city. The workshop method allows the cities to adopt the business models and will ease both the scaling-up and replication activities.

IMCG from WP3 are creating business model fact sheets for selected solutions and these will be used to promote the business model adaptation tool in an effective way.

6.2 Transition track pitches

The lighthouse cities of IRIS have a responsibility actively communicate the possibilities that cities outside the project can replicate IRIS solutions. The LH cities are to share the contacts they have with cities in Europe and outside of Europe with the consortium in order to reach the objective of at least 100 official replications signed by cities (80 in Europe and 20 beyond Europe).

The challenges cities are facing are very much alike. IRIS calls them transitions and most other cities call them challenges. Whatever you choose to call them, the area in which we provide solutions, must be

pitched. The cities – both within and outside of Europe – that IRIS is to reach, need to understand what's in it for them.

The IRIS official power point, provided by WP10 Communication, contains excellent slides regarding this. It can be seen as transition track pitches. Some examples are shown in a previous chapter.

Besides the general IRIS power point slides, each lighthouse cities of IRIS needs to have a presentation ready for each transition track that they have knowhow within to support cities outside the project.

It shall also be clear who to contact in order to get further information. This is because when the consortium with WP10 Communication, WP8 Replication within Europe and WP3 Business Models and head of beyond Europe activities in lead, are communicating the possibility for cities outside the project to replicate the IRIS solutions the lighthouse cities must be ready to handle cities, that as a result of the marketing activities, might want to pay the lighthouse cities a visit in order to see the integrated solutions being demonstrated within each transition track/challenge.

WP10 supports with general presentation material such as power point slides regarding each transition track. There is plenty material available on Emdesk. WP1 is responsible for making it clear to all partner where on Emdesk one finds the information.

6.3 Potential market – European cities

Potential cities to work with are particularly:

- Cities presented in D3.3 European smart cities and district overview and market analysis
- The LH cities' European sister cities
- Cities that are recruited by CELSIUS
- European cities that have done delegation visits in the IRIS LH cities the last couple of years
- European cities that IRIS project partners already are working with

As stated earlier there are 18 lighthouse projects and there are more to come. All projects have the objective of replicating their sustainable solutions outside the project, in Europe. We can see them as competitors, or we can align with them through IRIS WP2, EU wide cooperation with ongoing projects, initiatives and communities. We chose the latter. Collaboration is much more efficient than competition. See [Appendix 2](#).

WP8 is responsible for the replication activities within Europe. The report D3.3 European smart cities and district overview and market analysis for IRIS integrated solutions (September 2018, WP3, IMCG) provides a good overview of European cities that could be interested in replicating IRIS solutions. This, together with the list of cities that IRIS project partners already have established connection with provide a base for the European market to reach out to.

Many of the cities IRIS will target will be taken from activating IRIS collective network of cities within Europe. These could be sister cities, cities that have been on delegation visits in the city and already have shown interest in the areas which IRIS is covering.

In the IRIS grant we refer to the CELSIUS project which had the ambition to recruit 50 cities in Europe. They were very successful and managed to reach that objective and more. CELSIUS 2 has recently started and the consortium is more than willing to share their learnings on how to recruit cities and give access to the cities that they have gathered (nearly 80 cities in Europe). The contact person for CELSIUS and the replication manager of IRIS has been introduced to each other through e-mail conversation (August 2019).

Already today the lighthouse cities have delegations from cities outside of Europe. By looking into what cities have showed interest for the transition tracks that IRIS is operating in, we'll have a list of cities with potential for replicating IRIS solutions.

The cities of Utrecht, Nice and Gothenburg handles many international delegations from cities all over the world yearly, that come to see sustainable solutions being demonstrated. Not all visits are related to IRIS, but many of them are related to the transition tracks in which IRIS operates.

The beyond activities demands for the IRIS consortium to find cities both in and outside of Europe that are interested in the replication of IRIS solutions. The international cities visiting IRIS LH cities will be some of the cities which will most probably would like to sign up for IRIS.

In the exploitation plan we point out the need for transition track spokespersons. These will use the transition track pitches (see examples below) when communicating with the market of European cities. And as suggested above, pitches for individual business models could also be provided when needed.

6.4 Potential market beyond Europe

Potential cities to work with are particularly:

- The LH cities' sister cities outside of Europe
- Non-European cities that have done delegation visits in the IRIS LH cities the last couple of years
- Non-European cities that IRIS project partners already are working with
- Smart cities that seek information on smart solutions

The LHs have sister cities outside of Europe as well as within. This is a valuable source for recruiting cities. Also, LHs get to welcome many delegation visits from all over the world Example of this are Santiago, Chile who has had a delegation interested in energy visiting Gothenburg and a delegation from Shanghai, China, interested in mobility visiting Utrecht. It is important to communicate with these two groups of cities.

So far, we have only identified one other project with the ambition to go beyond Europe to replicate. That is Sharing Cities. WP3 is represented in the bankable business model task group within the EIP-SCC and during a meeting in April 2019 with Sharing Cities, we agreed upon working together on this issue, as far as doable.

WP3 Development of bankable business models and exploitation activities is responsible for the beyond activities and is to explore the IRIS' partners' already established international relations. The task of listing the international contacts has started and it will be a large focus on this during the year to come.



WP3 will also identify forums where cities beyond Europe with an interest in European sustainable solutions can be found – such as Barcelona Smart City Expo. In November 2018 we were several partners of IRIS that attended the Barcelona Smart City World Expo. Over 700 cities were represented and over 21.000 visitors were there. All in all, 146 countries were at the exhibition. The fair proved to be a good place to build up the global network of contacts to smart cities all over the world. WP3 and IMCG were there and we talked to city representatives from China, South Korea, Australia etc and many European cities. We got to know several cities in the US, such as San Diego and Atlanta. WP3 (IMCG) will attend this expo in November 2019. This event provides opportunities to meet city representatives from smart cities from all over the world that wish to become smarter.

