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Deliverable 10.7

Final report on national and international conferences

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Executive Summary

The objective of this report is to provide an overview of IRIS presentation and participation in international and national events, including webinars, as a result of T10.5 which aimed to communicate the IRIS project results and contribute to knowledge transfer to both specialist and non-specialist audiences.

IRIS presentation at and participation in international and national events, including webinars, has proven essential in order to:

- build awareness and trust in IRIS actions and solutions to accelerate the replication of smart city solutions among professional audiences and citizens alike;
- facilitate knowledge exchange and transfer in academia, research and policy spheres;
- inspire a broader public to move towards a long-term sustainable behaviour change and assist the adoption of new technologies and services.

Having said this, the number of events relevant to IRIS-objectives and partners, organized by all kinds of organizations and networks at national, international and global level, turned out to be so huge and diverse that selection quickly became essential to ensure representation/participation at events with largest impact for IRIS objectives, and to avoid overburdening of IRIS partners with travel costs and (re)presentation requests. To this end, T10.5 focused on 20 key deliverables of the 115 deliverables that IRIS delivered, that have the most potential for communication, dissemination and replication of IRIS results. In addition, T10.5 identified 3 groups of IRIS-relevant events:

A: events with very high expected impact of IRIS communication and dissemination (such as *European Sustainable Energy Week, Lighthouse projects joint events).*
B: events with considerable expected impact of IRIS communication and dissemination(such as *Smart City Expo & World Congress, Lighthouse projects final events).*
C: sector-specific and expert 'thought leadership' events (such as*FIWARE summit).*
At all levels, events with the highest expected impact were actively communicated within IRIS. For level A and B representation/participation, support was offered through coordination activities, social media, materials, and award nomination texts. For level A and B, cooperation was sought with **WP2**, 'EU-wide cooperation with ongoing projects, initiatives and communities'. For level B, cooperation was often sought also with **WP8** 'Replication by Lighthouse regions, Follower cities, European market uptake'.

This final report includes the covid-19-struck years 2020-2021, which started with all events being cancelled and nothing happening at all, then evolving in events taking place online, and since 2022 hybrid and even some offline again. Thus, covid-19 has had a profound impact on T10.5. On the one hand by making it more difficult to keep track of which partner participated in which meeting, but eventually increasing opportunities for all partners to participate in many more events than before, as travel time and venue constraints disappeared. The latter contributed to reaching all target groups, not least through the cooperation with WP2 'Cooperation with other Lighthouse projects and related initiatives', and the cooperation with the European Commission's 'Scalable Cities' service contract (as of 2022) in support of the Lighthouse projects' Board of Coordinators and Task Groups. Resulting in IRIS participation in over 100 international, national, and academic events, of which 78 are highlighted here.

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List of Abbreviations and Acronyms

Abbreviation	Definition
BoC	Board of Coordinators (of the 18 SCC01 Lighthouse projects)
C&D	Communication & Dissemination
CIP	City Innovation Platform
EC	European Commission
EIP-SCC	European Innovation Partnership – Smart Cities and Communities (merged with SCIS into Smart City Marketplace end 2020)
EUSEW	European Sustainable Energy Week
EWRC	European Week of Regions and Cities
FC	Fellow / Follower City in the IRIS project
LH	Lighthouse City in the IRIS project
OASC	Open and Agile Smart Cities
SCC01	All 18 Lighthouse projects selected under the Horizon2020 Smart Cities and Communities 01 call
SCIS	Smart Cities Information System (merged with EIP-SCC into Smart City marketplace end 2020)
SCM	Smart City Marketplace (European Commission service contract in support of the SCC01 Board of Coordinators)
WP	Work Package

1 Introduction

1.1 Scope, objectives and expected impact

This Deliverable D10.7 is related to Task 10.5 within Work Package 10 'Communication and dissemination'. Within Work Package 10, Task 10.5 focuses on 'National and international events'. This Task contributes to Objective 10.5 in the Grant Agreement: "Coordinate dissemination and stakeholder engagement activities at local, national and EU level, attending to conferences, workshops, and energy events related to the topic."

Task 10.5 focuses on the **coordination of IRIS-representation at relevant national and international events** <u>other than</u> **those organized by SCC01 selected projects (the running Lighthouse projects, EIP-SCC, SCIS)**. The cooperation between SCC01-projects and IRIS is coordinated by WP 2 'EU wide cooperation with ongoing projects, initiatives and communities'.

T10.5 communication and dissemination activities and national and international events proved critical to:

➢ Build awareness and trust in IRIS actions and solutions to accelerate the replication of smart city solutions among professional audiences and citizens alike.
➢ Facilitate knowledge exchange and transfer in academia, research and policy spheres.
➢ Inspire a broader public to move towards a long-term sustainable behaviour change and assist the adoption of new technologies and services.

The impact of Task 10.5 has been the communication of the project and the dissemination of the project's results, in support of knowledge transfer and replication, through plenary presentations, poster sessions, and participation in workshops at events, both off and online. Through this, a wide variety of audiences has been targeted, including:

❖ **Non-specialist audiences** (communication), e.g. during the annual European Week of Regions and Cities and/or the Green Week in Brussels.
❖ **Specialist audiences** (dissemination), such as participants in the Smart City Expo and World Congress in Barcelona, European Sustainable Energy Week, TM Forum, the World Electric Vehicle Symposium and Exposition (EVS), and Lighthouse projects joint and final events.

This Deliverable D10.7 summarizes the activities and results of IRIS representation and participation in national and international events from M1 to M66 of the IRIS project. As such, it includes the interim report D10.6 that was delivered in M30.

1.2 Contributions of partners

Contributions to this Deliverable have been provided by UTR, CERTH and ESCI directly, and by many other IRIS partners indirectly through reports on events by email, social media and content for the IRIS website. Many more partners have (re)presented IRIS in events.

1.3 Relation to other activities

Deliverable D10.7 is related to the following other IRIS Tasks / Deliverables:

o   Task 10.1 Communication and Dissemination Plan and Secretariat / Deliverable 10.10: First update of Communication and Dissemination Plan. As this is the overarching framework for Task 10.5 activities.
o   Task 10.2 Compelling IRIS content for distribution to high volume digital and mass media / Deliverable 10.4: Interim social media and content distribution monitoring report. As this supported the analysis of the impact of Task 10.5 activities and contributed to focus on most relevant and effective events.
o   Task 2.1 Cooperation with other selected Lighthouse projects and related initiatives / Deliverable 2.1 Lessons learnt though cooperation with other Lighthouse projects. As collaboration with other Lighthouse projects and related initiatives (such as EIP-SCC, SCIS, Smart City Marketplace, Scalable Cities) proved essential for efficiency and impact of communication and dissemination activities (e.g. joint stands and/or joint presentations at events, collaboration between projects for SCIS Solution Booklets, and coordinated contributions to events).
o   Task 8.7 European scale up activities / Deliverable 8.13: Establish and operate IRIS European smart cities network with Seven European level regional arrangements. As cooperation with existing European smart cities networks (notably those established by finished and running Lighthouse projects) is essential for both efficiency and impact of communication and dissemination activities.

The work of Task 10.5 has been closely related to the work of WP2 'EU-wide cooperation with ongoing projects, initiatives and communities', yet complementary: T10.5 focused on audiences outside ongoing Lighthouse projects and related initiatives. However, WP2 and T10.5 have been strongly supporting each other by sharing stages, addressing mixed Lighthouse/non-Lighthouse project audiences, and working together on (re)presentations by IRIS partners in relevant international and national events that were (co-)organized by one or more Lighthouse projects and/or initiatives.

An example of this cooperation based on complementarity is the IRIS representation at the Smart City Expo & World Congress in Barcelona, where IRIS participated in the EIP-SCC stand of all ongoing Lighthouse projects through WP2 while supporting IRIS partners in their (re)presentations at the Agora and in the national Pavilions as part of T10.5.

Another example is the cooperation between T10.5 and WP2 (T2.3) to reach non-Lighthouse project audiences through cooperation with other Lighthouse projects, for example by submitting a joint application for a policy session at the European Sustainable Energy Week (EUSEW).

The work of T10.5 has also been very relevant and closely related to the work of WP8 'Replication by Lighthouse regions, Follower cities, European market uptake'. T10.5 supported WP8 by communicating relevant international and national events to IRIS Follower cities, as well as communicating events (co-)organized by IRIS Follower cities to audiences outside IRIS.

In addition to serving Follower cities, T10.5 actively cooperated with WP8 (and WP2) to (re)present IRIS at events that are attended by audiences outside ongoing Lighthouse projects.

An example of T10.5 support to WP8 has been the small-scale exploration of programs and audiences of the many different IRIS- relevant events organized year-round, for relevance specifically for IRIS Follower cities.

