



# IRIS

Integrated and Replicable Solutions  
for Co-Creation in Sustainable Cities

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## Deliverable 8.15

### First update of the mentoring roadmap

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<b>Task:</b>	T8.1: Replication activities planning and roadmap creation
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## Version History

Version	Date	Modifications made by
0.1	01/09/2021	VAASA created the first structure of the deliverable
0.2	17/09/2021	VAASA, CERTH, UPB and ICEM updated structure
0.3	24/09/2021	First draft ready
0.4	29/09/2021	First version ready for review
0.5	30/10/2021	Updated version according to review comments
1.0	24/11/2021	Final version to be released to the EC

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# Executive Summary

The present document is the deliverable **D8.15** entitled as **First update of the mentoring roadmap** for the IRIS project. The deliverable is related to the task **T8.1 Replication activities planning and roadmap creation**. D8.15 is an updated version of the deliverable **D8.2 A mentoring roadmap**. The report focuses on the mentoring activities implemented in M37-M48, notably on the Site Management and Replication Board (SMRB) that became active in this period. Moreover, it presents the planning for the upcoming period until the end of the project.

In task **T8.1** all LH cities, and FCs, in the IRIS project have create a common roadmap together, **D8.1 A Roadmap for replication of activities**. To be able to plan replication activities, both for expansion of activities of LH cities to other regions, and for FCs to develop a replication plan based on their own specific experience, local conditions and best practices. D8.2 mentoring roadmap and this update focus on the mentoring actions found in the replication roadmap.

In the task **T8.2 Replication tools development for capacity building, training and knowledge transfer** the project has gathered all tools available for replication activities in the IRIS project in the deliverable **D8.3 Replication tool box**, together with explanations of what the tools are. **D8.2 A mentoring roadmap and this update D8.15** include the tools available for mentoring actions in the project.

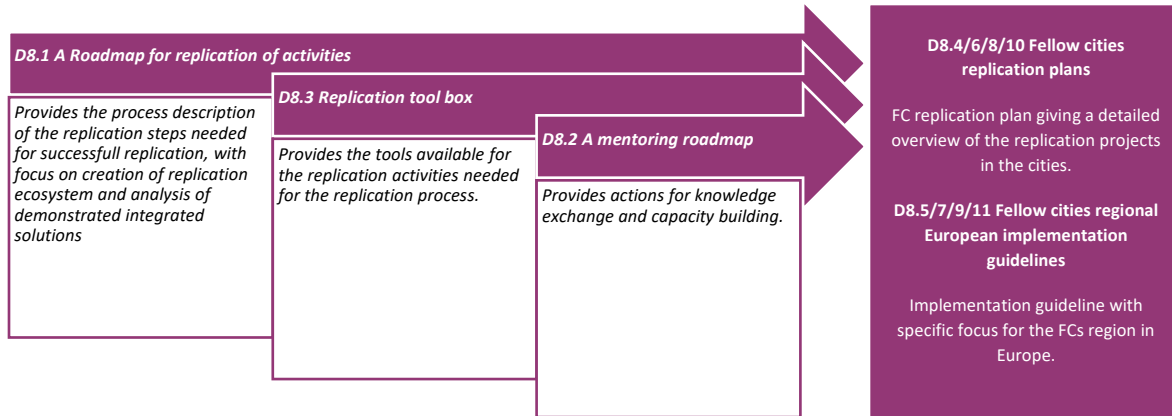
The roadmap D8.1 A Roadmap for replication of activities, the tool box D8.3 Replication tool box and the mentoring roadmap D8.2 A mentoring roadmap have all been supportive documents for the FCs in their creation of their replication plans that were successfully completed in M42 of the project. These replication plans can be found amongst the projects other deliverables:

- D8.4 Vaasa replication plan
- D8.6 Alexandroupolis replication plan
- D8.8 Santa Cruz de Tenerife replication plan
- D8.10 Focsani replication plan

The replication roadmap, replication tool box, mentoring roadmap and the FCs replication plans will serve as support of the upcoming European regional implementation guidelines that the FCs will create for their respective regions in Europe:

- D8.5 Vaasa Northeastern Europe implementation guideline
- D8.7 Alexandroupolis Southeastern Europe implementation guideline
- D8.9 Santa Cruz de Tenerife Southwestern Europe implementation guideline
- D8.11 Focsani South-Central Europe implementation guideline

The update of the mentoring roadmap presented in this document informs on mentoring activities in M37-M48 and the plans for mentoring actions by the LHs to the FCs, and between FCs, in the IRIS project M49-M66.





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## List of Abbreviations and Acronyms

Abbreviation	Definition
API	Application Programming Interface
BIM	Building Information Model
DSO	Distribution System Operator
CIP	City Innovation Platform
CPB	Consortium Plenary Board
DHS	District Heating System
EIB	European Investment Bank
EIP-SCC	The European Innovation Partnership on Smart Cities and Communities



EMS	Energy Management System
ESCO	Energy service company
EU	European Union
FC	Follower City
FIWARE	A curated framework of open source platform components to accelerate the development of Smart Solutions
ICT	Information and Communication Technologies
IS	Integrated Solution
KPI	Key Performance Indicator
LHC	Lighthouse City
RES	Renewable Energy System
ROI	Return on Investment
SC	Smart City
SCIS	The Smart Cities Information System
SCC1	Smart Cities and Communities lighthouse projects
SMRB	Site Management and Replication Board
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TG	Task Group
TSO	Transmission System Operator
TT	Transition Track
USEF	Universal Smart Energy Framework
WP	Work Package

# 1. Introduction

## 1.1. Scope, objectives and expected impact

This deliverable is part of **WP8: Replication by Lighthouse regions, Follower cities, European market uptake** in the IRIS project.

The objective of WP 8 is to design & implement replication plans for the LHs regions and FCs that are scalable to other EU markets and cities through the creation of a tool box for capacity building, training, active mentoring & knowledge transfer, and developing a roadmap (and business/financing plan) for the creation of replication plans. The FC Replication Plans will be implemented through a combination of solutions already available during the project or within a few years after the end of the project depending on the expertise and suitability of each FC.

The deliverable is related to the task **T8.1 Replication activities planning and roadmap creation**, where all LH cities and FCs created a common roadmap to plan replication of activities both for expansion of activities of LH cities to other districts and for FCs to develop a replication plan based on their own specific experience, local conditions and best practices. Figure 1 presents the interconnection between the WP8 deliverables.

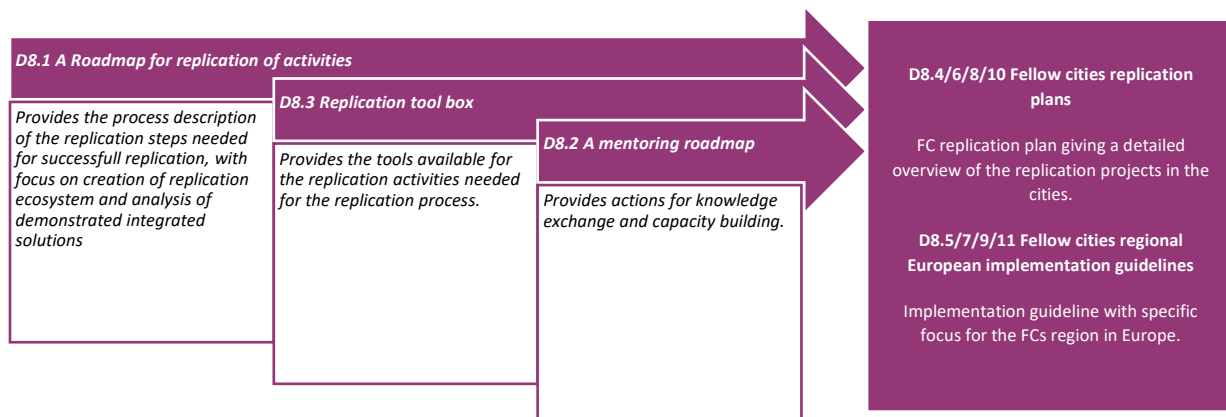


Figure 1 How the WP8 deliverables are associated with each other to support the IRIS replication process

LH cities will be acting as mentors to FCs on the creation of this roadmap. FCs will host mentoring visits in their city. In those visits, a team of city experts from a LC city will visit a follower city as a mentor, to help the local ecosystem work out how the chosen measure/solution could be adapted/implemented in their own context. The visits aim to support short-term wins and improvements, which can accelerate the FCs replication projects. The plan is to first have one study visit to each LH city, where all FCs will participate, followed by one mentoring visit to each FCs where identified key persons from all LH cities will participate. These visits will be carried out during years 4, 5 and 6 of the project. All in all, there will be 3 study visits and 3 mentoring visits in the project.