Example of activity; In November 2019 WP3 (IMCG) will be in Santiago, Chile – a city that has shown a lot of interest in for instance smart sensing and energy efficiency. They have previously visited Gothenburg to look at IRIS solutions. In Santiago we are arranging meetings with city representatives and companies.

Transition track pitches (see in a previous chapter) will be used when communicating with the market beyond Europe

One-to-one-meetings at the Barcelona Smart City World Expo November 2019

WP3 (IMCG) and WP8 (Vaasa) will arrange one-to-one-meetings during the Barcelona Smart City World Expo 19-21 November 2019. The expo is visited by cities from all of the world. Our meetings will be based on the transition tracks that the cities we meet with are interested in. Preferably at least one spoke's person from each track should be present. The lighthouse cities and solution providers along with other partners of IRIS will invite their city contacts in cities both in Europe and beyond to book one-to-one-meetings.

6.5 Official replication and deployment agreements

The lighthouse cities need to prepare for signing letters of intent with cities outside of the project; within and beyond Europe. This preparation does not only include a piece of paper, but a great effort to deliver the information, transfer the knowledge etc as has been promised in the IRIS offer, that LH cities, project coordinator, business model managers and replication manager of IRIS agreed upon during the sign-off meeting in April 2019.

As stated earlier in this document, “official replication and deployment agreements” is a very high threshold projects outside of the project that show interest to follow the project. Also, we have addressed that the ambition could be changed to follow the smart city community in Europe and transition tracks, rather than specifically the IRIS project and its' solutions.

7 Recommendations – solution provider level

To scale-up within the city must be a business opportunity none of our solution providers should miss out on. The potential market within the project is huge for the solution providers. As the one delivering the solution you can both scale up within the LH city where you demonstrate the solution and you can expand your business by interacting with the contacts you now have in both the other LH cities of IRIS and our four follower cities. And for the solution providers that have the means to do so, there are 100 cities outside the project that also constitute a potential market.

In order for a solution provider to exploit its results there is a need to make sure the checklist presented earlier has been worked through (see previous chapters). There is also a need to see to that you have a bankable business model, are tackling the non-technical market barriers and have an individual exploitation plan.

7.1 Bankable business model

In order to have a solution ready to be replicated you need to proof that your business model is working. As discussed thoroughly at the consortium meeting in Gothenburg in March 2018, a business model is considered to be bankable if it's scalable, economically appealing and involves a relatively low risk. To visualize this, we've compared it to the movie making business. Let's say a company is to invest in a movie. She can choose from two different movies. One having an un-known guy as main character and the other one starring Tom Cruise. The choice will obviously be on Mr Cruise. Why? Because he has proved that it's easy to scale up his success (Mission Impossible 1, Mission Impossible 2, Mission Impossible 3...) and his movies are doing very well money-wise and when he is in the movie there is a low chance of failure.

The business model workshop which will be held in each LH city by IMCG is the starting point for evaluating the business models potentials. During the spring of 2019 we held one such workshop for private companies in Gothenburg, concentrating on the local market for energy storage solution 2nd life batteries. The same type of workshop, focusing on different solutions, will be held in Utrecht and Nice during 2019. After these introduction workshops have been held, the IRIS local city coordinators will perform several other workshops focusing on the rest of the IRIS solutions. These workshops are based on the tool WP3 and IMCG introduced; The business model adaptation tool for scaling IRIS solutions on local city markets. The tool is partly based upon the business model canvas method, which is an accepted and widely used method.

Results – Value chain from battery 2:nd life workshop

Grid operator connects property system to local grid with a control unit which support optimisation, peak shaving and prosumer reimbursement.

Battery lease company lease batteries to Facility manager and change battery when times up.

Facility manager offers full service to Housing association including operations and relations to battery lease company and grid operator.

Smart city market support

- Services from local Grid operator.
- Possibility to sell electricity to the grid
- Reimbursement for peak shaving on subgrid-level (district or block)

Value proposition: Positive energy building and Peak power shaving
Enablers: > 200 kWh electricity storage in 2nd life automotive (bus) batteries powered by 140kW local PV and a energy management software