1.4 Structure of the deliverable

After the introduction on scope, objectives, expected impact, contributions of partners, and relation to other activities in Chapter 1, Deliverable 10.7 describes in Chapter 2 how national and international events have been targeted for IRIS communication and dissemination. Chapter 3 highlights a selection of international events that IRIS partners organized or actively participated in M1-M66. Chapter 4 highlights a selection of national events IRIS partners organized or actively participated in. Chapter 5 elaborates on the academic conferences in which the IRIS partners presented scientific knowledge created in the project, while Chapter 6 presents the webinars that IRIS organized, as well as contributed to, in M1-M66. Concluding in Chapter 7 with some recommendations for other and new Lighthouse and related projects.

2 Methodology

2.1 Key deliverables for campaigns

The number of events relevant to IRIS-objectives and partners, organized by all kinds of organizations and networks at national, international and global level, is so huge and diverse that selection quickly became essential to ensure representation/participation at events with largest impact for IRIS objectives, and to avoid overburdening of IRIS partners with travel costs and (re)presentation requests. To maximize the impact of IRIS communication, dissemination and replication, WP2 partners by end of 2019 identified 20 Key Deliverables (see Annex 1) among the 111 Deliverables that IRIS would produce in her five and a half years run time. The authors of these Deliverables were supported in taking the most effective stage at the right time to present their results to the solutions' most important stakeholders. This targeted communication and dissemination strategy was supported by WP10 products (e.g. content from T10.2, on- and offline communications from T10.5, and scientific/white papers). And linked with WP2 activities (e.g. ongoing stakeholder analysis) and networks (notably SCIS and Scalable Cities). The IRIS Key Deliverables were connected with events/stages on a local/national, European and global level to create coherence and momentum.

2.2 Selection of events

T10.5 identified **3 groups of IRIS-relevant events (see Annex 2)**:

     A: events with very high expected impact of IRIS communication and dissemination:
          Example: European Sustainable Energy Week, Lighthouse projects joint events.
     B: events with considerable expected impact of IRIS communication and dissemination:
          Example: Smart City Expo & World Congress. Lighthouse projects final events.
     C: sector-specific and expert 'thought leadership' events.
          Example: FIWARE summit, World Electric Vehicle Symposium and Exposition (EVS).

In selecting events, care has been taken to include:

- ❖ cities that are not (yet) partner in Lighthouse projects as Lighthouse or Fellow cities,
- ❖ citizens,
- ❖ industry representatives,
- ❖ EC policy developers,
- ❖ researchers,
- ❖ investors.

At all three levels, events with the highest expected impact were actively communicated within IRIS. For level A and B representation/participation, support was offered through coordination activities, social media, materials, and award nomination texts. For level A and B, cooperation was sought with WP2, 'EU-wide cooperation with ongoing projects, initiatives and communities'. For level B, cooperation was often sought also with WP8 'Replication by Lighthouse regions, Follower cities, European market uptake'.

2.3 IRIS events calendar on EMDESK

The C&D plan included an ongoing communication agenda in order to coordinate the (re)presentations of IRIS at specific national and international events outside of the IRIS project. This communication agenda was set up in 2018 in the IRIS shared document repository **EMDESK**, under its **Calendar**. This EMDESK Calendar showed what was coming up where and who intended to participate so that partners could prepare together. All partners could add ("schedule") and edit IRIS-related events on the EMDESK Calendar. The Calendar was maintained by the Task 10.5 leader (UTR).
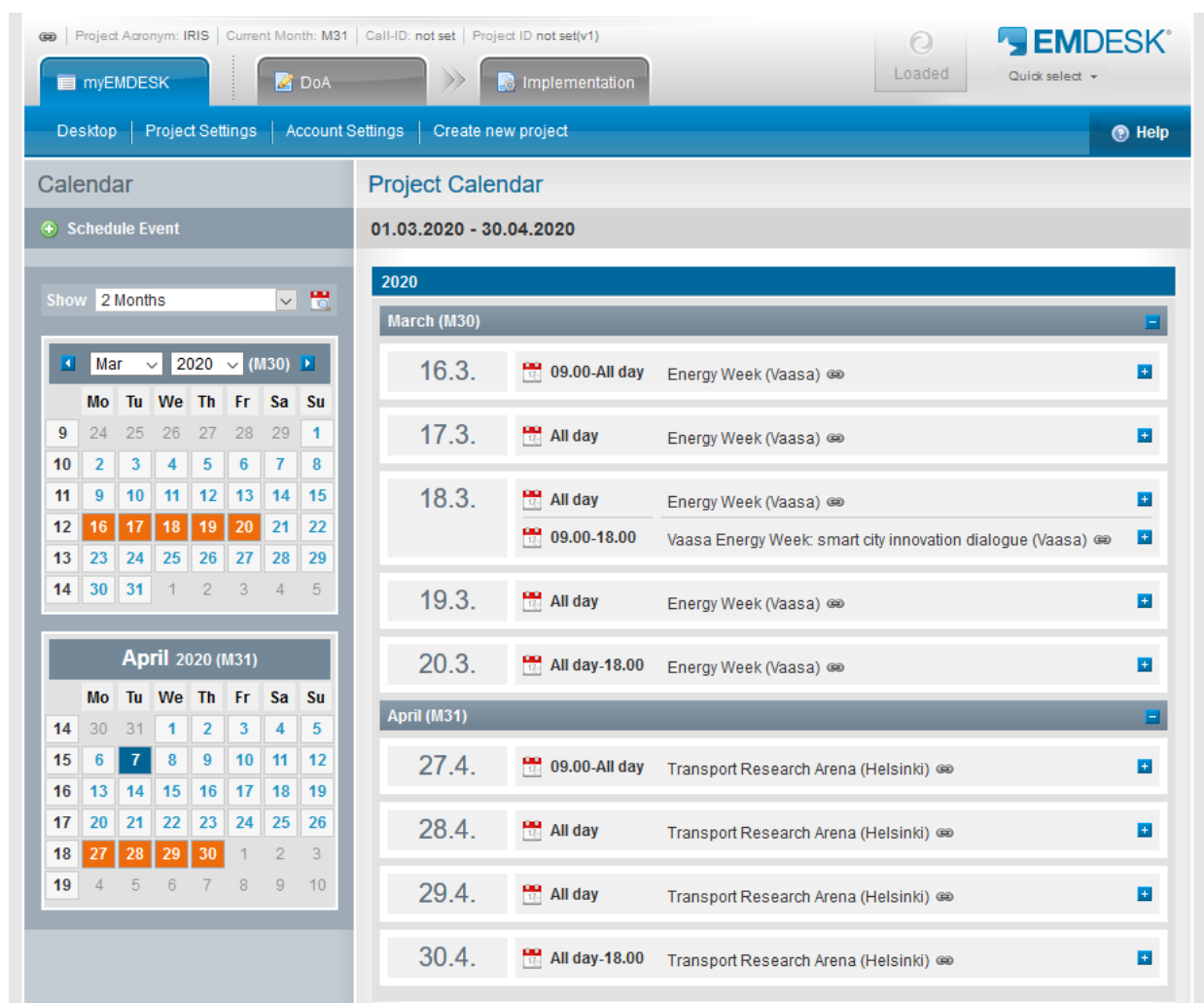
Figure 1 Screenshot of the IRIS Events Calendar on the EMDESK

With the development of the SCIS event calendar in 2019, the role of IRIS EMDESK Calendar became mostly to keep track of which IRIS partner(s) planned to participate in what meeting(s) for IRIS-internal collaboration and reporting purposes. With the onset of the covid epidemic early 2020, the EMDESK Calender became obsolete: the most efficient and reliable source of information on who planned to present (or had presented) what, where and when proved to be keeping track of e-communication within the IRIS consortium through email and social media.

2.4 Cooperation with other Lighthouse projects and initiatives

Increasingly, IRIS worked together with other Lighthouse projects and initiatives for most efficient and effective communication and dissemination. The main lines of collaboration were in the SCC01 Task Group Communication and Dissemination, and in the SCC01 Task Group Replication (of which IRIS was chair, with Lighthouse project +CityxChange as vice-chair, from September 2019 until September 2022). Both Task Groups actively communicate relevant international and national events to each other, to facilitate cooperation and joint undertakings.

With the establishment of the European Commission Scalable Cities service contract in support of the SCC01 Board of Coordinators and its Task Groups end 2020, the Task Group Communication and Dissemination gained momentum. April 2021 the Task Group Communication and Dissemination presented the results of a questionnaire among the Lighthouse projects to identify the most important events based on attendance and impact, and to gather suggestions for other events that the Lighthouse projects family should participate in.