The collaboration between the site managers of LH cities and the site managers of FC is an essential factor for successful mentoring visits. LH city site managers have in-depth know-how of all aspects in terms of





partners, technology, legislation, and citizens profiling for each demonstration in their cities. In contrast, FC site managers are aware of the required expertise to implement the envisaged projects in their cities. LH city and FC site managers have already been selected and represented in the IRIS project's organisational structure.

D8.15 is the first update of D8.2 A mentoring roadmap. In M60 the deliverable will be updated again (D8.16: Second update of the mentoring roadmap).

The main purpose of the deliverable (and its updates) is to provide mentoring actions for knowledge exchange and capacity building for the FCs in their replication projects. Other purposes of the deliverable are to report, and plan, past, current and coming mentoring activities in the IRIS project. Time-schedules, responsible partners, key organizations and activity content will be further updated in D8.16

The mentoring roadmap is an essential part of the replication process in the IRIS project where mentoring actions serves a fundamental function in the success of replication for the FCs. The mentoring roadmap is the third step in the replication process of the IRIS project, coming after the replication roadmap (D8.1) and replication toolbox (D8.3). The mentoring roadmap was built on the processes mentioned in D8.1 and will be supported by the tools proposed in D8.3 for knowledge exchange and capacity building in FCs.

The expected impact of this deliverable is that all mentoring activities performed by LH or FC contribute to better replication plans; the replicated projects can be faster implemented, with lower risks and leading to higher impact on the city level.

The deliverable will focus on removing obstacles to investment, providing visibility and technical assistance to investment and replication in additional areas and making smarter use of new and existing financial resources.

The main target audiences are the LHs (as mentors) and the FCs (those being mentored) in the IRIS project. The mentoring roadmap can serve as a useful document for other SCC01 projects, or other smart city networks and activities where mentoring activities are planned to be carried out.

Due to COVID-19 pandemic, the mentoring visits to the FCs will be organised during the 5<sup>th</sup> year of the project. Their planning is presented in this D8.15.

All of the FCs finished their replication plans in M42 of the project, and these plans will function as a foundation for planning of mentoring actions for the duration of the project.

- D8.4 Vaasa replication plan
- D8.6 Alexandroupolis replication plan
- D8.8 Santa Cruz de Tenerife replication plan
- D8.10 Focsani replication plan

## 1.2. Contributions of partners

Main contributing partners to this deliverable is VAASA, CERTH, UPB and ICEM, but using the input received by all LHs and FCs partners in previous deliverables **D8.1** and **D8.3**. During the writing of this



deliverable all the FCs and their partners have finished their replication plans (D8.4/6/8/10), and input from the work has been used in the creation of this deliverable.

## 1.3. Relation to other activities

Table 1 depicts the relation of D8.2 and its update D8.15 to other activities (deliverables) developed within the IRIS project.

Table 1 Relation of D8.2 to other activities (deliverables) developed within the IRIS project

Number	Title	Relation
D2.1 (60)	Lessons learnt through cooperation with other Lighthouse projects	Output – Mentoring actions in the IRIS project serves as good experience exchange with other LH projects
D3.7 (24)	Financing solutions for cities and city suppliers	Input – Essential information regarding financing for mentoring actions
D5.1 (12)	Report on baseline, ambition & barriers for Utrecht lighthouse interventions	Input – Important information regarding demonstrations for mentoring actions
D5.2 (12)	Planning of Utrecht integration and demonstration activities	Input - Important information regarding demonstrations for mentoring actions
D5.3 (24)	Launch of T.T.#1 activities on Smart renewables and near zero energy district (Utrecht)	Input - Important information regarding demonstrations for mentoring actions
D5.4 (24)	Launch of T.T.#2 activities on Smart energy management and storage for flexibility (Utrecht)	Input - Important information regarding demonstrations for mentoring actions
D5.5 (24)	Launch of T.T.#3 activities on Smart emobility (Utrecht)	Input - Important information regarding demonstrations for mentoring actions
D5.6 (24)	Launch of T.T.#4 activities on City Innovation Platform and information services (Utrecht)	Input - Important information regarding demonstrations for mentoring actions
D6.1 (12)	Report on baseline, ambition & barriers for Nice lighthouse interventions	Input - Important information regarding demonstrations for mentoring actions
D6.2 (12)	Planning of Nice integration and demonstration activities (Nice)	Input - Important information regarding demonstrations for mentoring actions
D6.3 (24)	Launch of T.T.#1 activities on Smart renewables and near zero energy district (Nice)	Input - Important information regarding demonstrations for mentoring actions



D6.4 (24)	Launch of T.T.#2 activities on Smart energy management and storage for flexibility (Nice)	Input - Important information regarding demonstrations for mentoring actions
D6.5 (24)	Launch of T.T.#3 activities on Smart emobility (Nice)	Input - Important information regarding demonstrations for mentoring actions
D6.6 (24)	Launch of T.T.#4 activities on City Innovation Platform and information services (Nice)	Input - Important information regarding demonstrations for mentoring actions
D6.7 (24)	Launch of T.T.#5 activities on Citizen engagement and motivating feedback (Nice)	Input - Important information regarding demonstrations for mentoring actions
D7.1 (12)	Report on baseline, ambition and barriers for Gothenburg lighthouse interventions	Input – Important information regarding demonstrations for mentoring actions
D7.2 (12)	Planning of Gothenburg integration and demonstration activities	Input – Important information regarding demonstrations for mentoring actions
D7.3 (24)	Launch of T.T.#1 activities on Smart renewables and near zero energy district (Gothenburg)	Input – Important information regarding demonstrations for mentoring actions
D7.4 (24)	Launch of T.T.#2 activities on Smart energy management and storage for flexibility (Gothenburg)	Input – Important information regarding demonstrations for mentoring actions
D7.5 (24)	Launch of T.T.#3 activities on Smart emobility (Gothenburg)	Input – Important information regarding demonstrations for mentoring actions
D7.6 (24)	Launch of T.T.#4 activities on City Innovation Platform and information services (Gothenburg)	Input – Important information regarding demonstrations for mentoring actions
D7.7 (24)	Launch of T.T.#5 activities on Citizen engagement and motivating feedback (Gothenburg)	Input – Important information regarding demonstrations for mentoring actions
D8.1 (25)	A Roadmap for replication of activities	Input – Mentoring actions are an important part in the replication process and in the replication roadmap
D8.3 (25)	Replication tool box	Input – Mentoring actions are tools identified and presented in the toolbox
D8.5 (60)	Vaasa Northeastern Europe implementation guideline	Output – Mentoring actions in the IRIS project services as best practices for the wider regional implementation guidelines
D8.7 (60)	Alexandroupolis Southeastern Europe implementation guideline	Output – Mentoring actions in the IRIS project services as best



		practices for the wider regional implementation guidelines
D8.9 (60)	Santa Cruz de Tenerife Southwestern Europe implementation guideline	Output – Mentoring actions in the IRIS project services as best practices for the wider regional implementation guidelines
D8.11 (60)	Focsani South-Central Europe implementation guideline	Output – Mentoring actions in the IRIS project services as best practices for the wider regional implementation guidelines
D8.13 (60)	Establish & operate IRIS European smart cities network with Seven European level regional arrangements	Output – Mentoring actions are key for all smart city networks on a European level and will feed into the activating of new cities
D8.14 (60)	Capacity building activities based on the IRIS smart cities toolbox	Output – The mentoring activities are closely connected to the capacity building activities in the IRIS project
D8.15 (48)	First update of the mentoring roadmap	Output – Update will build upon first version output
D8.16 (60)	Second update of the mentoring roadmap	Output – Update will build upon first version and first update output

## 1.4. Structure of the deliverable

This deliverable focuses on explaining the mentoring actions that will take place during the IRIS project. It will include actions carried out before the writing of the report, actions taking place while writing and mentoring actions that will be carried out for the remainder of the project. The deliverable has two main sections:

Chapter 2 presents the methodological approach of the IRIS mentoring process.