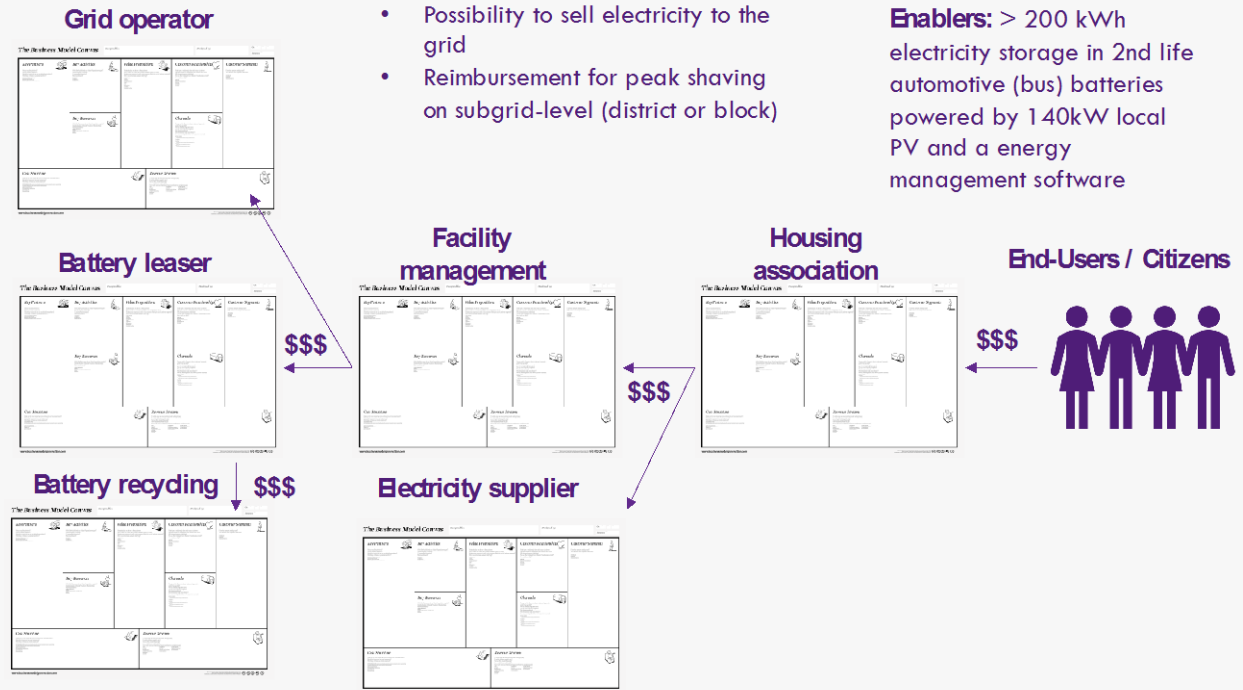


Figure 12 Resulting Value chain from business model case study 2nd life batteries, Gothenburg

The figure above presents the results from the workshop with private companies in Gothenburg, concentrating on the local market for energy storage solution 2nd life batteries as demonstrated in IRIS. It was enlightening for the participants to understand how the value chain to deliver the end-user value looks like and how well each company's individual business model fit into the value chain. There was a short discussion on business plans for different companies which probably change the value chain a lot if the demonstration is successful. For example, the battery recycling company plan to invest and taker the position of the battery leaser in the value chain.

7.2 Tackling potential non-technical market barriers

Exploitation is in reality to plan the pathway to the market. IMCG acts as innovation project manager in several different EU projects and have years of experience on non-technical issues, such as management of intellectual property rights. A main activity for all that wish to get their product or service to the market is to describe the way you are foreseeing getting there. When you have done that it's time to look at potential barriers for getting there. Here we list some major obstacles that you must address in order to get to the market.

- Ownership - Intellectual Property Rights (IPR)
- Funding
- Policies and regulations
- Customers
- Competitors
- Communication

7.2.1 Ownership - Intellectual Property Rights (IPR)

Make sure that you can prove that you own your product/service. Can you file for patent or can you protect it in another way?

Intellectual property rights, IPR, is an example of a non-technical barrier for market entrance. It is essential that it is there is no doubt on who owns the right of the solution that the solution providers of IRIS provide. Not only do we have the 16 IRIS solutions, but we are expecting several incubated ideas to be initiated during the project. These ideas might be a summary of a collaborative work, and then it is also important to have it all in writing regarding ownership.

A Non-Disclosure Agreement (NDA) can be used to regulate details. It's a legal contract between at least two parties outlining confidential information. It creates a relationship between the parties to protect for instance proprietary information. If intellectual property (IP) issues are solved with clarity early on in the project, potential future conflicts are avoided. Business angels, investors and financial institutions are the ones who can enable that the invention reaches the market, and they won't invest in your innovation if you might own it. They will want proof of that it yours.

The deliverable D3.5 IP Landscape Review by University of Brussels (VUB) will support this matter.

This deliverable will explore the IP landscape and the existing IP options related to IRIS project findings. In the form of a report, it will provide supportive material to be considered by the consortium when taking decisions regarding IP protection implementation.

7.2.2 Funding

You have to make your solution and your company financially attractive. This is a subject that you will be able to learn more about in D3.7 Financing solutions for cities and city suppliers. Make sure that you have investors and have secured the financing needed for market entrance. Remember that nobody will invest in your product/service if you can't prove ownership. D3.7 provides you with valuable information on what kinds of financial instruments there are available for you. If you as a solution provider are to seek funding in order to be able to reach the market you need to figure out your options for that. Remember that nobody will invest in your product/service if you can't prove ownership.

7.2.3 Policies and regulations

Know that the global climate objectives have a large impact on a vast range of areas and that regulations are getting stricter. See to that your product/service will be accurate in the years to come.

You could say that there wouldn't have been an IRIS project if it hadn't been for the UN's Global Climate Goals, which are tackling challenges that we all, especially cities, are facing. Many regulations and policies are being set stricter in order to adjust to these goals. As a solution provider within such an area, you should be aware of what rules and regulations that apply to your field. Remember that it could differ from country to country and it could be very different from continent to continent. Therefore, you must study the market you are intending to scaling-up your solution in.

And, if you know that you are delivering tomorrow's solution, can you also promise that you will be able to deliver the solution needed the days to come after tomorrow?

7.2.4 Customers

Make sure that your offer matches the customers' needs and know that they might need to be educated in order to understand the benefits of your innovative solution. There is a need to identify the customer. In the city where you test and demonstrate your solution you might know exactly who your customers are. In the IRIS project we aim for cities to replicate our solutions. However, often, the cities are the ones enabling replication, but they are not the buyers. Real estate owners might be the one that is the most relevant customer for you.

Through the IRIS project you can get support to reach the customers, but it's important to understand that all partners are to contribute with their contacts within and beyond Europe. If you have especially good relations with a certain city, please share the information so that we can target the market together.