The conclusion was that Scalable Cities and the Lighthouse projects should focus their effort on attending and participating at the **Urbis Smart City Fair** and the **Smart City Marketplace Forum**, and organizing and supporting **Lighthouse projects joint webinars and workshops**. As these events turned out to have the highest return on investment, high EU visibility, great value proposition, and provide excellent networking opportunities. Other events of importance mentioned were the **joint SCC01 events** organized (half) yearly by the chair of the Lighthouse projects group Board of Coordinators before covid struck, as well as the **Lighthouse project final events**, and the **European Week of Regions and Cities**. These events provided the best opportunities for exchange of information and for networking, including meeting EU policy makers – at least before covid / until March 2020.

These recommendations of the SCC01 Task Group Communication and Dissemination have been taken into account by IRIS Task 10.5 in the prioritisation of national and international events.

3 IRIS at international events

3.1 European Innovation Partnership Smart Cities and Communities, Smart Cities Information system, Smart City Marketplace, and Scalable Cities

By end of 2020, the European Commission European Innovation Partnership – Smart Cities and Communities (EIP-SCC) and Smart Cities Information System (SCIS) service contracts were integrated in / with the Smart City Marketplace (SCM).

In 2021, the European Commission Scalable Cities service contract was established, in support of the 18 SCC01 Lighthouse projects' Board of Coordinators and Task Groups, as well as the wider smart and climate-neutral cities community in Europe.

3.1.1 EIP-SCC (2020)

IRIS (HKU, UU/USI) presented the IRIS experiences and lessons learnt on citizen engagement and co-creation in an EIP-SCC meeting of Action Cluster Citizen Focus, 10 June 2020, at the launch of the European Academy on citizen engagement and co-creation.

3.1.2 SCIS (2020)

IRIS (SCT, VAASA, UTR) shared their monitoring and evaluation experiences in the SCIS final event with 200 participants on 4-5 November 2020.

3.1.3 Scalable Cities community event (2022)

On 1 June 2020 IRIS organized the Scalable Cities community event "Moving from solutions to system change" in Utrecht. The event brought together over 140 representatives of the Scalable Cities community around the question: Is it time to replicate success factors and enabling conditions, rather than solutions? To answer this question, the conference invited participants to play a game of "Smart City Sherlock" in which six experts in six areas of smart city innovation (or "transitions tracks") were invited to present and share their innovation story. With existing examples from around the Netherlands, as well as from other IRIS partners and other Lighthouse projects, the six keynote speakers, rather than pitching their technological innovation in the usual way as they might do to a potential investor, were instead invited to trace back the steps that led to these innovations, highlighting whenever possible the less tangible and more hap-hazard elements that helped to bring about their innovative solutions.

Figure 2 Scalable Cities community event hosted by IRIS

3.2 Smart City Expo Barcelona

The Smart City Expo in Barcelona is a global marketplace for a wide range of smart city sectors. It attracts a very large audience (2019: 21,000 smart city stakeholders) from all over the world, among which approximately 700 cities. The Smart City Expo, therefore, offers global dissemination opportunities. Participation by all Lighthouse projects is consequently supported by the EC and the Lighthouse projects Board of Coordinators. IRIS participated with the Lighthouse projects in a joint stand every year outside COVID times since the project kicked off in October 2017.

3.2.1 Smart City Expo Barcelona 2017

IRIS participated in the Smart City Expo World Congress in Barcelona n 14-16 November 2017 with two partners (UTR, JSP) and two official speaking slots (UTR, JSP).

3.2.2 Smart City Expo Barcelona 2018

IRIS participated in the Smart City Expo Barcelona on 13-15 November 2018 with eight partners (UTR, NCA, JSP,IMCG, CCS, SP, ESCI, CIV) and one speaking slot (CIV) in which was announced that all three IRIS Lighthouse cities are frontrunner cities in the FIWARE Foundation and TM Forum joint collaboration program to support the adoption of a reference architecture and compatible common data models.

3.2.3 Smart City Expo Barcelona 2019

IRIS participated in the Smart City Expo Barcelona on 19-21 November 2019 with seven partners (UTR, GOT, IMCG, JSP, ATMA, CIV, and SCT) and two official speaking slots (GOT, UTR, CIV).

Figure 3 IRIS in Smart City Expo Barcelona 2019 Lighthouse Showcase event

Figure 4 IRIS in Smart City Expo Barcelona 2019 Open Data Showcase event

3.2.4 Smart City Expo Barcelona 2020

IRIS participated with a speaking slot in the Smart City Business Event (online) on 16-18 November 2020. This event focused on developing the innovation system within Europe. IRIS partner UTR shared the IRIS City Innovation Platform solution and the smart EV parking use-case / service with the 86 participants in the session.

3.2.5 Smart City Expo Barcelona 2022

IRIS participated with three speaking slots in the Smart City Expo in Barcelona o 15-17 November 2022, a.o. the Smart City Business Forum that focused on the private sector's role in achieving cities' smart and climate-neutrality targets, creating opportunities for public and private actors to connect, build partnerships and take steps in accelerating urban transformation. IRIS participated in a joint booth with 30 other projects and initiatives on a broad range of smart city topics. IRIS presented in session 2.2 'Bridging the gap between cities and financial innovation. Other presentations were on Vehicle-2-Grid bidirectional charging of e-vehicles, and on ethical values in digitalization. IRIS partners were involved in organizing "the State of the European Smart Cities" session, the "Digitalisation at local level – How to get all cities and communities involved, making use of past and present projects" session, and the "Local Collaborative Governance" session.

Figure 5 Joint EU Smart Cities pavilion at SCWE 2022

3.3 European Week of Regions and Cities (2018, 2021)

The European Week of Regions and Cities brings together regions and cities from all over Europe, including their political representatives, officials as well as experts and academics, to exchange and discuss regional policies. In 2019, the European Week of Regions and Cities attracted 9.000 participants in more than 330 sessions.

Being aware of the Week's very relevant target group of regions and cities for communication and dissemination, IRIS participated in the European Week of Regions and Cities on 10 October 2018 with five partners (GOT, UTR, NCA, VAASA, JSP), and organized an official session focused on decision-makers (GOT). In the session, four IRIS cities - three Lighthouse, one Fellow - shared with the audience of 80 stakeholders how they have combined European funding mechanisms to accelerate their city strategies and aims. They also shared the impact they intend to create, based on their new analysis of end-user, business, citizen and technical requirements for replication.

For the European Week of Regions and Cities on 12 October 2021, IRIS organized a Participatory Lab on Positive Energy Districts as Innovation Ecosystems for Climate Neutrality. In this session that was moderated by EUROCITIES Economic Development Forum, four Fellow Cities from four different Lighthouse projects – Vaasa (IRIS), Parma, Leipzig, and Bydgoszcz - shared with the audience of 51 stakeholders how they realize(d) Positive Energy Districts by customizing smart energy solutions to their local needs and context. Showing that replication is not a copy-paste exercise, but a process of customization, leading to unique innovation ecosystems requiring connectedness of stakeholders, competence, and capital.

Figure 6 Speaker card promo for EWRC 2021

3.4 European Green Week (2021)

The European Green Week is Europe's biggest annual environmental event, which in 2021 was dedicated to the EU ambition of a zero pollution, zooming in on efforts to tackle pollution of air, soil and water, creating a world where pollution is no longer harmful for people's health and ecosystems.

IRIS (HKU) shared the IRIS citizen engagement and co-creation experiences, elaborating on social design of citizen engagement strategies in the European Green Week session 'Popular objectives, controversial measures: How to increase acceptance of zero pollution measures in cities?" (3 June 2021).

3.5 European Sustainable Energy Week (2020)

The European Sustainable Energy Week is the biggest annual event dedicated to renewables and efficient energy use in Europe and comprises a series of activities aimed at building a secure energy future for Europe.

IRIS participated in a joint policy session of 3 Lighthouse projects (IRIS, MatchUp, and SharingCities) at the European Sustainable Energy Week (EUSEW) on 10 June 2020. Moderated by the EUROCITIES Secretary-General, speakers from the cities of Utrecht, Skopje, Milano, and Antalya shared with the audience of 97 stakeholders how their city delivered on the Green Deal, with IRIS (UTR) presenting on Vehicle-to-Grid bidirectional charging stations for e-vehicles, answering many questions in the lively Q&A in the second half of the session.

Figure 7 Joint session at EUSEW 2020

3.6 POLIS (2021, 2022)

POLIS is the network of European cities and regions working together to develop innovative technologies and policies for local transport.

During the POLIS Annual Conference on 1-2 December2021 in Gothenburg, Sweden, IRIS (TRIV) presented the Gothenburg EC2B solution at the POLIS working group meeting for Parking. IRIS (GOT) also presented the Gothenburg City Information Model (CIM) during the event.