Chapter 3 presents the planning of the IRIS mentoring activities. The current state of the mentoring actions is presented and explained, together with responsible partners, their roles, and also a time-schedule for when the mentoring actions will take place during the project. That chapter will be updated in the next version of the deliverable, i.e. D8.16.



## 2. Methodological approach of the IRIS mentoring process

The mentoring roadmap is created through input gathered from previous work and experiences in WP 8, from presentations by FCs, workshops, deliverables and webinars in the IRIS project, and through research done regarding replication activities in the 17 SCC01 Lighthouse projects.

During the process of creating the mentoring roadmap, the IRIS project has also worked together with the EU Smart Cities Information System (SCIS), and the Marketplace of the European Innovation Partnership on Smart Cities and Communities (EIP-SCC, notably Action Cluster Integrated Planning), now together the Smart City Market Place, as well as with the SCC01 Collaboration Framework's Task Group on Replication.

### 2.1. Types of mentoring actions in IRIS

As mentioned in D8.2 The main actions used within the mentoring process are the following:

- Mentoring visits
  - Follower cities' representatives to Lighthouse cities
  - Lighthouse cities' representatives to Follower cities
- Staff Exchange
- Peer2Peer meetings
- Webinars
- Workshops

These actions, implemented and planned, are presented in chapter 3.2 (implemented actions M37-M48) and chapter 3.3. actions planned for M49-M66).

All IRIS webinars organized during M1-M48 can be watched on the IRIS youtube channel:

[https://www.youtube.com/channel/UCVZPWV3\\_lx4xF1aXItY9E8w/videos](https://www.youtube.com/channel/UCVZPWV3_lx4xF1aXItY9E8w/videos)

All replication workshops within the IRIS project have been in connection with the consortium meetings of the project.

The main actions within the mentoring process focus on, but are not limited to, seven thematic areas:

1. Provide Follower cities with ideas for new projects/solutions.
2. Transfer specific technical information regarding implemented solutions and help Follower cities site managers to adapt projects to local conditions. This is very important especially when the replication project includes new technologies, concepts, equipment, devices, etc.
3. Offer information and contacts of potential services and equipment suppliers especially for new technologies.
4. Offer information on business models, possible partnership between Municipality and other public or private companies for a faster, better, and more efficient project implementation.



5. Offer information about financing opportunities at EU level and provide a general support in analyzing different financing schemes.
6. Provide information and support for overcoming different barriers, e.g. technical, legal, financial, etc.
7. Provide solutions for after project implementation monitoring and any possible improvements that can be implemented to a specific project.

The mentoring actions in the roadmap follow a process flow that has different actions in different stages of the IRIS project. Some mentoring actions are dependent of parts in the replication process that the FCs need to achieve a certain stage before being able to enter into the mentoring actions.

Table 2 presents the time-plan of main mentoring actions in the IRIS project, i.e. LH cities demonstration communication actions, webinars, workshops, peer 2 peer meetings, mentoring visits (both LH cities to FC and FC to LH cities) and staff exchange. D8.1 (section 3.5) and D8.3 (section 3.5) provide detailed information about each type of action and the tools that can be used to support it. Note that due to COVID-19 pandemic, the mentoring visits to the FCs will be organised during the 5<sup>th</sup>, and 6<sup>th</sup> (the IRIS project is extended with 6 months) year of the project and their planning will be presented in D8.15 and D8.16.

Table 2 IRIS main types of mentoring actions

Mentoring actions / IRIS project year	1	2	3	4	5	6
Mentoring visits						
Staff Exchange						
Peer 2 Peer meetings						
Webinars						
Workshops						
Demonstration information actions						

The actors involved in the mentoring process have come from different entities, including:

1. Municipalities – usually there are people within the Municipality that oversee project implementation and they can gather great experience that can be shared.
2. Companies that participate in projects development/implementation. There are people that can share their experience and expertise in different areas, such technical design, business models, financing issues.

The mentoring process is based, first, on the Follower cities’ needs and, secondly, on the experience and expertise that can be provided by Lighthouse cities, gained by them through implementation of different projects/solutions within IRIS. The Follower cities’ needs come from the development of different projects/solutions that are part of one of the IRIS project Transition Tracks:

1. Transition Track #1: Renewable and energy positive districts
2. Transition Track #2: Flexible energy management and storage
3. Transition Track #3: Intelligent mobility solutions

4. Transition Track #4: Digital transformation and services

5. Transition Track #5: Citizen engagement and Co-creation

One important focus of the mentoring process has been and will be the replication / innovation eco-system that the FCs are working on creating in their cities. Many of the mentoring actions are completely dependent on a functioning eco-system with identified key organizations, companies and persons. If the eco-system is not functioning well in the FCs, the mentoring actions will not be able to reach the result and impact compared to the potential they have.

D8.1 (section 3.1.4) presents the process of defining the stakeholders in the IRIS Fellow Cities. Moreover, it presents (section 3.3) the methodology for the creation of working groups for chosen Transition Tracks and Integrated Solutions. Following the roadmap, the Fellow Cities did the first step in the definition of the local ecosystems for the IRIS solutions in their replication plans (D8.4, D8.6, D8.8 and D8.10). These deliverables include an initial mapping of the local stakeholders per TT. A more extended mapping of the local ecosystem will be part of D8.15.

Figure 2 presents the mentoring actions from the more passive ones to more active ones (from left to right). The more passive ones require less effort, preparation, time and resources, and, thus, can be more numerous, while the more active actions require more resources and involvement from both LHC and FC.



*Figure 2 Sequence of the IRIS mentoring activities*

As mentioned in D8.2, the Lighthouse cities’ representatives have the main mentoring role within the IRIS project. Municipality representatives and site managers can share their experience regarding project management, different financing issues, consultancy/equipment suppliers, overcoming barriers and obstacles for project implementation, after project implementation issues. Representatives of companies that participate in project development and implementation can share information and experience regarding different technical details, business models, data management, etc. Annex 2 – IRIS solutions’ leading partners provides an overview of the leading partners for all IRIS solutions in the three LHCs.

With the help of the updated mentoring roadmap, the IRIS project will be able to plan the mentoring actions for the coming two years and focus resources and work towards the mentoring actions that give the best results.

## 3. IRIS Mentoring activities implemented (M37-M48) and planned (M49-M66)

### 3.1. Implemented: Site Management and Replication Board – SMRB

In early 2021 the Site Management and Replication Board (SMRB) started its activities. It was a good time to start because:

- FCs have finalized their Replication Plans and know what Replication Projects they want to implement.
- LH cities have almost finished implementation all demonstrators, start monitoring and develop exploitable results.
- WP8 finished Replication (D8.3) and Mentoring Roadmap (D8.2) to support replication process.
- Knowledge exchange needs coordination and organization.