7.2.5 Competitors

Learn who your competitors are and know that they might be offering a product/service that is very much appreciated by the market. You need to understand how to make potential customers abandon old habits. The competitors might be different in another country than what they are in your own. Study the competitors on the market you intend to replicate to.

7.2.6 Communication

“No innovation without communication” – the market will not know that there is a new product/service if you don’t talk about it. Plan how you will communicate with different market segments. We also believe that there is “no scaling-up nor replication without communication”. You need to communicate your solution to the market. Do you have a sales pitch? The pitch should show:

- The value the solution delivers
- Explain what problem it is solving
- Show how it is better than existing solutions

All solutions providers that have a “born global” IRIS solution have the opportunity to promote themselves on the IRIS website and on the IRIS social media channels. Being part of the IRIS project, you can benefit from a well-oiled communication machinery. For example, a solution provider could make a short film clip with them pitching their solution and the benefits of it. This activity will be supported by WP10 (Communication).

However, as stated above, not all solution providers would want to pitch on the global market.

7.3 Individual solution partners’ exploitation plan

All solution providers with scaling-up ambitions (could be within the city where they are demonstrating their solution and beyond the project) should create an individual exploitation plan. See the checklist provided earlier in this document to see what each solution provider’s exploitation plan could contain.

IRIS originally had 16 exploitable results (solutions). And during the project incubated ideas will lead to that more business models will be created and there will be more business opportunities. All these solutions should have an individual exploitation plan.

7.4 Exploitation Key Performance Indicators (KPIs)

WP9 Monitoring and Evaluation is the work package in charge of KPIs. With their assistance you can set the KPIs relevant for you. To measure the impact of exploitation the following KPIs could be used:

- Number of scaling-ups and/or replications within the LH city
- Number of scaling-ups and/or replications within the project
- Number of scaling-ups and/or replications outside the project – in Europe
- Number of scaling-up and/or replications outside the project – beyond Europe

8 Output to other work packages

This deliverable is relevant to all work packages and partners since we all are to execute the exploitation plan and see to that we reach the target of 100 cities, 80 in Europe and 20 beyond Europe.

The report indicates what is expected of partners and work packages. The main output to other work packages is that this deliverable shows what input that is expected in order to succeed with our mission. Here are some examples:

8.1 Output to WP1 transferred to WP8

WP1 is finalized. The work package worked on transition strategy, the five tracks to maximise integration synergy and replicability. This deliverable indicates that there is a need for transition track pitches. WP1 has put a lot of valuable information on Emdesk regarding the transition tracks. WP1 was finalized by M12, and it will be mainly WP8 that will deal with the coming work on transition track pitches.

8.2 Output to WP2

The work package dealing with EU wide cooperation with ongoing projects, initiatives and communities.

On-going discussions of how the IRIS offer can be stronger by working together with the other lighthouse projects. This deliverable emphasizes the need to work together and collaborate with the other projects as we share many objectives.

8.3 Output to WP3

This work package deals with the development of bankable business models and exploitation activities.

A lot of the work of this work package is dependent on how other work packages work in order to reach the objective of recruiting 20 cities outside the project. The check lists for exploitation presented in this deliverable will be a useful tool for WP3 when communicating with project partners that are ready to replicate a business model.

8.4 Output to WP4

This work package regards the CIP, the City Information Platform. It will play a central role for many new business solutions that will have the potential to be scaled-up or replicated. It will probably be of much value for WP4 to work with the University of Utrecht and Chalmers university concerning new incubated ideas.

8.5 Output to WP5, WP6 and WP7

The work package of the lighthouse cities Utrecht, Nice and Gothenburg will learn from this deliverable that they play an important role pushing the solution providers within their demonstration sites towards forming an exploitation plan.

8.6 Output to WP8

This work package regards replication by lighthouse regions, follower cities and European market uptake. This deliverable is of importance for WP8 as it presents different ways to reach potential European cities. For example, through the collaboration with CELSIUS, a project, that was very successful in recruiting follower cities. Also, WP8 has a deliverable M36, D8.12, which is very similar to D3.8. Therefore, we have suggested that D8.12 could be an up-dated and extended version D3.8. That means that it should also include beyond Europe activities. This deliverable shows that WP8, responsible for leading the work of recruiting 80 cities within Europe, will be helped by working closely together with WP2. This deliverable indicates that there is a need for transition track pitches. As WP1 was finalized by M12, it will be WP8 will continue the work of the pitches.

8.7 Output to WP9

This work packages regards monitoring and evaluation. D3.8 indicates the need for KPIs for exploitation activities to measure the impact of our work. WP9 should look into that work with relevant solution providers and cities.

8.8 Output to WP10

Work package 10 is all about communication and dissemination. D3.8 clearly shows that to succeed with exploitation objectives there is an urgent need for communication. WP10 plays an important role here and this document indicates what could be done in order to communicate the IRIS offer.

8.9 Output to WP11

This work package is project management. D3.8 clearly shows that there are no particular tasks or deliverables within somebody's work package that says to execute the exploitation plan. However, it is also clear that the IRIS project has an objective to recruit 100 cities. This means that the project management must see to that this exploitation plan is being executed.

Also, note that WP1 is finalized and the relevant updates of Emdesk might be a task for WP11.

9 Conclusions

The actual meaning of following an exploitation plan is a complicated matter. Since it is not stated in every work package what to contribute with in regards of exploitation, not all partners are yet aware that we are all obliged to contribute to the work on recruiting 100 cities. Exploiting the results of a project is highly depending on the ability of all project partners (not only WP10) being able to communicate what IRIS offers to cities outside the project, in Europe and beyond. The exploitation plan also implies that there is a lot of actions that needs an overall coordination and administration. Not only do the partners of IRIS have an obligation, but the project management has to take action.