During the POLIS Annual conference 2022 in Brussels, IRIS (UTR) presented the municipality's Strategic Plan for upscaling of smart charging infrastructure towards 2030.

3.7 European TM Forum (2018, 2019)

TM Forum is a global non-profit network of the telecom industry.

IRIS participated in the European TM Forum 14-16 May 2018 and 2019, both in Nice, France, presenting IRIS project results and exchange of expertise on standards and interoperability to support city-needs driven development of industry standards, directly contributing to WP4 City Innovation Platform.

3.8 FIWARE Summit (2018, 2019)

The FIWARE Summit is a meeting place for developers, entrepreneurs, political decision makers, thought leaders, business executives and investors, including >100 cities. It aims at the exchange of expertise, lessons learnt and drafting of policy recommendations.

IRIS participated in the FIWARE Summit on 27-28 November 2018 (Malaga) and no 21-22 May 2019 (Genoa) with three partners (CIV, NCA, UTR), in both events to reach a common data model and common API for the CIP Data Market.

All three IRIS Lighthouse cities joined the TM Forum and FIWARE Foundation joint collaborative Frontrunner program to support the adoption of a reference architecture and compatible common data models that underpin a digital market of interoperable and replicable solutions for smart cities. This cooperation was established during the Smart City World Expo & Conference in November 2018 (Barcelona) and elaborated during the FIWARE summit in November 2018 (Malaga).

In the FIWARE Summit of May 2019, the IRIS demonstration of smart charging stations was presented, showing the combination of parking sensor and charging station, based on FIWARE data models en the open NGSI API. During this session IRIS participated in a discussion group with other European cities about the Front runner program, the development of new data models, and further standardization.

3.9 Open & Agile Smart Cities (OASC) network (2020)

On 23 January 2020 the IRIS Standards & Interoperability manager (UTR) participated in the annual conference of the Open & Agile Smart Cities (OASC) network In Brussels: "Connected Smart Cities & Communities". This conference brought together more than 500 key decision-makers from municipalities, European institutions, international organizations, research & academia, and businesses.

IRIS presented in the tech-track 'Operating urban data platforms based on minimal interoperability' a Practitioners guideline on open urban platforms which was developed for the most part by three of the Dutch Lighthouse projects (TRIANGULUM, RUGGEDISED and IRIS), and published by NEN, the Dutch standardization body.

3.10 European Urban Knowledge Network (2020)

The European Urban Knowledge Network (EUKN) is an independent, Member State-driven network in the field of European urban policy, research and practice, working with European national and regional governments to promote sustainable urban development. EUKN Smart Czechia (28 July 2020) focused on integrated approaches towards smart cities. IRIS (NCA) participated with a presentation of the IRIS experiences with City Innovation Platforms (CIP).

3.11 Fully Charged Show (2022)

On 20-22 May 2022, the Fully Charged Clean Energy and Electric Vehicle Show took place in Amsterdam, The Netherlands. At this event, IRIS (UTR) participated in a panel discussion on integrating solar power charged electric vehicles and vehicle-to-grid (bidirectional charging).

In December 2022, a documentary on IRIS LHC UTR becoming the world's first city integrating solar power charged electric vehicles and vehicle-to-grid decharging was published on YouTube by Fully Charged. This video has been viewed 95.968 times by March 2023.

3.12 International Electric Vehicle Symposium (2022)

The 35th International Electric Vehicle Symposium & Exhibition in Oslo, Norway, on 22 June 2022 attracted 11.000 visitors from 70 countries. At the event IRIS (UTR) presented the municipality's Strategic Plan for upscaling of smart charging infrastructure towards 2030.

3.13 Thermal Equipment, -Renewable Energy-Rural Development International Conference (2020)

On 26-27 June 2020, the Focșani Fellow City Partner, ICEMENERG, represented IRIS at the 9th International Conference on Thermal Equipment, Renewable Energy and Rural Development (TE-RE-RD 2020) - organized by the Politehnica University of Bucharest (UPB) in Constanța, Romania.

3.14 FOREN International Conference (2020)

On 6-10 September 2020 the IRIS Fellow City partner ICEMENERG represented IRIS at the 5th Edition of the WEC Central & Eastern Europe Energy Forum (FOREN 2020) "Energy Transition in South-Eastern Europe: opportunities, challenges, perspectives" (virtual/online), organized by CNR-CME (The Romanian National Committee of the World Energy Council) and held in Bucharest.

3.15 SCC01 SmartenCity Lighthouse project final event (2022)

On 14-15 June 2022, IRIS (UTR) participated in the panel on replication best practices and recommendations, organized by SCC01 project SmartenCity during their final event in Vittoria-Gasteiz. As chair of the SCC01 Task Group Replication, UTR shared best practices and lessons learnt as exchanged in Task Group Replication 2019-2022.

3.16 Innovation and Networking Days (2019)

The Innovation and Networking Days, organized by Fraunhofer FIT in collaboration with other European research institutions, allow innovators from industry, research and public administrations to meet, share, network and discuss different facets of a broad topic(s).The Innovation and Networking Days 2019 were co-organized by Fraunhofer FIT (Germany) LINKS Foundation (Italy) and by the Centre for Research and Technology CERTH (Greece) in Bonn. The focus of the 2019 edition was the topics of Smart City and Energy, as well as the Intelligent Processes. IRIS (CERTH) presented the IRIS project in the keynote speech of the event on 6-7 November 2019.

3.17 EU COST Action & Region of Crete Geothermal District Heating and Cooling workshop (2022)

Fellow City Alexandroupolis presented the IRIS project and the city's work regarding the geothermal district heating network in a knowledge transfer workshop organized by the EU COST Action on Geothermal-District Heating and Cooling and Region of Crete, on 27th of May 2022, in Chania (Crete). Specific focus was on market and socio-economic related aspects of geothermal energy use in heating and cooling networks.

3.18 EU-China Smart Sustainable Cities (2019)

The EU-China Smart Sustainable Cities Event, 17-18 December 2019 in Brussels, brought together around 40 actors involved in EU-China Cooperation on sustainable urban development. IRIS (UTR) presented the IRIS project as part of the event's program line Pathways to urban innovation, highlighting the experiences of the City of Utrecht in how R&I projects such as IRIS can support and inspire public urban administration in their transition to urban sustainability.

3.19 CoMotion LIVE (2021, USA)

The 20th October 2022 episode of CoMotion LIVE!, which was supported by the Kingdom of The Netherlands, addressed the next wave of sustainable innovation in the EV world: bi-directional charging and vehicle-to-grid technology. In this episode, IRIS (UTR) participated in a panel discussion on vehicle-to-grid, sharing insights into how this technology can be maximized and implemented, with IRIS examples.

3.20 Earth Day Forum (2022, Taiwan)

On 21 April 2022, IRIS LHC UTR joined the Earth Day Forum in New Taipei, Taiwan, organized by New Taipei City. More than 20 speakers attended the Forum online and offline globally from 10 countries, including 15 cities. At the Erath Day Forum, IRIS (UTR) presented the Utrecht city's bidirectional EV charging ecosystem, Strategic Plan for upscaling of its EV charging infrastructure towards 2030.

3.21 Accelerating Clean Energy in India (2022)

On 19 October 2022, IRIS (UTR) presented the municipality's Strategic Plan for upscaling of its EV charging infrastructure towards 2030 at Accelerating Clean Energy in India.

3.22 IRIS final event (2023, Gothenburg)

On 8-9 March 2023 IRIS partners GOT and JSP hosted the two-day IRIS final event. Starting with a session putting the spotlight on the IRIS Fellow Cities Vaasa, Focsani, Alexandroupolis, and Santa Cruz de Tenerife,

moderated by Sofia Corsi, coordinator at the European network Scalable Cities. The Fellow cities shared thoughts on challenges and achievements and how their work to become smarter and more sustainable continues after IRIS. In the afternoon of the first day participants took A look in the mirror: a self-assessment tool the IRIS-project developed and regularly used to take a closer look at its successes and challenges. The final mirror compared the IRIS successes and challenges to the original project ambitions, and the way the collaboration in the project took place. The second day offered three study tours, reflecting and looking forward on central themes in the IRIS project: energy efficient buildings, electric transport and digital twins.

Figure 8 Final IRIS event in Gothenburg 2023

4 IRIS at national events

IRIS local ecosystems partners are active with numerous events in their region. Below we are highlighting one example from each region.

4.1 National events: The Netherlands

4.1.1 Inauguration of the world's first bidirectional car charging ecosystem by King of the Netherlands (2019)

His Majesty King Willem-Alexander launched a new durable energy and mobility ecosystem in Utrecht on 21 March 2019. The system deploys shared electric Renault ZOE cars and charging stations, enabling the Renault ZOE to both charge and discharge.