According to the original project plan the Site Management and Replication Board (SMRB) is responsible for monitoring the developments in the Lighthouse Cities, the Replication in the Follower Cities and the overall Replication of the Project. The SMRB is the main advisor to the Project Steering Committee. The Site Management and Replication Board (SMRB) will have as its members:

- IRIS Replication Manager, lead of SRMB, and responsible for the smooth rollout of the replication roadmap.
- IRIS Business Modelling Manager, responsible for the coordination of development of innovative business models.
- IRIS Monitoring and Evaluation Manager.
- IRIS Citizen Engagement Manager, responsible for coordination of citizen engagement and co-creation methods.
- IRIS Advisor on EU Data Protection Law, responsible for providing advice on legal, regulatory and privacy aspects.
- IRIS Lighthouse and Fellow City site managers responsible for the coordination of all city activities in WP5/6/7/8

Indeed, the Site Management and Replication Board is the most suitable board in the project to support the coordination and organization of the replication process.

The Site Management and Replication Board is a platform for delivery of replication exchange activities. Its objectives are:

- To develop and keep up to date the IRIS Mentoring Roadmap (D8.2 and updated D8.15, D8.16).
- To monitor, organize and implement the exchange activities included in the Mentoring Roadmap.





- To monitor and report on the exploitable results from the (LH)-cities.
- To report to PC and Project Steering Committee on the progress and flag and discuss issues.

The composition of the SMRB is detailed in Table 3.

Table 3 Composition of the SMRB

Role	Partner	Main Responsible	Deputy
Replication Manager (chair)	VAASA	Mauritz Knuts	<i>Maria Backman</i>
Exploitation Manager	IMCG	Ulrika Wahlström	<i>Jonas Normann</i>
Monitoring and Evaluation Manager	RISE	Jutta Schade	<i>Lina Eriksson</i>
Citizen Engagement & Co-Creation Manager	HKU	Willem-Jan Renger	<i>David Crombie</i>
Technical & Innovation / Quality Manager	CERTH	Panagiotis Tsarchopoulos	<i>Thanasis Tryferidis</i>
EU-wide collaboration manager	UTR	Muriël Pels	<i>Roel Massink</i>
Communication manager	ESCI	Alec Walker-Love	
Site Manager Utrecht	UU	Arno Peekel	<i>Matthijs Kok</i>
Site Manager Nice	NCA	Celine Gindre	<i>Estelle Michel</i>
Site Manager Gothenburg	JSP	Eva Pavic	<i>Björn Westling</i>
Site Manager Vaasa	VAASA	Mika Hakosalo	<i>TBD</i>
Site Manager Alexandroupolis	ALEX	Kostas Lymperopoulos	<i>Konstantinos Kadoglou</i>
Site Manager Santa Cruz de Tenerife	CSS SCT	Diego Broock Hajar / or Javier Rodríguez	<i>Besay García Rguez Manuel Pérez Coca</i>
Site Manager Focsani	FOCS UPB	Dan Mihal Cazaciuc / or Eduard Mincuic	<i>Adrian Imireanu</i>

A smaller preparation group was formed to plan and develop the meetings of the SMRB and the way of working. The smaller preparation group consists of the following people:

Role	Partner	Name
Replication Manager (chair)	VAASA	Mauritz Knuts
Project Coordinator	UTR	Roel Massink
Citizen Engagement & Co-Creation Manager	HKU	Willem-Jan Renger
Exploitation Manager	IMCG	Ulrika Wahlström

The SMRB deploys the following activities:

- LH and FC site managers plan mentoring actions together with support of horizontal managers.



- Site managers reports on progress with demonstrations and replications (e.g. Replication project tracker).
- Site managers reports on progress with planned mentoring actions.
- Success stories regarding mentoring activities are shared to motivate work with coming actions.
- Work to successfully plan and carry out mentoring actions in the project; webinars, P2P meetings, study visits and mentoring visits.

The SMRB defined the following **targets**:

- Webinars: 5 webinars in 2021 & 5 webinars in 2022.
- Peer-2-Peer: each LHC & FC organises at least 3 P2P activity-lines/themes per year
- Mentoring Visits: one to each FC in 2021 & one to each FC in 2022. Can start online.
- Study Visits: one to each LHC in 2021 & one to each LHC in 2022. Can start online.
- Exploitation targets; 5 exploitable results per LHC

The SMRB measures **success in terms of**:

- Level of completion of SMRB action plan.
- Number of local stakeholders connected.
- Stated satisfaction with replication process by site managers.
- Replication projects successfully commissioned.
- Number of exploitable results.

In the reporting period (M37-M48), the SMRB met five times:

09.02.2021: SMRB Kick-Off Meeting

31.03.2021: SMRB Regular meeting

28.04.2021: SMRB Regular meeting

26.05.2021: SMRB Regular meeting

30.06.2021: SMRB Regular meeting

During the planning and development of the SMRB, and its way of working, a dashboard was created using the on-line co-creation platform Miro. The main reason for introducing the dashboard was that the SMRB has a large number of members, all of them with main responsibilities in the project and in possession of great knowledge and expertise. A regular meeting method would have limited each members input to only a few minutes, but using an on-line co-creation tool like Miro would open up the possibility to receive feedback and activity from all the members of the SMRB throughout the meeting. The Miro SMRB dashboard has served its purpose very well as it is continually being extended from meeting to meeting (Figure 3).

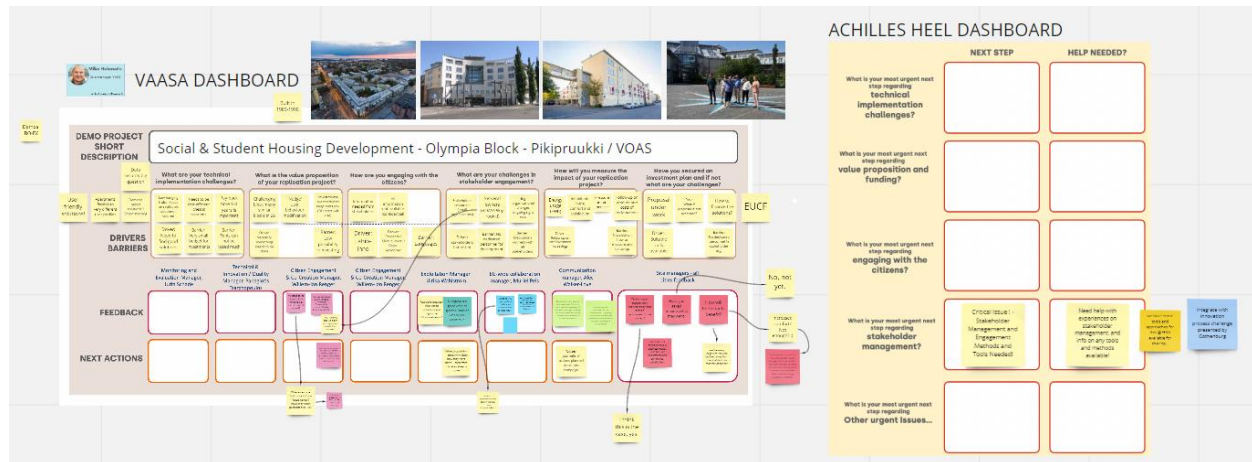


Figure 3 An indicative screenshot from Miro co-creation dashboard

During the meetings, the group focuses on issues brought by the site managers and try to solve them together, planning mentoring actions with key persons involved.

### 3.2. Mentoring actions implemented M37-M48

As described in D8.2, paragraph 3.2 Mentoring needs, the FC have identified knowledge gaps related to the replication of the IRIS solutions, in their replication plans. In the same document, they also present local actions for capacity building and knowledge transfer.

One of these identified knowledge gaps is related to financing, and the project partner IMCG (active in WP 3) has activated a mentoring process with the FCs to attend this knowledge gap. IMCG is conducting P2P meetings with all FCs in order to address the challenge with financing the replication projects being planned and implemented.

There should be mentioned that, especially due to pandemic, the Integrated Solutions from Transition Track 5 have not been addressed as initially planned neither in Lighthouse nor in Follower cities. Therefore, there is a special need in mentoring actions for the Transition Track 5, and hopefully after the pandemic these actions can be performed and Follower cities can replicate Citizen Engagement and Co-creation related projects.

