



|
Platone

PLATform for Operation of distribution NEtworks

|
D1.6

Report on Twin Projects Coordination Workshops



The project PLATform for Operation of distribution NEtworks (Platone) receives funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement no 864300.

Project name	Platone
Contractual delivery date:	30.04.2023
Actual delivery date:	19.04.2023
Main responsible:	Selene Liverani, E.DSO
Work package:	WP1 – DSO Operation Strategies and Harmonization
Security:	P = Public
Nature:	R
Version:	V1.0
Total number of pages:	32

Abstract

This deliverable describes the outcomes of the cooperation activities conducted by the Platone project to foster knowledge exchange, replication of best practices and exploitation of synergies among similar European projects and international initiatives. Special focus is dedicated to the collaboration with the twin projects of Platone, funded under the ES-1-2019 call of Horizon 2020, and the two Coordination Workshops organised in April 2021 and December 2022 as part of Task 1.4 “*Coordination with similar/twin projects*”. The organisation of the two workshops is described in detail, elaborating on the foreseen goals and discussion focus. The outcomes of the discussion, organised around different key topics, are reported and elaborated to identify common learnings, best practices and recommendations for future innovation and research. The participation and results of these cooperation activities will contribute to the exploitation of the Platone solution and insights after its conclusion in August 2023.

Keyword list

Flexibility – DSOs – Cooperation – Knowledge Sharing - Data Management - Data Economy - Regulatory Obstacles - Key Performance Indicators - Customer Engagement - Battery Storage - Clean Energy Package - Field testing - Energy Communities - Active User Participation - Open Source.

Disclaimer

All information provided reflects the status of the Platone project at the time of writing and may be subject to change. All information reflects only the author's view and the Innovation and Networks Executive Agency (INEA) is not responsible for any use that may be made of the information contained in this deliverable.

Executive Summary

“Innovation for the customers, innovation for the grid” is the vision of project Platone - Platform for Operation of distribution Networks. Within the H2020 programme “A single, smart European electricity grid”, Platone addresses the topic “Flexibility and retail market options for the distribution grid”. Modern power grids are moving away from centralised, infrastructure-heavy Transmission System Operators (TSOs) towards Distribution System Operators (DSOs) that are flexible and more capable of managing diverse renewable energy sources. DSOs require new ways of managing the increased number of producers, end users and more volatile power distribution systems of the future. Platone is using blockchain technology to build the Platone Open Framework to meet the needs of modern DSO power systems, including data management. The Platone Open Framework aims to create an open, flexible and secure system that enables distribution grid flexibility/congestion management mechanisms, through innovative energy market models involving all the possible actors at many levels (DSOs, TSOs, customers, aggregators). It is an open source framework based on blockchain technology that enables a secure and shared data management system, allows standard and flexible integration of external solutions (e.g. legacy solutions), and is open to integration of external services through standardized open Application Program Interfaces (APIs). It is built with existing regulations in mind and will allow small power producers to be easily certified so that they can sell excess energy back to the grid. The Platone Open Framework will also incorporate an open-market system to link with traditional TSOs. The Platone Open Framework will be tested in three European field trials and within the Canadian Distributed Energy Management Initiative (DEMI).

This deliverable reports on the engagement of the Platone project in cooperation activities with similar projects and initiatives aimed at fostering knowledge exchange, replication of best practices and exploitation of synergies. Since the beginning of the project, Platone’s partners have been actively involved in the working groups of numerous European initiatives such as BRIDGE, OPEN DEI and ETIP SNET, contributing to the publication of joint reports addressing a number of topics, including digitalisation, consumer engagement, and flexibility markets.

By joining efforts with the Horizon 2020 projects FEVER, edgeFLEX and DECIDE, Platone initiated in 2020 the FlexCommunity, to foster knowledge exchange on the topic of energy flexibility, building synergies to reduce regulatory barriers and sustaining projects work and learnings beyond their lifetimes. After three years, counting on more than 200 members, the organisation of over ten events and the consolidated participation in events and initiatives of international reach, the future work of the FlexCommunity will ensure the uptake of Platone’s results and findings.