Figure 9 King of the Netherlands inaugurates new bidirectional ecosystem in Utrecht World premiere for Renault and We Drive Solar

This innovation made the Renault ZOE a battery on wheels, which can store solar energy and later return it to the electricity grid. Enabling a more efficient use of sustainable solar and wind energy. The bidirectional technology optimized the recharge costs for customers allowing expansion on a massive scale.

The city of Utrecht was the first Dutch municipality to choose to implement the new energy and mobility system on a large scale. The world introduction in Utrecht was also the first deployment of the new ISO15118 protocol for AC bidirectional charging. This protocol allows a bidirectional flow of energy (solar energy into the car, and from the car to the grid) which makes it possible for electric cars to actively take part in smart energy networks.

4.1.2 Utrecht becomes first bidirectional region in the world (2021)

In April 2021, Utrecht became the first bidirectional region in the world. In the presence of Dutch Secretary of State Stientje van Veldhoven, Municipality Utrecht alderman Eelco Eerenberg and Province of Utrecht political representative Huib van Essen, a collaboration was signed between Hyundai and strategic partners in Utrecht.

Since the inauguration of the world's first public bidirectional car charging infrastructure by King of the Netherlands in 2019, Utrecht installed 500 charging poles in the Utrecht city and region that can charge electric cars as well as provide energy to the grid (bi-directional charging). This made Utrecht the first region in the world with a bi-directional ecosystem. In this bi-directional ecosystem, batteries in electric shared cars are used large-scale for storage of sustainable energy. Because of this unique position and expertise of Utrecht, car producer Hyundai chose Utrecht to test and large-scale deploy the first bi-directional production car with bi-directional charging technology on board (Hyundai IONIQ 5).

4.1.3   Community of Practice of Dutch Lighthouse cities (2020-2021)

IRIS organized several meetings with the Community of Practice of the five Dutch Lighthouse cities from five different Lighthouse projects (TRIANGULUM, RUGGEDISED, IRIS, ATELIER, MakingCity) to exchange best practices. Some meetings had a specific theme of interest to all. For example IRIS partner LOM shared the Vehicle-to-Grid integrated solution and related experiences with governance of the local innovation ecosystem in a Community of Practice meeting in August 2020.

4.1.4   Launch of the world's first bidirectional production car (2022)

On 21st April 2022, the first bidirectional production car, the Hyundai IONIQ 5, was launched by Hyundai and mobility provider We Drive Solar. This IONIQ 5 can charge and discharge so it can store renewable energy and later deliver it back to the grid due to its unique Vehicle-to-Grid (V2G) technology. Through this storage, renewable energy is always available. It is an important step in fulfilling Utrecht's ambition to become the world's first bidirectional city and region. The kick-off took place in the presence of President and CEO of Hyundai Motor Europe Michael Cole, director and founder of We Drive Solar Robin Berg, State Secretary of Infrastructure and Water Management Vivianne Heijnen, Mayor of Utrecht Sharon Dijksma, CEO of Ballast Nedam Development Onno Dwars and CEO of MRP Bart Meijer. The 25 IONIQ 5 bidirectional cars present provided power from their batteries during the ceremony.

The starting signal for the new energy system of the future was given in the monumental CAB building, in the newly to be built Cartesius urban district in Utrecht by developers MRP and Ballast Nedam Development. This new residential area will focus on sustainability, innovative energy solutions and sustainable (shared) mobility. Cartesius is the first healthy and sustainable urban district in the Netherlands where this energy system will be applied on a large scale.

The commissioning of the first bidirectional production car in Utrecht attracted a lot of media attention worldwide. As many as thirteen different countries on three continents wrote about the launch. For a list of the publications, see the article on the Dutch website here.

Figure 10 Launch of the world's first bidirectional production car Hyundai IONIQ 5. From left to right: Robin Berg (We Drive Solar), Vivianne Heijnen (State Secretary of Infrastructure and Water Management), Sharon Dijksma (Mayor of Utrecht), Anneke de Vries (Dutch Railways NS), Michael Cole (Hyundai), Onno Dwars (Ballast Nedam), Bart Meijer (MRP).

4.2 National events: France

4.2.1 Innovative City (2018)

IRIS participated in the 7th edition of Innovative City taking place in Nice 27-28 June 2018, themed "Innovation for better life & smart business". This major event in the field of innovative, connected and sustainable cities welcomed 3,250 participants, nearly 200 speakers, and 140 exhibitors, including major industrial groups as well as start-ups and many international delegations.

Four IRIS partners (NCA, ENEDIS, EDF, UNS) participated in the event. NCA signed a new partnership with ENEDIS and EDF Provence-Alpes-Côte d'Azur. The signature reflects an ambitious investment policy of 70 million euros with ENEDIS. The objective of this partnership is to set up a local organization and a unified governance, from the mountains to the coast. This strengthened coordination between public and private actors demonstrates once again the willingness of NCA to pursue its development policy focused on Smart City, Energy Transition and Smart Grids.

Another highlight of Innovative City was the conference "Universities, Territories and Economic Development: What tools at the service of citizens? ", during which UNS (GREDEG-CNRS) presented IRIS.

4.2.2 Sustainable Places (2022)

IRIS partner NCA shared demonstration results and best practices, including City Innovation Platform, at the Sustainable Places conference on 8 September 2022, which was hosted by NCA and University Côte d'Azur.

4.2.3 Transition Forum (2022)

IRIS was partner in the Transition Forum 2022 exhibition event. Transition Forum is an association of which the City of Nice and the Métropole Nice Côte d'Azur are partners. The Transition Forum exhibition event is organized by the French weekly financial newspaper La Tribune. The 2022 edition, themed "Accelerate", took place on 29 September 2023 in Nice, and brought together more than 1,500 participants on site and 3,000 participants online.

Figure 11 At Transition Forum 2022

4.3 National events: Sweden

4.3.1 Cleantech matchmaking (2018)

During the May 2018 Gothenburg Tech Week (a yearly event covering the full range from tech to business) IRIS was involved in two of the many events taking place, among which the Cleantech Matchmaking Event. In this event, 40 cleantech start-ups from the Nordic region met with 10 leading industry actors from across different sectors – with the start-ups being in charge of the matchmaking. IRIS partners were actively involved in this event, among which IRIS partners HSB, RISE, JSP and Metry, which was very rewarding for both big and small.

4.3.2 Inauguration of Viva building (2019)

On 4 September 2019, the unique local housing association Viva was inaugurated in Guldheden in Gothenburg. The 132 apartments of Viva are unique in that several innovative housing solutions in terms of social, economic and environmental sustainability are used full scale in the association, including solutions that have never been tested before in housing projects in Sweden. Among the innovations are the repurposing of bus batteries as solar energy storage in the apartments, innovative mobility solutions that enable living without owning a car, Ecosystem Service Analysis, use of more durable concrete with 30% less CO2 emissions, and environmental building Gold certification. Viva was initiated by IRIS partner Riksbyggen in collaboration with IRIS-partners in the Positive Footprint Network Johanneberg Science Park, Chalmers, Gothenburg University, Göteborg Energi, the City of Gothenburg and RISE - Research Institutes of Sweden.

Figure 12 Viva housing association in Gothenburg
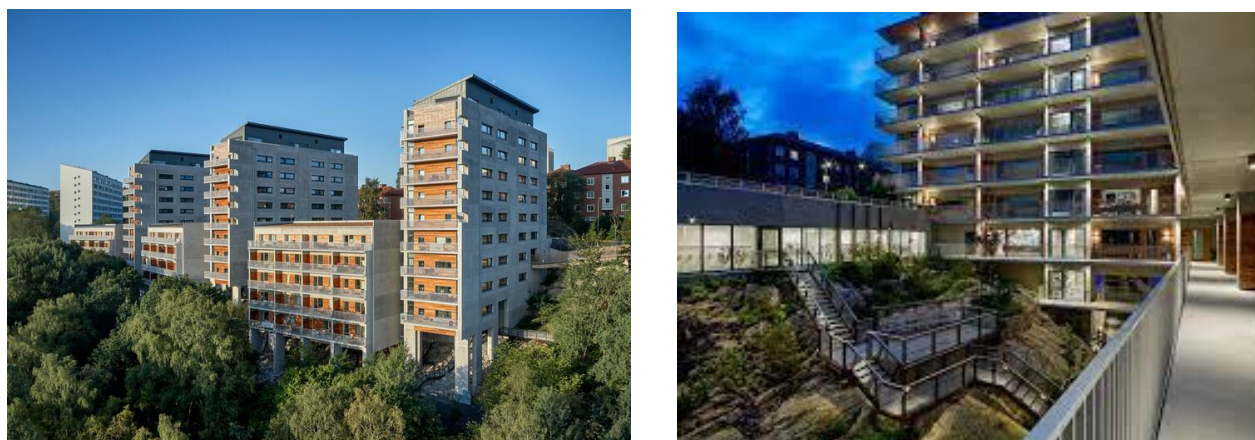
4.4 National events: Finland

4.4.1 Vaasa EnergyWeek (2018-2019-2020-2022-2023)

The annual Vaasa EnergyWeek in March gathers energy stakeholders from all over the world to share information, hear about the latest news and most interesting cases, extend their networks and do

business. Topics include digitalization, batteries and storage, circular economy, future smart cities, energy regulation, business and innovation. IRIS has participated in the Vaasa Energy Week every year since the start of the IRIS project.