HKU, the IRIS leading partner in citizen engagement and co-creation activities, proposed a mentoring process to support FC to organise the local citizen engagement actions. Each FC signed in on one time slot of 1.5 hour for a one-on-one expert/mentor meeting with HKU. Each FC prepared a brief question/challenge in advance. Based on the meeting follow-up agreements were made.

The mentoring process started at the same time when the IRIS project started, since all partners started to share different information, experience, and expertise. At the face-to-face IRIS consortium meetings organized in Utrecht, Gothenburg, Nice and Vaasa there have been organized knowledge exchange actions on different subjects meant to develop and enhance the mentoring process within IRIS project. Due to the pandemic the face-to-face consortium meetings have been replaced by on-line activities such as webinars, peer-to-peer meetings, and workshops with different topics, which proved to be very effective even though they have been held on-line. The mentoring process within IRIS project is a



continuous one, and hopefully, after the pandemic shall pass, there can be organized live visits so this process can have a great impact on projects/solutions replication action.

The table below shows the implemented mentoring actions for each IRIS project year.

Table 4 Timeline of IRIS mentoring actions

ACTION / YEAR	1	2	3	4
Visits FC to LHC				1 per FC
Visits LHC to FC				1 per FC
Staff Exchange				
Peer 2 Peer			4	3
Webinars		2	6	4
Workshops	2	4	4	4

The following mentoring actions were implemented in the reporting period M37-M48:

### 3.2.1 Project wide knowledge exchange activities

Table 5 Project-wide knowledge exchange activities for the 4th year of the project (M37-M48)

Topic of exchange (e.g. solution, process, method, tool)	Type of exchange	WPs involved	Organiser	Contributor(s)
Retrofitting and tenant engagement	Peer-2-peer	WP5, WP8	USI	Bo-Ex, Vaasa, USI, Tenerife, Alexandroupolis
Battery Energy Storage Systems	Webinar	WP5, WP6, WP7, WP11	CERTH	LomboXnet, EDF, Goteborg Energi
Business modelling – fit to local conditions	Webinar	WP3	UU, IMCG CERTH	For solution providers (with city representatives attending)

All webinars organized M1-M48 can be found in Annex I , and can be watched watched on the IRIS youtube channel: [https://www.youtube.com/channel/UCVZPWV3\\_lx4xF1aXItY9E8w/videos](https://www.youtube.com/channel/UCVZPWV3_lx4xF1aXItY9E8w/videos)

### 3.2.2 Mentoring activities

Peer 2 Peer meetings are central when it comes to mentoring activities in the project. The Peer 2 Peer meetings identify key persons in the city ecosystems that are needed for successful replication. The meetings are also important when planning other mentoring activities such as webinars, workshops, study- and mentoring visits. Successful Peer 2 Peer meetings are a pre-requisite for the study and mentoring visits. Table 6, Table 7, Table 8 and Table 9 present the organised Peer 2 Peer meetings for each FC.



## VAASA

Table 6: Organised Peer 2 Peer meetings with FC Vaasa

City, Demonstration Project and/or Organization	Replication Project	Topics for Mentoring Support	Suggested time
Utrecht	Smart Energy Management System in Vaasa	Transition Track #2: general discussion on Measure 4: Smart energy management system would be of interest, interesting solution for Vaasa.	Q2 / 04 / 2020
Nice	Positive Energy Building in Vaasa	TT#1 Palazzo Meridia optimization	Q2 / 04 / 2020
Gothenburg	Positive Energy Building in Vaasa Ravilaakso mobility solutions	TT#1 Viva Sustainability Tool TT#3 EC2B	Q2 / 04 / 2020
Utrecht, Bo-Ex, retrofit projects (including citizen engagement)	Pikipruukki social housing / VOAS student housing	Retrofit solutions, implementation and investment calculation	Q4 / 10 / 2020
Utrecht, DSO Stedin, LomboXnet	Smart Grid, Ravilaakso / Vaasa as whole	Grid flexibility, congestion management, peak load reduction	Q1 / 01 / 2021
Gothenburg, Trivector, EC2B	Ravilaakso, Hanna & Yrjö säätiö	EC2B suitability for Ravilaakso area and H&J säätiö project	Q2 / 04 / 2020
Utrecht City Innovation Platform	Vaasa City Innovation Platform	How to plan and create a CIP	Q3 / 08 / 2020
Utrecht	Smart Grid, Ravilaakso / Vaasa as whole	Grid flexibility, congestion management and peak load reduction	Q1 / 02 / 2021
Gothenburg	Vaasa digital platform	Citizen engagement using a digital platform	Q1 / 02 / 2021
Gothenburg, Min Stad	Vaasa City participatory city modelling	Citizen Engagement on digital platform	Q2 / 2021
HKU	Lähiö Inno - VOAS	Citizen Engagement	Q1 / 02 / 2021
Utrecht, HKU	Lähiö Inno – VOAS	Citizen engagement – follow up	Q2 / 05 / 2021
Gothenburg, Metry	Vaasa Campus Area Development	Energy Cloud Solutions	Q2 / 06 / 2021
Gothenburg, IMCG	Replication projects – City Data Platform,	Financing possibilities for replication projects	Q3 / 08 / 2021



	District Heating, Mobility		
Gothenburg, IMCG	Replication projects – City Data Platform, District Heating, Mobility	Financing possibilities for replication projects - Follow up meeting	Q3 / 09 / 2021

**ALEXANDROUPOLIS**

Table 7: Organised Peer 2 Peer meetings with FC Alexandroupolis

City, Demonstration Project and/or Organization	Replication Project	Topics for Mentoring Support	Suggested time
Utrecht	Apartment buildings Street lighting (Retrofitting towards NZE district) (Smart street lighting with multi-sensoring)	Topic 1 – TT1, measure #6 – Smart AC/DC power grid in apartments Topic 2 – TT1, measure #7 – Smart DC street lighting at district level	Q2 / 04 / 2020
Nice	Energy Positive Buildings Smart Multi-Sourced Low Temp District Heating (TT1, M2-Positive energy city hall) (TT2, M1-Low enthalpy geothermal district heating)	Topic 1 – TT1, measure #1 – Collective self-consumption at building scale Topic 2 – TT2, measure #2 – Smart multi-sourced low temp district heating with innovative storage solutions	Q2 / 04 / 2020
Gothenburg	Energy Management System Energy Cloud (TT2, M1-Low enthalpy geothermal district heating) (TT4, M2-Energy cloud)	Topic 1 – TT1, measure #10 advanced energy management system to integrate PV, DH, grid and storage options Topic 2 – TT4, measure #2 energy cloud	Q2 / 04 / 2020
Nice, Palazzo Meridia	Retrofit objects (TT1, M2-Positive energy city hall)	Retrofit solutions: Techno-economic efficiency, implementation plan technology analysis, legal issues	Q1 / 02 / 2021
Utrecht, Bo-Ex	Retrofit objects (TT1, M4-Retrofitting towards NZE district)	Retrofit solutions: investment calculation, implementation, citizen engagement	Q1 / 02 / 2021



	(TT1, M1 -Retrofitting towards positive energy buildings)	project governance	
HKU	Retrofitting towards NZE district	Citizen engagement activities for a specific replication project	Q1 / 02 / 2021

**SANTA CRUZ DE TENERIFE**

Table 8: Organised Peer 2 Peer meetings with FC Santa Cruz de Tenerife

City, Demonstration Project and/or Organization	Replication Project	Topics for Mentoring Support	Suggested time
Utrecht	Retrofitting City Innovation Platform	TT#1.1 Measure #4. Could we know more about the cost-benefit analysis refurbishment of the building? TT#4. Santa Cruz de Tenerife is still studying possible City Innovation Platform.	Q2 / 04 / 2020
Nice	Retrofitting City Innovation Platform	TT#1.1 Measure #4. Could we know more about the cost-benefit analysis refurbishment of the building? TT#4. Santa Cruz de Tenerife is still studying possible City Innovation Platform.	Q2 / 04 / 2020
Gothenburg	Battery Storage Systems Energy Management Systems Planning of E-Buses	TT#1.1.: #1. Could we know more about the cost-benefit analysis for the 140 kW PV/ 2nd life Battery storage system (200 kWh)? What type of agreements could make possible to receive the 2nd life batteries. TT#1: #6. Could we know more about the advance management system to integrate PV,	Q2 / 04 / 2020