This exploitation plan has drawn a conclusion that there are a number of actions that need to be covered in order to exploit the IRIS results aiming at recruiting the 80 cities within Europe and the 20 outside of Europe. We, the IRIS project partners, need to be able to:

- Present the IRIS' offer, use the transition track pitches and project results and communicate with the world outside the project
- Scale-up district by district in the LH cities showing that we believe in our own solutions
- Identifying new solutions within IRIS to complement the 16 integrated solutions
- Ease replication by identifying financing solutions and by enable knowledge transfer regarding IRIS solutions and their business models
- Identifying the IRIS born global solutions and activate the project partners' global network of cities

Early on we concluded that the way D3.8 was originally designed, focusing only on the exploitation plan and operation beyond Europe, was not something the consortium was fit for in month 24 of the IRIS project. Together with several project partners we concluded and agreed upon a version of the exploitation plan to include the steps needed to be taken before going beyond Europe. IMCG has also concluded that a good idea would be for WP8 to use parts of D8.12 European level replication plan (M36) to include an updated version of D3.8, which then will be produced by WP8.

There are 18 lighthouse projects having almost the same objective as IRIS regarding recruiting cities. A conclusion is that the IRIS offer will be stronger if presented in a lighthouse context. The different task groups that IRIS partners are involved with in this community provide a possibility to increase collaborations among the projects.

When letting other cities know what IRIS has to offer, it's easier to speak in wider terms and talk about transition tracks – the challenges cities are facing – rather than speaking about specific solutions within the transition tracks. The GA states that 20 solutions providers should be given the opportunity to pitch outside of Europe. IMCG believes that it will be more likely that IRIS can pitch the transition tracks (mainly through a transition track spokesperson) and business models, since as of yet, there haven't been 20 companies within IRIS ready to go scale-up at a global level.

The exploitation of IRIS' results demands a large degree of knowledge transfer. We, all project partners, have to understand that a lot of important information has already been gathered and a lot of it is to be found on Emdesk. There is a need to structure this information to make it more accessible and transfer some of the information outside of Emdesk so that the target group there can access it. This material forms the basis for the information LH cities will present during the study visits they hold for delegations from cities from all over the world. Furthermore, the material will be used on the IRIS website – a website that is needed to be more customer-focused and not so much project-focused.

There are a lot of barriers to overcome and engagement to create to reach the broader market. The efforts needed of each IRIS partner to do this and reach the overall objective to exploit results is not specifically written down as a delivery or task, which demands for a large willingness to deliver.

We have to change mindset on what to show the world. It's perfectly fine to show what's being demonstrated even though everything is not finalized and in place. Other are interested in the journey we are making, rather than the final product. They're interested in the collaboration between academia, society, industry and companies that we manage to handle, in order to strive towards demonstrating the integrated solutions.

In the GA it says IRIS is to recruit 100 cities through "Official replication and deployment agreements". It is not easy to get cities to sign such a document. It is a high threshold for cities outside of the project. Also, we have addressed that the ambition could be changed for cities to follow the smart city community in Europe and transition tracks, rather than specifically follow the IRIS project and its' solutions.

The outcome of this plan is depending on that you act upon it and that we work together.

9.1 WP3 SERVICES

There are a number of services that the WP3 provides within IRIS. Here you will find a list of the ones that we have developed so far in order to assist in the execution of the exploitation plan.

IMCG

- Business Model Adaptation Tool Adaptation for cities - workshops with LH cities and FCs
- Evaluation of business models for IRIS solutions – fact sheets
- Assistance for solution providers that wish to go beyond Europe – calls for immediate action

VUB

- Assistance regarding IPR-related issues

UNS

- Evaluation of business models of IRIS solutions
- Knowledge transfer on what integrated solutions LH cities believe will be replicated in FCs

UU

- Evaluation of the business models of incubated ideas

HKU

- Support when solution providers are involving end-users in the innovation management

If you wish to use one or several of the services above, please contact the organisation delivering it. Please act in good time, as the companies or organisations might not have the means to assist you at once. Note that there is an opportunity for you to be introduced to global cities attending the Smart City World Expo in Barcelona in November 2019)

9.2 LIST OF ACTIONS FOR WORK PACKAGES AND PARTNERS TO ACT UPON

Here is a list of actions that need to be executed by all of us partners in order to succeed with recruiting the 80 cities within Europe and 20 cities beyond Europe. Further details are to be found in the report.

Table 24 *List of actions for work packages and partners to act upon*

ACTION	Work package level	Main partners
The IRIS offer For more details; Table 10 The IRIS offer and its' different target groups (page 45) Table 11 Selected partners' responsibility regarding the IRIS offer (page 46)	WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11	IMCG Vaasa CERTH Utrecht (project coordinator) LH cities ESCI
Scaling-up district by district in LH cities For more detail; Table 13 Selected partners responsibilities scaling-up district by district (page 51)	WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11	Nice University LH cities Solution providers ESCI
Identifying new solutions with IRIS For more details; Table 14 Selected partners responsibility identifying new solutions within IRIS (page 52)	WP5 WP6 WP7 WP3 WP4	Utrecht University Nice University Chalmers LH cities ESCI