In 2019, IRIS (JSP) presented the IRIS project in the Vaasa EnergyWeek.

In 2020, IRIS (VAASA, MERI) organized a smart energy innovation dialogue: an international meeting place for innovation support and research commercialization experts around smart energy in 2020, so that they can discuss, share and learn about hot topics and trends in bringing innovation and technological discovery to market.

In 2022, solutions from 7 Finnish Lighthouse and Fellow Cities, among which IRIS Fellow City VAASA, were shared in a dedicated session during Vaasa Energy Week.

In 2023, IRIS was presented in a poster session at the Research Exhibition of Energy that was part of the Vaasa EnergyWeek 2023. Also in 2023, the European Technology and Innovation Platform for Smart Networks for Energy Transition (ETIP SNET)arranged the [17th ETIP SNET Regional Workshop 21th March in Vaasa, Finland](#) . As part of its mission to foster research and innovation activities to support Europe's energy transition with the goal to research, develop and demonstrate technologies, services and their integration across all energy carriers and considering grids and storage, a workshop was organised in co-operation with [Vaasa Energy Business Innovation Centre (VEBIC)](#), with Fellow City Vaasa as case-study.

4.4.2 Tampere Smart City Week (2020)

IRIS participated in the [Tampere Smart City Week in January 2020](#), aimed at cooperation with local and national smart city actors. Part of the week was a replication day, organized by Lighthouse project MatchUp, inviting all four other Finnish Lighthouse and Fellow cities, as well as local and national stakeholders. The IRIS Fellow City of Vaasa presented IRIS at the event and participated in many of the event's replication workshops.

4.4.3 Innovative Small and Medium Cities event (2022)

The Innovative Small and Medium Cities event was arranged in Brussels on 18-19 May 2022, with 20 cities attending the event. The Vaasa IRIS team presented the IRIS Smart Cities project and its solutions and arranged a workshop around replication.

4.5 National events: Greece

4.5.1 Technology Forum conference (2018)

IRIS partner CERTH presented the IRIS project in the 5th Technology Forum conference on 16 May 2018 (Thessaloniki). The Technology Forum is a knowledge sharing platform between private sector (ICT & other industries) and research organizations (Universities & Research Centres). It organizes one conference per year. CERTH's presentation in the "Smart Cities" section was entitled "Demonstrating Innovative Solutions within a Smart Cities Ecosystem".

4.5.2 SMILE2MATCH (2019)

IRIS partner CERTH presented the IRIS project in SMILE2MATCH conference on 4 July 2019 (Thessaloniki). The SMILE2MATCH event, jointly organized by the Smart Island Energy System (SMILE) H2020 project and the Enterprise Europe Network brought together business, research and government actors dealing with the creation of sustainable islands. Participants from multiple European countries discussed and established new international cooperations in the fields of renewable energy production, smart grids, electric mobility and energy storage solutions.

4.6 National events: Spain

4.6.1 EIT Urban Mobility Telpark City Lab (2022)

EIT Urban Mobility Telpark City Lab on 22 March 2022 in Madrid aimed to contribute to create an ecosystem of knowledge to share information in an open environment, in which cities can learn from each other. The collaboration environment seeks to promote public-private collaboration, and to jointly address the mobility challenges facing cities and the urban agenda, based on best practices. The March 2022 event focused mainly on sustainable urban mobility. The event is by invitation only and targets the main cities in Spain. IRIS Fellow City Santa Cruz de Tenerife City Council participated as one of the invitees to Telpark City Lab in 2022, together with a.o. Madrid, Barcelona, Porto, Pamplona, and Alcobendas.

4.6.2 Greencities (2022)

Greencities is a meeting of experts on urban management and mobility of the future. Greencities on 21-22 September 2022 in Malaga, offered more than 250 presentations analyzing both administrative and technological advances, as well as showcasing success stories and experiences.

IRIS Fellow City Santa Cruz de Tenerife City Council participated in the Greencities 2022 two-day matchmaking event for smart and sustainable mobility.

4.7 National events: Romania

4.7.1 International Conference on Energy and Environment (2019)

IRIS Fellow City Focsani partner UPB represented IRIS in the 9th International Conference on Energy and Environment (CIEM) in Timisoara, 17-18 October 2019.

4.7.2 Smart Cities of Romania Conference (2021 – 2022)

On 2 November 2021, the IRIS Fellow City Focsani partner ICEMENERG represented IRIS at the 7th Edition of the Smart Cities of Romania Conference 2021, organized by SCoR (Smart Cities of Romania), and hosted by the Chamber of Commerce and Industry of Romania. Most of the stakeholders in the field of Smart City in Romania were present at the conference.

On 10 November 2022, the IRIS Fellow City Focsani partner ICEMENERG represented IRIS at the 8ᵗʰ Edition of the Smart Cities of Romania Conference 2022, organized by SCoR (Smart Cities of Romania), and hosted by the Chamber of Commerce and Industry of Romania. During the conference, the latest technologies in the field of renewable energy, electro-mobility, digitalization, but also energy efficiency were presented so that Romanian cities can become smart cities.

4.7.3   New technological solutions for the production, transport and distribution of electricity Conference

In 2021, the IRIS Fellow City Focşani partner ICEMENERG represented IRIS at the national conference New technological solutions for the production, transport and distribution of electricity. The conference organized by CNR-CME (The Romanian National Committee of the World Energy Council) & Siemens Energy on April 14, 2021. During the conference, the most modern solutions in the energy field for the production, transport and distribution of electricity were presented. 5.7.4. Smart Cities of Romania Conference 2021

Training Awareness on Renewable Energy and Energy Efficiency in Romania (2022)On 31 March 2022, IRIS Fellow City Focşani partner ICEMENERG represented IRIS at the Webinar (online): "Training Awareness on Renewable Energy and Energy Efficiency in Romania" – organized by Innovation Norway.

4.8 IRIS presentations at national events outside IRIS countries

4.8.1   4ᵗʰ E-mobility Convention (2022, Slovenia)

On 13 April 2022, IRIS (UTR) presented the municipality's Strategic Plan for upscaling of smart charging infrastructure towards 2030 at the 4th E-mobility Convention in the context of the INTERREG Europe project e-MOPOLI in Brdopri Kranju, Slovenia.

4.8.2 Charging Infrastructure Conference organized by the German Federal Ministry for Digital and Transport (2022, Germany)

On 29 June 2022, the German Federal Ministry for Digital and Transport organized a Charging Infrastructure Conference, hosted by NOW GmbH and the National Centre for Charging Infrastructure The event addressed high-ranking decision-makers at EU, federal, state and municipal level, companies from the ("automotive") industry, energy supply, grid operation and the operation and production of charging infrastructure, members of the advisory board of the National Centre for Charging Infrastructure, and a broad specialist public.

The conference was intended to highlight the central importance of establishing a comprehensive charging infrastructure throughout Germany for the success of battery-electric mobility and for achieving the federal government's transport and climate policy goals.

At the event, IRIS (UTR) presented the Utrecht municipality's Strategic Plan for upscaling of smart charging infrastructure towards 2030.

4.8.3 Webinar on EV infrastructure organized by Irish Ministry of Transport (2023, Ireland)

On 21 March 2023, IRIS (UTR) presented Dutch solutions and examples, as well as the municipality's Strategic Plan for upscaling of smart charging infrastructure towards 2030, in a webinar on delivery of EV-infrastructure, organized by the Irish Ministry of Transport.