		Storage, Electric vehicles. TT#3: Local Bus Company, in Tenerife, claims that air conditioning might dramatically reduce electrical charge of the e-buses.	
Gothenburg	Energy Systems	Energy system BRF Viva	Q1 / 02 / 2021
Nice	City sensors	Integration of renewable energy sources in residential buildings	Q1 / 02 / 2021
Utrecht, Bo-Ex, retrofit projects (including citizen engagement)	Social housing retrofitting Barrio de La Alergía y María Jiménez	Retrofit solutions, implementation and investment analysis	Q2 / 05 / 2021
Gothenburg, Viva Measure 200 kWh electricity storage in 2nd life batteries powered by 140 kW PV.	Smart Gerencia 2nd life batteries	Agreement for supply 2nd life, BEMS, integration of batteries, bateries performance and investment analysis	Q2 / 06 / 2021
Nice, Activities on NCA, Smart Charging infrastructure Gothenburg, Viva Measure 200 kWh electricity storage in 2nd life batteries powered by 140 kW PV.	Santa Cruz EV charging system	General management of the infrastructure. Managemnt of RES, 2nd life batteries and EV: (how manage this flexible electricity?)	Q3 / 09 / 2021 Q2 / 06 / 2021
Gothenburg, Brf Viva	Personal Mobility Strategy	General philosophy of the project and integration of different solutions. Citizens engagement	Q2 / 04 / 2021
Nice, Sensor data collection in air quality. Measure 1	Santa Cruz sensor data collection in air quality	Citizen engagement activities vs environmental scenario	Q3 / 10 / 2021
Gothenburg, City Information Model Pilot.	CIM y public data	Johannesber pilot area. Implementation sensor data into BIM/CIM for public visualization	Q2 / 06 / 2021
Nice, Data control and monitoring for Smart e-mobility	Smart EV charging	Smart Charging platform	Q3 / 11 / 2021





Gothenburg, Co-creation activities in Local Innovation Hubs	VR BIM Smart Gerencia	Citizen engagement activities	Q3 / 09 / 2021
Nice, Sensor data collection in air quality. Measure 1	Santa Cruz sensor data collection in air quality	Citizen engagement activities vs environmental scenario	Q3 / 12 / 2021
Gothenburg	2 <sup>nd</sup> life batteries	2 <sup>nd</sup> life batteries	Q3 / 2021
Utrecht, HKU	Citizen engagement	Citizen engagement	Q3 / 2021
Gothenburg, IMCG	Financing roadmap	Financing roadmap	Q3 / 2021
Utrecht, Utrecht cycling network deputy	Personal mobility network	Utrecht cycling network	Q3 / 2021

## FOCSANI

Table 9: Organised Peer 2 Peer meetings with FC Focsani

City, Demonstration Project and/or Organization	Replication Project	Topics for Mentoring Support	Suggested time
Utrecht	City Management and Planning Citizen Engagement Energy Efficient Behavior	IS 4.2 Services for city management and planning. IS 5.1 Co-creation the energy transition in your every environment. IS 5.4 Apps and interfaces for energy efficient behavior.	Q2 / 04 / 2020
Nice	Citizen Engagement Energy Efficient Behavior	IS 5.1 Co-creation the energy transition in your every environment. IS 5.4 Apps and interfaces for energy efficient behavior.	Q2 / 04 / 2020
Gothenburg	City Management and Planning Citizen Engagement Energy Efficient Behavior	IS 4.2 Services for city management and planning. IS 5.1 Co-creation the energy transition in your every environment. IS 5.4 Apps and interfaces for energy efficient behavior.	Q2 / 04 / 2020
Utrecht	EV charging	V2G EV charging	Q1 / 02 / 2021



Gothenburg	Residential buildings	Integration of renewable energy sources in residential buildings	Q1 / 02 / 2021
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### 3.3. Plan for mentoring actions M49-M66

The mentoring actions within IRIS projects started in the first year of the project. There have been organized, at the face-to-face and on-line consortium meetings and with other opportunities, webinars, workshops and peer2peer meetings. Due to the pandemic, site visits and staff exchange have not been organized yet. However, they are still in plan for the 4<sup>th</sup>, 5<sup>th</sup>, or 6<sup>th</sup> year of the project.

The table below shows the planned mentoring actions for the 5<sup>th</sup> and 6<sup>th</sup> IRIS project year.

*Table 10 Timeline of IRIS mentoring actions*

ACTION / YEAR	5	6
Webinars	4	if needed
Workshops	4	if needed
Peer 2 Peer	3	if needed
Visits FC to LHC	1 per FC	if needed
Visits LHC to FC	3 per FC	if needed
Staff Exchange	1 per FC	if needed

The proposed mentoring actions proposed for the last years of the project are very much dependent on the evolution of the pandemic situation in Europe, especially when talking about staff exchange and experts' visits. So, this planning shall be adjusted in accordance with the overall situation in EU.

Based on continuous identification of knowledge gaps, needs and interests of the FCs, a plan for the remainder of the IRIS project regarding mentoring actions was created. In below table 10 and 11 are overviews of planned Project-wide knowledge exchange activities and Mentoring activities (notably Peer-2-Peer meetings)

*Table 11 Project-wide knowledge exchange activities for the 5th year of the project (M49-M60)*

Topic of exchange (e.g. solution, process, method, tool)	Type of exchange	WPs involved	Organiser	Contributor(s)	Date (indicative)
<ul style="list-style-type: none"> <li>• Startup in Residence</li> <li>• Mobility Challenge</li> <li>• FIWARE Hackathon</li> <li>• Smart Lighting Challenge</li> <li>• Energy Poverty Challenge</li> <li>• Citizen Innovation Challenge</li> <li>• ChangeU Student Hackathon</li> </ul>	Cookbooks	WP3	UU		November 2021



Topic of exchange (e.g. solution, process, method, tool)	Type of exchange	WPs involved	Organiser	Contributor(s)	Date (indicative)
<ul style="list-style-type: none"> <li>Smart City Challenge</li> </ul>					
Smart City User Innovation and Business Incubation	Webinar	WP3	CERTH	UU, UNS, IMCG	November 2021
City Innovation Platform	Webinar	WP4, WP8	CERTH	Gothenburg	December 2021
Smart City User Innovation and Business Incubation	Webinar	WP3	CERTH	UU, UNS, IMCG	November 2021
PCM (Phase Change Material) storage	Factsheet	WP7	Akademiska Hus		December 2021
IP – when do you need IP protection?	Webinar	WP3	VUB	For solution providers that have worked on their Key Exploitable Results	1 <sup>st</sup> Quarter 2022
Monitoring and Evaluation	Webinar	WP9	RISE	RISE, CERTH, LH cities	1 <sup>st</sup> Quarter 2022
Financial instruments	Webinar	WP3, WP8	IMCG, VASEK		TBD
Battery Energy Storage Systems	Webinar	WP5, WP6, WP7, WP11	CERTH	LomboXnet, EDF, Goteborg Energi	2 <sup>nd</sup> Quarter 2022
Smart grid/grid flexibility	Webinar or peer-2-peer	WP5, WP8	TBD	LomboXnet, Stedin, Vaasa stakeholders, Tenerife	TBD
2nd Life Batteries	Webinar or peer-2-peer	WP5, 6, 7, 8		UTR, NCA, GOT Tenerife	TBD
Intellectual Property	Peer-to-peer (on demand)	WP3	VUB	For solution providers that have worked on their Key Exploitable Results	TBD
E-buses	Peer-2-peer	WP5, WP8	USI	QBUZZ, Tenerife, Alexandroupolis	TBD
City innovation management	Peer-to-peer	WP3/WP8	TPD	UTR, NCA, GOT	TBD
Financial instruments	Webinar	WP3, WP8	IMCG, VASEK	LH cities, FCs	TBD
Key Exploitable Results	Peer-to-peer	WP3	IMCG	Exploitation teams – the solution providers	TBD