<p>Making it easier to scale-up within the LH cities</p> <p>For more details; Table 15 Selected partners' responsibility to scale-up within the LH City (page 53)</p>	<p>WP5 WP6 WP7 WP3</p>	<p>IMCG LH cities Specific solution providers</p>
<p>Ease replication</p> <p>For more details; Table 16 Selected partners' responsibility to ease replication (page 53)</p>	<p>WP8 WP5 WP6 WP7 WP10 WP4 All WPs</p>	<p>Vaasa</p>
<p>Identify possibilities for financial instruments regarding replication</p> <p>For more details; Table 17 Selected partners' responsibility to ease possibilities to finance replication (page 54)</p>	<p>WP3</p>	<p>IMCG</p>
<p>Identifying the born global solutions</p> <p>For more details; Table 18 Selected partners responsibility identifying born global solutions</p>	<p>WP5 WP6 WP7 WP8 WP3 WP10</p>	<p>LH cities Solution providers Vaasa IMCG ESCI</p>
<p>Communicating the IRIS solutions to the world</p> <p>For more details; Table 19 Selected partners' responsibility to communicate the IRIS solutions to the world (page 56)</p>	<p>WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11</p>	<p>All partners ESCI IMCG Vaasa LH cities</p>
<p>Activate the IRIS' partners' global network of cities</p> <p>For more details; Table 20 Selected partners' responsibility to activate the IRIS global network of cities (page 57)</p>	<p>WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9</p>	<p>All partners LH cities the "born global" solution providers Vaasa IMCG</p>



	WP10 WP11	
Provide information about IRIS solutions to the world For more details; Table 22 Selected partners' responsibility to see to that the world get the IRIS information (page 59)	WP5 WP6 WP7	LH cities
Presentation of IRIS results For more details; Table 23 Selected partners' responsibility to present a result (page 61)	WP11 WP5 WP6 WP7 WP8 WP10 WP3	Utrecht (project coordinator) LH cities IMCG Vaasa ESCI

APPENDIX 1: Internal sign-off meeting April 10, 2019

Sign-off from project coordinator, replication manager, communication manager and LH city representatives on proposed exploitation plan. This is a documentation of the notes taken from that meeting. The notes have also been sent out to all that was invited to participate.

Version	Date	Modifications made by
1.0	29-8-2019	Ulrika Wahlström, Jonas Norrman, IMCG
2.0	20-9-2019	Ulrika Wahlström, IMCG

Background

In March 2019 IMCG sent out an e-mail to the ones responsible for WP5/6/7 to inform them about the meeting we intended to have (and had in April). We described the Exploitation plan as it was set in the grant, concentrating on the Beyond Europe-activity;

This plan is part of the task "Beyond Europe". It means that the we are to attract at least 20 cities outside of Europe. We align this with the work of Vaasa (WP8) who are to attract 80 cities within Europe. Furthermore, 20 solution providers will have had the opportunity to pitch their solution beyond Europe before project ends.

To attract the cities outside of the project a lot of communication is needed - therefore we're also aligned with WP10. And to attract the cities we need an IRIS offer. IMCG is producing a draft for this offer and it's very general. Mainly, it contains that we offer cities:

- *Insight to 5 key areas of transition*
- *Knowledge transfer regarding bankable solutions*
- *Invites to visit the demonstration sites showing smart city solutions*
- *Entrance to a network of cities in the European Smart City community*

We also here proposed to identify one spokesperson for each transition track of IRIS so that when there are questions about a certain transition track, we have one person to go to. We encouraged all to identify such a person. We emphasized the need to understand the role of the LH cities when it comes to:

- the responsibility to handle international delegation visits from cities interested in following us and learn more about the transition tracks (in Gothenburg this is arranged by Business Region Göteborg's Green Gothenburg and Johanneberg Science Park is responsible for the content. It is not yet clear how it's handled in Nice and Utrecht).
- the need for identifying the "born global" solutions of your city

- the need to share information about which cities outside Europe (and within Europe) that you (and the solution providers in your team) have good relations with today - these are the cities we will start trying to attract to follow us.

A meeting was booked to discuss the Exploitation plan and Operations and all of our different roles. Topics that we were to discuss were;

- Communication and marketing (join us!); the IRIS website and the IRIS offer
- The importance of handling delegation visits in the LH cities
- The importance of meeting cities elsewhere (Barcelona Smart City World Expo, Santiago, Chile etc); transition track spokesperson, born global solutions, incubated ideas
- Risks; Saying no to delegation visits, Not delivering information to cities that signed up to follow
- What happens next; discussion on workshop in Vaasa, planned delegations visits, transition track spokespersons, already established relationships with other cities, the importance to align with the international department in the LH city

Notes from meeting

IRIS meeting: April 10, 2019, go-to-meeting

Participants: WP5 Utrecht (Arno Peekel) WP7 Gothenburg (Eva Pavic), Project coordination (Roel Massink, Panagiotis Panos Tsarchopoulos). WP8, replication (Mauritz Knuts), WP3, author of plan (Jonas Norrman, Mark Sanders, Ulrika Wahlström)

Not able to attend; WP6 Nice and WP10 Communication -

Introduction

This meeting is arranged by WP3 to align with LH cities (WP5/6/7), replication (WP8), communication (WP10) and project coordinator, so that all are aware what will be needed to be done in order to execute the exploitation plan (IRIS D3.8 Exploitation plan and operation, due M24, September 2019) that WP3 now is writing on.

Note that this exploitation plan is within the task T3.5 Beyond Europe, where one of the main objectives are to attract 20 cities outside of Europe to replicate IRIS solutions.

However, as we are very much aware of the fact that WP8 has the objective of attracting 80 cities within Europe to replicate IRIS solutions. We also know that they will have a Replication Tool ready by M25 (October) – one which must be a part of WP3 Exploitation plan. Furthermore, WP8 also is to write an exploitation plan (we believe it is M36?) and we believe it can't be much different from the one we are delivering now. Therefore we must work together.

Why is going beyond the project/Europe good for you as a city?

- If you want to implement policy and regulation to steer the market towards an new integrated solution, the solution needs to be available at an affordable price which means that a market larger than just your city must be created.