International cooperation was sought through the collaboration with the DEMI Initiative, a partnership between the Northern Alberta Institute of Technology (NAIT), ATCO, Siemens and the University of Alberta. Two workshops were organised with the Canadian partners in 2020 and 2022 to explore the potential for replication of Platone’s approach for additional use cases in Canada. The assessment of this potential will be supported by the elaboration of a stakeholder questionnaire to be published at the conclusion of the Platone project.

A special focus of Platone’s cooperation activities was dedicated to the collaboration with its twin projects funded under the ES-1-2019 call of Horizon 2020 “*Flexibility and retail market options for the distribution grid*”: ebalance-plus, EUniversal, FEVER, FlexiGrid, FLEXIGRID, PARITY and X-FLEX. In this context, two Coordination Workshops were organised to ensure comparability and cooperation, enable fruitful knowledge exchanges, and facilitate the replication and exploitation of the projects’ results. The First Coordination Workshop, held in April 2021, gave the floor to the projects to present their strategy in addressing the challenges of the call and then opened the discussion among projects’ experts which addressed five key topics: data management and data economy, regulatory obstacles to innovation, Key Performance Indicators (KPIs), customer engagement, and DSO operation of battery storage. Building upon the outcomes of this event, the Second Coordination Workshop was organised in December 2022. In this second edition, projects’ representatives brought an update on the steps they had taken and planned to take to overcome their previously identified challenges. Presentations from the FlexCommunity and the BRIDGE Working Group (WG) on Consumer and Citizen Engagement highlighted the importance of knowledge exchange in promoting flexibility solutions in the energy system and supporting user engagement strategies. Knowledge sharing among projects experts focused on key topics revisited according to the project’s advancements: new regulatory impact on innovation, lessons learnt from field testing, customer engagement strategies, energy communities and active user

participation, and Open Source for DSOs. Insights from the discussion allowed to identify remaining barriers to the rollout of flexibility solutions, exchange best practices and formulate recommendations for the final steps of their activities and future innovation activities.

The results of the Coordination workshops and other joint activities will pave the way for the uptake of Platone's solutions after the conclusion of its activities in August 2023. Knowledge sharing and cooperation will play a key role in its exploitation, remarkably with the continuation of the FlexCommunity activities beyond the project and the renovated commitment of consortium partners in new European-funded projects building on Platone's results.

Authors and Reviewers

Main responsible		
Partner	Name	E-mail
E.DSO		
	Selene Liverani	selene.liverani@edsoforsmartgrids.eu
Author(s)/contributor(s)		
Partner	Name	
E.DSO		
	Selene Liverani	
B.A.U.M.		
	Kristin Petersen	
	Andreas Corusa	
Avacon Netz		
	Benjamin Petters	
	Navreet Dult	
Engineering		
	Ferdinando Bosco	
areti		
	Gabriele Fedele	
	Olivia Cicala	
HEDNO		
	Froso Gralista	
RSE		
	Ilaria Losa	
RWTH		
	Amir Ahmadifar	
Reviewer(s)		
Partner	Name	
areti		
	Gabriele Fedele	
	Antonio Vito Mantineo	
APIO		
	Mattia Alfieri	
	Alessandro Chelli	
Approver(s)		
Partner	Name	
RWTH		
	Amir Ahmadifar	