5 IRIS at Academic Events

The IRIS academic partners presented project's research results in many conferences. Some of them are:

- T2S 2018 – Annual Conference (October 17th – October 19th in Valencia)
- EU-SPRI 2019 – Conference: Science Technology and Innovation policies for sustainable development goals. (June 5th-june 7th 2019 in Rome)
- EURAM 2019 – Exploring the future of management (June 26th- June 28th in Lisboa)
- 17th International Open and User Innovation Conference (July 8th – July 10th 2019 in Utrecht)
- IECER 2019 – Interdisciplinary European Conference on Entrepreneurship Research (October 16th – October 18th 2019)
- EGOS 2020 – (July 2nd-July 4th online)
- IECER 2020 – A virtual Community Conversation (October 15th 2020 online)
- 10th International Congress on Transportation Research (September 1st – September 3rd 2021 in Rhodes, Greece)
- EU-SPRI 2022 – Challenging Science and Innovation Policy (June 1st – June 3rd 2022 in Utrecht)
- NEST 2022 - Network for early career researchers in sustainability transitions – (May 5th – May 6th in Lyon)
- DRUID 2022 – (June 13th – June 15th 2022 in Copenhagen)
- CIRED 2022 Workshop (June 2nd – June 3rd 2022 in Porto)
- GEOINNO 2022 – Geography of Innovation Conference (July 4th -July 6th 2022 in Milano)
- Innodays 2022 – international conference for Innovation and Entrepreneurship (November 5th-8th 2022 in Casablanca)

The most active participation was in the 17th International Open and User Innovation Conference organised from July 8th – July 10th 2019 in Utrecht. Cross discipline collaboration and innovation was the heartbeat of this annual Utrecht University conference (8-10 July 2019). The event gathered around 200 researchers from various disciplines such as innovation or strategic management, organization design, marketing, intellectual property rights management, entrepreneurship, and public policy, all exchanging on the latest research findings and plans in the field. IRIS partners and endeavours submitted three papers:

Chris Eveleens and Mark Sanders (both from Utrecht University, UU) presented two IRIS papers entitled: "The impact of incubation on start-up performance; Smart city, user and radical innovations" and "A citizen innovation challenge as a way to identify and develop user innovations in low-income groups" in a session dedicated to 'Institutions, Innovation Law and Policy'. Chris Eveleens' analysis of archival data from two Utrecht incubators showed that incubation is helpful to new ventures and that, if anything; smart city innovations benefit more from incubation than normal ventures. This evidence supports the fact that smart city programs should consider business incubation as a tool to promote the transition.

Mark Sanders presented an ongoing project in the IRIS project in Utrecht to elicit suggestions and ideas to collect and further develop user innovations from Kanaleneiland, the low-income demonstration district for the IRIS-project in lighthouse city Utrecht. In the discussion that followed his presentation, some valuable contacts were established, and Mark received several helpful hints from the audience regarding similar projects in Germany and Sweden.

Carolin Eckinger (UU) presented her bachelor thesis written within the scope of the IRIS project in the 'User and social entrepreneurship' track. The presented research addressed the link between user innovation and business incubators and how incubators can be a possible tool for their success. The audience consisted of about 15-20 people, including professor Erich von Hippel (Harvard), founding father of the field of user innovation research. Carolin presented a new index built to identify user innovations in a dataset of start-ups and then presented preliminary results showing business incubation benefits user and non-user innovations alike, but a selection bias against user innovations in incubation programs is likely. The index proposed was well received.

Overall, the presentations allowed the IRIS team to pitch research conducted and provided an opportunity to highlight the importance of user innovations as well as the IRIS project itself. The feedback received was positive since other researchers were working on topic related research or valued the importance of the topic introduced.

6 Webinars organized by IRIS

IRIS organized and coordinated a series of webinars, which were all made publicly available through the IRIS Smart Cities website.

6.1 Grid flexibility (2018)

In November 2018, IRIS organized the webinar "Grid flexibility: an antidote to relieve pain in the changing energy system?". A key challenge the IRIS project tackled was the change from a traditionally centralized energy production system to a more decentralized one, which requires more grid flexibility. IRIS demonstrations worked on different solutions addressing this challenge. This webinar will take you from the European policy goals towards concrete solutions. This webinar was a basis for a further discussion and lengthy Q&A among IRIS experts (not included in video). The webinar has been viewed 160 times (by March 2023).

6.2 Vehicle-to-grid technology (2019)

In September 2019, IRIS (UTR, LOM, GOT) organized a webinar on vehicle-to-grid technology implementation and scale-up in Utrecht in The Netherlands: the first city in the world with a large-scale network of V2G-chargers using a global open protocol ISO15118, which will play an important role in our future energy systems. The webinar was attended by 42 stakeholders. The webinar has been viewed 855 times, the accompanying slideshare 1154 times (by March 2023).

6.3 Second life batteries in residential buildings (2019)

In April 2019, IRIS (Bo-EX, JSP, GOT, RB) organized the webinar "A new lease of life: second generation batteries in residential buildings". The webinar addressed safety considerations when installing 2nd life batteries in residential buildings, sharing lessons learnt and best practices. The webinar has been viewed 126 times (by March 2023).

6.4 How numerical software tools support the creation of replication plans in smart cities energy projects (2019)

In December 2019, IRIS (CERTH) organized a webinar in cooperation with Lighthouse project PoCityF to familiarize European municipalities and other relevant stakeholders (energy policy makers, architects, engineers, constructors) with representative numerical tools and available software that can be utilized for supporting feasibility studies and replication activities. These tools can be used by both Lighthouse

cities and Follower cities. The webinar was attended by 25 stakeholders, while after the event the webinar (with accompanying slideshare) has been viewed 211 times (by March 2023).

6.5 Developing and applying a successful Mobility as a Service business model (2020)

In March 2020, IRIS (CERTH, TRIV) organized a webinar on successful MaaS business models. The webinar (with accompanying slideshare) has been viewed 253 times (by March 2023).

6.6 Citizen Engagement (2020)

In April 2020, IRIS (HKU, UU/USI) shared their experiences with a paradigmatic shift in citizen engagement, covering the four stages of citizen engagement, design systems thinking in cities, and the role of touchpoints and influencers. The webinar (with accompanying slideshare) has been viewed 174 times (by March 2023).

6.7 City Innovation Platforms (2020)

In July, IRIS (NCA, CSTB) shared City Innovation Platform applications in energy efficiency and environmental risk management and monitoring, in cooperation with NCA local stakeholder IMREDD. The webinar (with accompanying slideshare) has been viewed 176 times (by March 2023).

6.8 Battery Energy Storage Systems (2020)

In December 2020, IRIS (CERTH, EDF, LOM) shared expertise and experiences with battery energy storage systems (BESS). The webinar showed how battery energy storage can help power the energy transition, based on case studies in electric vehicle fleets and repurposed 2nd life batteries in residential buildings.

Stationary electricity storage solutions are a core part of the energy transition - providing the potential for grid stability and resilience as well as flexibility services, peak shaving and peak shifting of electricity demand; thus enabling higher levels of renewable energy integration and self-consumption.

The webinar (with accompanying SlideShare) was viewed 41.849 times (by March 2023).

6.9 Smart city business models (2021)

In April 2021, IRIS (CERTH, UU, IMCG) presented the Smart City Business Model Canvas and illustrated how the canvas can be used to map out and analyze the business model of two Mobility as a Service solutions demonstrated in the IRIS project. The webinar (with accompanying slideshare) was viewed 285 times (by March 2023).

6.10 Smart city business models (2022)

In January 2022, IRIS (UU, IMCG, CERTH, UTR) shared how ideation tools and business incubation can be used to create smart city business models. The webinar presented recipes to generate smart city business model ideas, and showcased a blueprint for a Business Incubation Program. The webinar (with accompanying slideshare) was viewed 150 times (by March 2023).

6.11 Urban Data Platforms (2022)

In November 2022, IRIS (NCA, GOT, CIV, CERTH) shared experiences of the IRIS Lighthouse cities with Urban Data Platforms. Addressed were vendor-neutral and technology agnostic components that anybody can use and integrate into existing systems, onboarding processes and governance to have different stakeholders with different interests work together, and standard data models promoting interoperability and replicability without having to reproduce all the details of an entire vertical. The webinar (with accompanying slideshare) was viewed 278 times (by March 2023).

6.12 IRIS presentations in webinars organized by other Lighthouse projects and related initiatives

IRIS also presented experiences and lessons learnt in webinars organized by other Lighthouse and closely related projects. Below a selection.

6.12.1 Citizen engagement (2019)

IRIS (UTR, HKU) shared experiences and recommendations on citizen engagement, notably on storytelling, in a webinar organized by Lighthouse project +CityxChange in October 2019.

6.12.2 Smart public lighting procurement, Urban data Platform (2020, 2022)

IRIS (UTR) shared her experiences, results and recommendations in smart public lighting, notably the procurement process around it, as well as the Utrecht data platform (City Innovation Platform) in a webinar organized by the Lighthouse project STARDUST in August 2020, and in May 2022.

6.12.3 Citizen engagement (2021)

IRIS (UTR) shared experiences and best practices in citizen engagement and co-creation at a webinar organized in March 2021 by BRIDGE, a European Commission initiative which unites Horizon 2020 and Horizon Europe Smart Grid, Energy Storage, Islands, and Digitalization projects to create a structured view of cross-cutting issues which are encountered in the demonstration projects and may constitute an obstacle to innovation.