- If you want your solutions to be available at an affordable price, a larger market than your own city must be created.
- Replication is all about creating demand, which in turn creates supply and a market.
- This is why we need an exploitation plan – we all need to see to that a lot of other cities have the need for the solutions that we have tested and demonstrated and proved working.
- Therefore, there is a need for looking into the born global solution and to see what new ideas that need to be incubated.
- Additional benefit: Through this project your cities will be known for being a forerunner when it comes to smart integrated solutions.

The purpose of this meeting is at least to agree on:

- The IRIS offer
- The different roles for us all in the exploitation plan (contact with other cities, packaging the offer, deliver the offer by knowledge transfer).

Why focus on cities outside the project at this stage

A question arose on why the IRIS offer must be described and decided this early on in the project. IMCG explained, the D3.8, being within the beyond Europe task M24, is there for a reason. To get an interest for the IRIS solutions outside the project demands that we interact and build up relations with a lot of cities (100). Why should they bother to pay interest to our solutions? And if we start off this work with attracting cities outside of Europe (and outside of the project, within Europe) too late in the project, there will not be enough time for the recruitment process.

Identify our different roles in the exploitation plan

It is important to understand the role of the LH cities when it comes to:

- the responsibility to handle international delegation visits from cities interested in following us and learn more about the transition tracks (in Gothenburg this is arranged by Business Region Göteborg's Green Gothenburg and Johanneberg Science Park is responsible for the content. It is not yet clear to me how it's handled in Nice and Utrecht).
- the need for identifying the "born global" solutions of your city, e.g solutions which can be well known on any market globally.
- the need to share information about which cities outside Europe (and within Europe) that you (and the solution providers in your team) have good relations with today - these are the cities we will start trying to attract to follow us

The IRIS offer

To attract the cities outside of the project a lot of communication is needed - therefore we're also aligned with WP10. And to attract the cities we need an **IRIS offer**. IMCG is producing a draft for this offer and it's very general. Mainly, it contains that we offer cities:

- insight to 5 key areas of transition
- knowledge transfer regarding bankable solutions (
- invites to visit the demonstration sites showing smart city solutions
- entrance to a network of cities in the European Smart City community

During our discussions at the meeting some people argued we can't be too vague, but on the other hand, if promising a lot, like [mySmartLife](#), then it can be too much for the LH cities to live up to.

Do you have any objections to the offer stated above? Please let us know.

It was pointed out that the building of a global network; 80+20 = 100 cities will be a growing communication platform. This platform we need to feed with information to engage them; newsletter from IRIS is needed.

WP8 has gotten the impression that the other lighthouse projects have not been able to replicate yet. Project coordinator says that we should not, at this stage, focus on beyond activities, as we first need to replicate within the city. Gothenburg informs that Riksbyggen has replicated within their own business.

WP3 points out the fact that the exploitation plan regards "Beyond Europe", but agrees that a first logic step is to start within the city. A question arises: who is to be responsible for replicating within the city – district by district? Please let us know, and it'll be put in the exploitation plan.

Suggestion: The other light house projects should be used for the exploitation plan, meaning WP8, leading the process of recruiting 80 cities within Europe could look at the cities within the other projects since they are indeed interested in smart city solutions. (Note that there is valuable information on this in D3.3 market analysis).

[IRIS website](#)

As of today, the website is very project oriented. This is not what attracts cities outside the project. We have talked to WP10 and Alec regarding the need for a "JOIN US" place to go on the website, which will be the hub for all communication.

LH cities handling on location: Delegation visits

Utrecht has no clear answer on what they are offering to delegations. Delegations are there to visit more mature projects. Describes 3 business models; Lomboxnet (mobility), start ups (within data), societal (Boex). Looking into what kind of actors are involved in the demos – what can other cities learn from that?

Gothenburg has business models coming up from SMEs; Metry (Energy Cloud) and Trivector (mobility). Gothenburg has Green Gothenburg that handles delegations – there is a need for "IRIS packages" to be offered there.

Nice and Utrecht hadn't so far giving any input on how they handle delegations, but after the meeting, Utrecht sent good input on this.

WP3 expressed the need for understanding that we need to handle visits now, not postpone everything to the project end.

Handling off location: Barcelona Smart City World Expo, Santiago/Chile

- Transition track spokesperson
- Born global solutions – it's NOT the providers, but the solutions; the business models, that will be replicated. We discussed what is the definition of replication and Roel stated: "The actual act of replication is that one solution from IRIS will be implemented elsewhere."
- The importance of Incubated ideas were emphasised

WP3 proposes that we identify **one spokesperson for each transition track** of IRIS so that when there are questions about a certain transition track, we have one person to go to. There could also be a city representative – a neutral part who can explain the city policy plans to support different solutions.

Deliverable	Nice	Gothenburg	Utrecht
T.T.#1	Dominique CACCAVELLI (CSTB)	Peter SELBERG (RB)	Martijn Broekman (BOEX)
T.T.#2	Christian KEIM (EDF)	Per LÖVERYD (AH)	Ragnild Scheifes (LomboXnet) & Martijn Broekman (BOEX)
T.T.#3	Eric SIMONS (VULOG)	Emma LUND (TRIV)	Ragnild Scheifes (LomboXnet)
T.T.#4	Stéphane ROUX (NCA)	Camilla NORDSTRÖM (GOT) & Håkan AXELSSON (METRY)	Mirjam Harmelink (UTR)
T.T.#5	Unknown	Arvid TÖRNQVIST (GOT)	Rianne Bakker (UTR)

Above you see the list of TT managers in each city. WP3 believes that transition level on a broader base is of more interest. A city outside of the project must talk to a city representative (Björn, Eva, Arno, Mirjam, Jean-Charles and Alain) when discussing the challenge they're facing (transition track) – not a solution provider for a certain solution within a certain city.