The planned mentoring activities will most likely result in additional mentoring activities, and therefore this plan will be updated as more mentoring activities are agreed upon. Updates will be presented in D8.16 Second update of the mentoring roadmap [M60]

## VAASA

Table 12: Planned, Peer 2 Peer meetings with FC Vaasa

City, Demonstration Project and/or Organization	Replication Project	Topics for Mentoring Support	Suggested time
Gothenburg, IMCG	Replication projects – City Data Platform, District Heating, Mobility	Financing possibilities for replication projects - Follow up meeting	Q4 / 2021

## ALEXANDROUPOLIS

Table 13: Planned Peer 2 Peer meetings with FC Alexandroupolis

City, Demonstration Project and/or Organization	Replication Project	Topics for Mentoring Support	Suggested time
<b>Planned Peer 2 Peer meetings</b>			
Nice, Palazzo Meridia	Positive energy city hall	Retrofit solutions, techno-economic efficiency, implementation plan	(undecided)
Utrecht, Bo-Ex, retrofit projects (including citizen engagement)	"EOT" social houses	Retrofit solutions, implementation and investment calculation	(undecided)
Nice, #2 smart DHN, MNCA	Geothermal DHN of Anthei-Aristino	Storage solutions for optimisation, enhanced energy management system	Q1 / 2022
Utrecht, Fighting Energy Poverty, Municipality of Utrecht	Fighting energy poverty	Implementation process (innovation challenge), citizen engagement activities	Q4 / 2021
HKU	Applies to all replication projects that "need" citizen engagement	Citizen Engagement	Q1 / 2022

## SANTA CRUZ DE TENERIFE



Table 14: Planned Peer 2 Peer meetings with FC Santa Cruz de Tenerife

City, Demonstration Project and/or Organization	Replication Project	Topics for Mentoring Support	Suggested time
<b>Planned Peer 2 Peer meetings</b>			
Gothenburg, Brf Viva, technical project	Personal Mobility Strategy	Follow up meeting	Q4 / 2021
Utrecht, Utrecht cycling network deputy	Personal mobility network	Follow up meeting	Q4 / 2021
Utrecht, EV Charging	EV charging points	Communication systems for EV charging points	Q4 / 2021

## FOCSANI

Table 15: Planned Peer 2 Peer meetings with FC Focsani

City, Demonstration Project and/or Organization	Replication Project	Topics for Mentoring Support	Suggested time
Utrecht & Gothenburg	Retrofitting of residential and public buildings	Integration of renewable energy sources	TBC
Nice & Gothenburg	Smart district heating	Integration of renewable energy sources	TBC
Utrecht	V2G EV charging	Low temperature district heating, integration of renewable energy sources	TBC
Utrecht & Gothenburg	Bike sharing	V2G EV charging	TBC
Utrecht City Innovation Platform	Vaasa City Innovation Platform	Bike sharing	TBC
Nice & Gothenburg	District heating system automation, monitoring & control	How to plan and create a CIP	TBC
Gothenburg & Nice	Traffic lights management, Street lighting	Traffic lights management, Smart street lighting	TBC
Nice & Utrecht, HKU	Citizen engagement	Citizen engagement	TBC
Nice & Gothenburg	Apps for energy efficient behavior	Apps for energy efficient behavior	TBC
Utrecht	V2G EV Charging	V2G EV charging	Q4 / 2021
Utrecht & Gothenburg	Bike sharing	Bike sharing	Q4 / 2021



## 4. Output to other work packages

The mentoring roadmap will have relevant output to the tasks and deliverables for the following work packages:

### WP2: EU wide cooperation with ongoing projects, initiatives and communities

Will provide information of the IRIS mentoring process, which will be relevant, and interesting information for other SCC01 LH projects.

### WP3: Development of Bankable Business Models and Exploitation Activities

Will provide information about mentoring actions regarding business and financial mentoring from horizontal partners, and LHs, to FCs on how to finance their replication projects and how to create feasible business models for them.

### WP5: Utrecht Lighthouse City demonstration activities

Will provide information regarding expected mentoring actions from Utrecht to FCs.

### WP6: Nice Lighthouse City demonstration activities

Will provide information regarding expected mentoring actions from Nice to FCs.

### WP7: Gothenburg Lighthouse City demonstration activities

Will provide information regarding expected mentoring actions from Gothenburg to FCs.

### WP9: Monitoring and evaluation

Will provide information regarding expectations on monitoring and evaluation of demonstration results for mentoring actions. Key persons in local replication eco-systems will need monitoring and evaluation information for successful mentoring results.

### WP10: Communication and Dissemination

The mentoring actions have a strong connection to both internal and external communication of the project. Most mentoring actions will have an active communicative need and the mentoring roadmap will help the communication work package to follow the mentoring actions as they happen.

## 5. Conclusions

The objective of this deliverable is to provide an update on mentoring actions for knowledge exchange and capacity building for the FCs in their replication projects in the reporting period (M37-M48) and present an update of planned mentoring actions in the next period (M49-M66).

The mentoring actions have been implemented as planned and have contributed to the FC Replication Plans that were delivered in M36. In support of the mentoring actions and the implementation of the Replication Plans, the IRIS Site Management and Replication Board has become active in this reporting period. Together with the insights gained in SCC01 Task Group Replication from other Lighthouse projects' replication approaches the activities planned for the next reporting period will be focused on tackling specific barriers in replication as a process of adaptation/customization of local ecosystems and framework conditions.

The main results of the mentoring activities were captured in the FCs Replication Plans, as delivered in M36.

The mentoring actions have led to the FCs better being able to specify their replication actions together with their stakeholders in their local ecosystem. The FCs have been able to improve the plans for their replication projects and preparing them for actively applying for funding to implement them. The mentoring actions have also given the FCs a better understanding of the demonstrations in the LHs and how they were implemented, but also understanding why they were implemented. All the mentoring actions have also strengthened the project as a whole and given a good foundation for study and mentoring visits to, and from, the FCs. The mentoring actions have also provided the FC teams with tools to help them reaching out to local stakeholders, but also to other cities and city networks outside the IRIS project, which is essential in reaching the IRIS project goal of activating 80 cities outside the project in Europe and 20 cities outside Europe.

Also in the deliverable D8.15 are presented the main targets defined by the SMRB, as well as the terms for measuring the success by the SMRB.

It should also be mentioned that during the period M37-M48, the SMRB met five times. During these meetings, the SMRB members documented the outcomes in an on-line dashboard. This dashboard is created in the Miro platform during the planning and development activity of SMRB to support the co-creation. Using an on-line co-creation tool like Miro opens the possibility to receive contributions and activity from all SMRB members during the meeting. The Miro SMRB dashboard also serves the purpose very well, as it is continuously developed from one meeting to the next, which is an advantage.

All 4 Follower cities have already started implementing different projects that they planned to replicate. For some of those projects, the information/help provided/offered by Lighthouse cities has been of beneficial help. However, there is still room for improvement to meliorate the ties between Lighthouse and Follower cities. A crucial role in reaching this goal shall have the staff exchange and mentoring visits that are planned in the next two years of the IRIS project.

This deliverable has one update coming later in the project:

**D8.16 : Second update of the mentoring roadmap [60]**



Related to task 8.1. Second update of the mentoring roadmap for FCs mentored by LHs with a Gantt chart and a Work Breakdown Structure (WBS), as well as a schedule per task, responsible partner related subtasks, related deliverables, and dependencies on other tasks. The report will focus on removing obstacles to investment, providing visibility and technical assistance to investment and replication in additional areas and making smarter use of new and existing financial resources.