6.12.4   Citizen engagement (2021)

IRIS (HKU) shared experiences and recommendations on low effort design in citizen participation in renovation of apartment buildings in a webinar organized by the NEB initiative in collaboration with the EC LIFE Program, November 2021.

7 Conclusions & recommendations

The expected impact of Task 10.5 is the communication of the project and the dissemination of project's results, in support of knowledge transfer and replication, through plenary presentations, poster sessions, and participation in workshops at events, targeting non-specialist as well as specialist audiences.

This Deliverable D10.7 summarizes the activities and results of IRIS representation and participation in national and international events during the first half of the IRIS project, in order to capture lessons learnt and distil recommendations for the second half of the project.

7.1 Conclusions

In the 66 months of IRIS, all Lighthouse and Fellow Cities and many other IRIS-partners have (re)presented IRIS at least 69 international events, 17 national events, and 14 academic events, totaling at least **100 events**. If we also take into consideration the local events delineated in D10.8, this total raises to 150 events which is well above our initial target total of 140 events, notwithstanding the impact of COVID.

Both non-specialist and specialist audiences were reached at a wide array of events in all ten countries of IRIS, beyond IRIS countries in Europe, and across the world. Presentations were held, workshops and networking events attended, and webinars organized to build awareness and trust in IRIS actions and solutions, facilitate knowledge exchange and transfer in academia, research and policy spheres, and inspire the broader public to move towards a long-term sustainable behavior change and assist adoption of new technologies and services.

The experiences with international and national events lead to the following recommendations for ongoing new Lighthouse and related projects.

7.2 Recommendations

- To support in credibility, communication and dissemination can benefit greatly from input from **Monitoring and evaluation** results.
- **Insititutionalized networks of cities** such as EUROCITIES (of which all three IRIS Lighthouse cities are members) and Scalable Cities Coordinators Group (in which all seven IRIS cities have participated), are essential networks for communication and dissemination.
- A study by SCC01 Task Group Communication in 2021 showed that SCC1 Lighthouse projects and Scalable Cities best focus their communication efforts on attending and participating at the **Urbis Smart City Fair** and **Smart City Marketplace Forum events**, while also organizing and supporting **SCC01 and Scalable Cities joint webinars and workshops, including project's final events**. These events have the highest return on investment, high EU visibility, great value proposition and provide excellent networking opportunities. Also of importance was found to be the **EU Week of Cities and Regions**, as it provides good exchange of information and chance to meet EU policy makers.

Annex 1: 20 IRIS key deliverables

	Del nr	Deliverable title	Del owner	Month due
1	D4.5	Guide for integration and configuration of Fiware components and source code of the CIP core components and APIs of the CIP platform.	NCA	24
2	D8.1	A replication roadmap for Follower and other cities.	VAASA	25
3	D8.3	A replication toolbox for Follower and other cities.	VAASA	25
4	D4.3	Report on data governance within the CIP platform	NCA	30
5	D3.6	IRIS City innovation management performance and roadmaps	IMCG	36
6	D8.4	Replication Plan Vaasa	VAASA	36
7	D8.6	Replication Plan Alexandroupolis	ALEX	36
8	D8.8	Replication Plan Santa Cruz de Tenerife	SCT	36
9	D8.10	Replication Plan Focsani	FOCS	36
10	D9.6	Intermediate report after one year of measurement	RISE	38
11	D3.1	Learnings from innovative business model adaptation tool	UU	48
12	D3.4	SCUIBI-program 3.0 handbook for implementation in IRIS cities & beyond	UU	48
13	D5.8	Preliminary report on Utrecht lighthouse demonstration activities	UTR	48
14	D6.8	Preliminary report on Nice lighthouse demonstration activities	NCA	48
15	D7.8	Preliminary report on Gothenburg lighthouse demonstration activities	GOT	48
16	D5.9	Final report on Utrecht lighthouse demonstration results and lessons learnt	UTR	M60
17	D6.9	Final report on Nice lighthouse demonstration results & lessons learnt	NCA	M60
18	D7.9	Final report on Gothenburg lighthouse demonstration results and lessons learnt	GOT	M60
19	D2.1	Lessons learnt through cooperation with other Lighthouse projects (barriers and drivers in legislation, regulations and policies tackled together)	UTR	M60
20	D2.2	Report on development and application of standards for interoperability	CIV	M60

Annex 2: Categories of events

As Communication & Dissemination capacity and resources are limited[1], three levels of events are distinguished, with appropriate levels of support by the Communication & Dissemination Secretariat:

Level A: events with very high expected impact of IRIS communication and dissemination

Significant investment of Communication & Dissemination time, budget, and resources.

Table 1 Examples of Level A events: strong C&D support

'Level A' event	Type of organization. Relevance for IRIS
European Week of Regions and Cities	Large audience (6.000) of mostly regions and cities, European dissemination and replication opportunities
European Sustainable Energy Week	The biggest event in Europe dedicated to renewables and efficient energy use, attracting over 3,000 energy stakeholders in its 3-day policy conferencein Brussels with ample networking opportunities.
EUROCITIES Forum meetings	Platform of >140 cities in 39 countries, organized around six For a, among which Environment, Mobility, and Knowledge Society (ICT) forum. Small to fairly large audiences of city representatives (60-400). Exchange of lessons learnt; municipalities potentially interested in implementing IRIS solutions.

Level B: events with considerable expected impact of IRIS communication and dissemination

Limited investment of Communication & Dissemination time, budget, resources.

Table 2 Examples of Level B events: limited C&D support

'Level B' event	Type of organization. Relevance for IRIS
Smart City Expo & World Congress Barcelona (SCEWC)	Global marketplace and conference for wide range of smart city sectors. Very large audience (>20.000, representing a.o. 700 cities), fairly targeted (smart city stakeholders). Global dissemination and replication opportunities. *NB In 2019 BoC discusses how to improve the organization and form of Lighthouse representation at 'Barcelona' as EIP-SCC does not organize the Lighthouse representation anymore.*
SCC01 replication events	Fairy small but very relevant audience (200-300). Organized by one Lighthouse project for all other Lighthouse projects to support knowledge transfer and replication among Lighthouse cities and to Follower/Fellow cities.

Nordic Edge Smart City Expo & Congress	(Northern) European market place and conference for wide range of smart city sectors. Large audience (6.000), fairly targeted. Dissemination and replication opportunities.
Climate-KIC Energy, Climate-KIC Transport	Strong community promoting innovation in (sustainable) energy. Organises events all across Europe. Exchange of lessons learnt and policy recommendations.
TM Forum meetings	Global non-profit network of telecom industry. Presentation of IRIS project results and exchange of expertise on standards and interoperability to support city-needs driven development of industry standards.
EnergyCities annual meeting	European network of 1.000 local authorities in 30 countries on energy transition. Presentation of IRIS project and results; exchange of lessons learnt; policy recommendations; municipalities potentially interested in implementing IRIS solutions.
European Mobility Week	Towns and cities that register their participation showcase their commitment to clean and sustainable urban transport. In 2019: 3,135 towns and cities.
Major academic event (to be decided)	Dissemination of relevant results during conferences; research recommendations to and policy recommendations from academia.

Level C: sector-specific and expert 'thought leadership' events

No event-specific investment of Communication & Dissemination time, budget, resources.

Table 3 Examples of Level C events: No C&D support

'Level C' event	Type of organization. Relevance for IRIS
FIWARE Foundation & summit	A meeting place for developers, entrepreneurs, political decision makers, thought leaders, business executives and investors, including >100 cities. Exchange of expertise, lessons learnt and policy recommendations.
Open and Agile Smart Cities (OASC)	Non-profit, international network of >140 smart cities. Exchange of expertise, lessons learnt and policy recommendations.
Eur Regions Innovation Network (ERRIN)	Platform of >130 regional organisations from 24 European countries. Dissemination and replication opportunities in relevant working groups (e.g. Smart Cities).
POLIS annual conference, workings group meetings	Network of European cities and regions to develop innovative technologies and policies for local transport, organized around five themes (Environment and health, Traffic efficiency, Safety and security, Social and economic aspects, Governance). Dissemination and replication opportunities, policy recommendations.

Housing Europe	Network of 45 national and regional federations covering 43.000 public, social and cooperative housing providers in 24 countries. Exchange of expertise and lessons learnt; municipalities potentially interested in implementing IRIS solutions.
Covenant of Mayors for Climate and Energy	Global network of >7,000 local and regional authorities across 57 countries. Policy dissemination.
Investors summit	Presentation of IRIS solutions' business models and Lighthouse Solution Packages.
Computers, Privacy and Data Protection (CPDP)	Platform of 20 academic centres. Dissemination of relevant results during conferences; research recommendations to and policy recommendations from academia.