Risks

- The IRIS offer is either too general or too detailed
- Saying no to delegation visits
 - Some expressed that they don't feel that they have enough to show for delegations yet
- Not delivering information to cities that signed up to follow
- Solution providers don't want to go abroad

APPENDIX 2: Recruiting cities, Discussion note, July 10, 2019

Discussion note on 80 European city recruitment and 20 cities outside of Europe with replication/deployment agreements.

Version	Date	Modifications made by
1.2	26-7-2019	Roel, Alec, Muriël, based on input from Ulrika, Mauritz, Bruno

Proposed actions for city recruitment and replication

The following list are possible actions we can take as a consortium. The first two actions are key priority to follow up by consortium partners.

Create a joint Smart Cities Network with SCC-01 projects, SCIS, EIP-SCC

To achieve our replication and city recruitment targets we need to work smart and in collaboration with the other European networks and projects in our field. Instead of working separately on a replication and recruitment plan we want to join forces with the other SCC_01 project, which have probably similar targets, and work on a joint Smart Cities Network with a common pool of interested city contacts.

- The combination of SCIS and EIP-SCC presents a great opportunity. EIP-SCC has a large pool of (city) stakeholders involved. This can serve as an asset for all SCC-01 projects if we work together.
- Need to convince the European Commission that doing this in a joint way will result in a larger overall impact of the program. Key message is: we will focus our replication energy not on getting new cities on board, but on getting replication offers to EIP-SCC cities. So, we rather spend driving our city content to the EIP-SCC/ SCIS network than on recruiting cities separately.

What actions do we need to take.

ID	Action	Holder	Timing
1.1	Pitch to EC: UTR to pitch and discuss with the EC (Georg Houben & Jens Bartholmes from DG ENER) and INEA (Michaela Gigli and Adas Pagonis): why a join-SCC-01/EIP-SCC/SCIS city (recruitment) network is necessary and get their feedback	UTR (Roel/Haye) + ESCI (support pitch)	Aug-Sep 2019
1.2	Pitch to BoC/TG Replication: once EC is in favour the same proposal should be tabled to the BoC and TG Replication	UTR (Muriël/Roel) VAASA (Mauritz)	Sep-Oct 2019
1.3	Create detailed activity plan with TG replication: Detail this as	UTR, VAASA,	Nov-Dec

one of the activity lines in Task Group Replication and/or with support of Task Group City Coordinators. This should be included in the 2020 SCC-BoC plan	IMCG, ESCI	2019
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Create regional arrangements around our LH- and F-cities

In Task 8.7 European Scale up activities the following sub-task is included: Seven European level regional arrangements – with the goal of regional cities get-together to establish contact with likeminded cities and exchange experiences - involving the 7 LH and FC communities responsible for their arrangement.

Currently, in the Netherlands (Utrecht), Finland (Vaasa) and Sweden (Gothenburg) the first signs of bottom-up regional SCC-01 'Communities of Practice' with regional meet-ups around SCC-01 topics are emerging. These meet-ups have started with a joint LHC project desire:

- 1) To support Lighthouse practitioners on the implementation of their SCC01 projects and exchange with peers on challenges;
- 2) To enlarge the community with non-SCC city representatives and to involve, inform and exchange with these peer practitioners on the SCC-01 solutions, challenges and results.

As IRIS we should support and nourish these networks, because they will become important for practitioners to share.

Strategy:

The key is have the primary focus on *'support 'smart city' practitioners on implementing smart city solutions, solving challenges and barriers'*. The sign-up or replication agreement from new cities will be a result from doing this activity well. By creating an active community of practitioners a base for potential replication of solution is laid. Replication cities can join the community and become active in learning from the SCC-01 cities. The regional communities of practice should organize content driven meetings rather than 'offering solutions'. Specific actions to build these communities:

- Within cities: within each LHC/FC the partner representatives have the responsibility to find replication and scale up opportunities. There is no specific task or PM allocated to this, but should be the reason why cities participated in the first place.
- Within IRIS: Nourish the development of these networks that have emerged from the bottom-up and support the networks that need to be established (NCA, SCT, ALEX, FOCS). D3.12 EU Level Replication Plans (m36) could develop guidance on this.
- External IRIS: propose and establish an activity line in the Task Group Replication dealing with the support and establishment of regional network (nodes) > work together with SCIS/EIP-SCC and the SCC projects (& learn from experiences in Celsius)

Additional actions from list CityFied that could be included to facilitate the regional networks

- Leant on consortium partners to recruit districts in their own larger cities or regions
- Expanded the community scope to small and very small municipalities (10,000 inhabitants & less)

- Through connections each LH/F-city partners has with friend cities, twinned cities and through targeted presentations by IRIS partners to visiting delegations in the LH/F-cities. (note, this can work once first results of the project are able to show)
- Through (re)mapping of all EU city associations that consortium members participate in and have consortium members provide targeted presentations fellow members from cities (i.e. Utrecht, Nice, GOT...) & lobbied to feature in association materials, working groups etc
- Through connections with international NGO's and intermediaries such as the Climate Group, Living Labs Global, Renewables Cities, C40, international donors such as DFID and international government innovation departments through Mission Innovation.

Other actions to stimulate IRIS partners to recruit cities

1. Established an internal scoreboard with prizes & recognition for every project meeting for people who 'signed up' a city, district or region
2. Targeted all EU Regional Offices and visited many in person to pitch CITYFIED opportunities and try to establish clusters of interested cities close to one another
3. Made a 'Recruitment ambassador toolkit' for any member of the consortium to present and use to recruit. Translated and adapted by various partners
4. Multiple external events and awareness actions in Brussels and beyond