In the updates, there will be more experience and results from mentoring actions to evaluate and package as lessons learned for other projects.





# Annex 1 – Webinars organised during M1-M48

Table 16 Webinars organised during M1-M48

Topic	Date	Video Link
Grid Flexibility: An antidote to relieve pain in the changing energy system?	2/10/2018	<a href="#">YouTube Channel</a>
Vehicle 2 Grid (V2G) technology	23/9/2019	<a href="#">YouTube Channel</a>
How numerical software tools support the creation of replication plans in smart cities energy projects	17/12/2019	<a href="#">YouTube Channel</a>
Developing & applying a successful Mobility As A Service (MaaS) business model	24/3/2020	<a href="#">YouTube Channel</a>
A Paradigmatic Shift in Citizen Engagement	22/4/2020	<a href="#">YouTube Channel</a>
City Innovation Platforms: applications in energy efficiency and environmental risk	15/7/2020	<a href="#">YouTube Channel</a>
Battery Energy Storage Systems (BESS)	8/12/2020	<a href="#">YouTube Channel</a>
Smart City Business Models - How to boost sustainable innovation and make it a financial success!	4/2/2021	<a href="#">YouTube Channel</a>



# Annex 2 – IRIS solutions’ leading partners

Table 17 The leading partners of the IRIS activities in LH city UTR

Measure Number	Measure Title	Leading Partner
Transition Track #1: Smart renewable and closed-loop energy positive districts		
Measure 1	District wide PV	BOEX
Measure 2	LT district heating	BOEX
Measure 3	HEMS TOON	BOEX
Measure 4	NZEB refurbishment	BOEX
Measure 5	Smart (hybrid) e-heating systems	BOEX
Measure 6	AC/DC home switchboxes	BOEX
Measure 7	Smart DC Street Lighting	UTR
Transition Track #2: Flexible energy management and storage		
Measure 1	Solar V2G charging points for e-cars/e-vans (demand driven)	LOM
Measure 2	Solar V2G charging point for e-buses	LOM
Measure 3	Stationary storage in apartment buildings	LOM
Measure 4	EMSs- Smart Energy Management System	LOM
Transition Track #3: Intelligent mobility solutions		
Measure 1	V2G e-cars (demand driven)	LOM
Measure 2	V2G e-buses	LOM
Transition Track #4: Digital transformation and services		
Measure 1	Monitoring E-Mobility with LoRa network	UTR
Measure 2	Smart Street Lighting with multi-sensing	UTR
Measure 3	3D Utrecht City Innovation Model	UTR, CIV
Measure 4	Monitoring Grid Flexibility	UTR, LOM
Measure 5	Fighting Energy Poverty	UTR, BOEX
Transition Track #5: Citizen Engagement and Co-creation		
Measure 1	Community building by change agents	BOEX, HKU
Measure 2	Campaign District School Involvement	UTR
Measure 3	Campaign Smart Street Lighting	UTR
Measure 4	Co-creation in Local Innovation Hub	UTR, HKU
Measure 5	XR Experience	BOEX



Table 18 Leading partners of the IRIS activities in LH city NCA

Measure Number	Measure Title	Responsible Partner
Transition Track #1: Smart renewable and closed-loop energy positive districts		
Measure 1	Collective self-consumption at building scale (Palazzo Meridia)	NEXITY
	Collective self-consumption at building scale (UNS-IMREDD)	UNS-IMREDD
Measure 2	Optimization of heating load curve	COF
Measure 3	Commissioning process from the design of the operation	CSTB
Measure 4	Dashboard providing real-time energy balance	EDF
Transition Track #2: Flexible energy management and storage		
Measure 1	LEM - Local Energy Management system	EDF
Measure 2	DHC Smart District Heating and Cooling optimization algorithm - Phase 1: Monitoring on a part of the network	MSE
	DHC Smart District Heating and Cooling optimization algorithm - Phase 2: Full monitoring (with electric and thermal storage)	EDF, MSE
Measure 3	Stationary storage deployment in buildings and local electric flexibility management	UNS-IMREDD, EDF
Transition Track #3: Intelligent mobility solutions		
Measure 1	Dynamic energy management of an EV charging network - Phase 1: baseline EVCI supervision management	EDF
	Dynamic energy management of an EV charging network - Phase 2: V1G and V2G based smart charging services	EDF
Measure 2	Free floating EV car sharing system - Phase 1: smart management of EV charging to optimize shared vehicles use rate	EDF
	Free floating EV car sharing system - Phase 2: Smart charging of V1G and V2G vehicles for EVCI to contribute to grid flexibility services	EDF
Transition Track #4: Digital transformation and services		
Measure 1	Sensors data collection in air quality - Phase 1: With legacy air sensors)	ATMOSUD
	Sensors data collection in air quality - Phase 2: With microsensors	ATMOSUD
Measure 2	BIM/CIM data display	CSTB
Measure 3	Charging infrastructure data for optimal EV-based free-floating car sharing - Phase 1: Connected to phase 1 of measure 3.2	NCA
	Charging infrastructure data for optimal EV-based free-floating car sharing - Phase 2: Connected to phase 2 of measure 3.2	NCA



Measure 4	Data interoperability with energy cloud	UNS-IMREDD
Transition Track #5: Citizen Engagement and Co-creation		
Measure 1	Public awareness campaign on air quality - Phase 1: with IMREDD targeted audience	ATMOSUD
	Public awareness campaign on air quality - Phase 2: with public stage media	ATMOSUD
Measure 2	Public awareness campaign Energy – School & Collège; Youth & Family - Phase 1: with youth and family	COF
	Public awareness campaign Energy – School & Collège; Youth & Family - Phase 2: for the school	COF
Measure 3	Citizens individual engagement – IOT invoices	COF

Table 19 Leading partners of the IRIS activities in LH city GOT

Measure Number	Measure Title	Responsible Partner
Transition Track #1: Smart renewable and closed-loop energy positive districts		
Measure 1	At least 200 kWh electricity storage in 2nd life batteries powered by 140 kW PV	RB
Measure 2	Heating from geo energy with heat pumps (2-300 m deep boreholes)	RB
Measure 3	Cooling from geo energy without chillers	RB
Measure 4	Local energy storages consisting of water buffer tanks, structural storage and long-term storage in boreholes	RB
Measure 5	Seasonal energy trading (cooling in summer season) with adjacent office block	RB
Measure 6	Advanced Energy Management System to achieve peak shaving and minimal environmental impact	RB
Measure 7	Building Integrated Photovoltaics (BIPV) in façade	HSB
Transition Track #2: Flexible energy management and storage		
Measure 1	350 V DC building microgrid utilizing 140 kW rooftop PV installations and 200 kWh battery storage	AH
Measure 2	Low temperature DH 45/30 system for six buildings	RB
Measure 3	1700 kWh PCM (Phase Change Material) cooling storage	AH
Measure 4	Integration and evaluation of a 200kWh energy storage	RB
Transition Track #3: Intelligent mobility solutions		
Measure 1	EC2B, version for accommodation (Riksbyggen's BRF Viva)	TRIV
Measure 2	EC2B, version for workplaces (Johanneberg campus area)	TRIV
Transition Track #4: Digital transformation and services		
Measure 1	CIM - City Information Model	GOT
Measure 2	Energy Cloud	METRY
Transition Track #5: Citizen Engagement and Co-creation		



Measure 1	Organize a spatial planning design contest for children and youths based on a Minecraft® model of Gothenburg	GOT
Measure 2	Further develop the city's online citizensourcing platform "Min Stad"	GOT
Measure 3	Inclusive Life Challenge competition	GOT
Measure 4	Demonstrate a BIM (Building Information Modelling) based AR/VR app	JSP
Measure 5	Demonstrate the Personal Energy Threshold (PET)	HSB