Table of Contents

1	Introduction	7
1.1	Task 1.4	7
1.2	Objectives of the Work Reported in this Deliverable	8
1.3	Outline of the Deliverable	8
1.4	How to Read this Document	8
2	Cooperation with twin projects and initiatives	9
2.1	Platone and the Twin ES-1 Projects	9
2.2	Platone and the BRIDGE Initiative	9
2.3	Platone and the OPEN DEI project	10
2.4	Platone and ETIP SNET	10
2.5	Platone and the FlexCommunity	10
2.6	Platone and the DEMI Initiative	11
3	First ES-1 Projects Coordination Workshop	12
3.1	Planning and organisation	12
3.2	Structure and content of the workshop	13
3.3	Outcomes and evaluation	14
4	Second ES-1 Projects Coordination Workshop	16
4.1	Planning and organisation	16
4.2	Structure and content of the workshop	17
4.3	Outcomes and evaluation	19
5	Milestone MS15	22
6	Discussion and Conclusion	23
7	List of Tables	24
8	List of Figures	25
9	List of References	26
10	List of Abbreviations	27
Annex A	Outcomes of the Breakout Rooms of the Second Coordination Workshop	28
A.1	New Regulatory Impact on Innovation	28
A.2	Lessons Learnt from Field Testing	29
A.3	Customer Engagement Strategies	30
A.4	Energy Communities and Active User Participation	31
A.5	Open Source for Distribution System Operators	32

1 Introduction

The project “PLATform for Operation of distribution Networks – Platone” aims to develop an architecture for testing and implementing a data acquisition system based on a two-layer Blockchain approach: an “Access Layer” to connect customers to the Distribution System Operator (DSO) and a “Service Layer” to link customers and DSO to the Flexibility Market environment (Market Place, Aggregators, ...). The two layers are linked by a Shared Customer Database, containing all the data certified by Blockchain and made available to all the relevant stakeholders of the two layers. This Platone Open Framework architecture allows a greater stakeholder involvement and enables an efficient and smart network management. The tools used for this purpose will be based on platforms able to receive data from different sources, such as weather forecasting systems or distributed smart devices spread all over the urban area. These platforms, by talking to each other and exchanging data, will allow collecting and elaborating information useful for DSOs, transmission system operators (TSOs), Market, customers and aggregators. In particular, the DSOs will invest in a standard, open, non-discriminatory, blockchain-based, economic dispute settlement infrastructure, to give to both the customers and to the aggregator the possibility to more easily become flexibility market players. This solution will allow the DSO to acquire a new role as a market enabler for end users and a smarter observer of the distribution network. By defining this innovative two-layer architecture, Platone strongly contributes to removing technical and economic barriers to the achievement of a carbon-free society by 2050 [1], creating the ecosystem for new market mechanisms for a rapid roll out among DSOs and for a large involvement of customers in the active management of grids and in the flexibility markets. The Platone platform will be tested in three European trials (Greece, Germany and Italy) and within the Distributed Energy Management Initiative (DEMI) in Canada. The Platone consortium aims to go for a commercial exploitation of the results after the project is finished. Within the H2020 programme “A single, smart European electricity grid” Platone addresses the topic “Flexibility and retail market options for the distribution grid”.

One of the key elements to maximise the impact, replication and exploitation of the solution developed and tested in Platone is the continuous exchange and cooperation with other projects and initiatives that are tackling similar challenges at the European and international levels. Seven additional projects were selected and funded under the same Horizon 2020 call “*Flexibility and retail market options for the distribution grid*” that Platone responds to. At the same time, the international cooperation with Canada envisioned in the call materialised with the partnership with the University of Alberta and the DEMI initiative. During the course of the project, Platone interacted with its twin projects through several joint activities, while two Coordination Workshops were organised to foster knowledge exchange among them. This document provides an overview of the collaboration activities of Platone and reports in detail on the organisation, content and key outcomes of the Coordination Workshops. The proposed analysis of the common learnings from these activities aims to provide recommendations for the fine-tuning of the final steps of the projects’ operation and a set of best practices contributing to future research and innovation activities.

1.1 Task 1.4

One of the main objectives of Work Package (WP) 1 “*DSO Operation Strategies and Harmonization*” is to foster harmonisation between Platone and similar projects and initiatives in Europe and beyond. In this context, Task 1.4 “*Coordination with similar/twin projects*” is dedicated to the coordination with the other projects responding to the LC-SC3-ES-1-2019 call of Horizon 2020 “*Flexibility and retail market options for the distribution grid*” as well as with the DEMI initiative in Canada. The objective of the task is to ensure comparability and cooperation between Platone and its twin projects, enabling fruitful knowledge exchanges and facilitating the replication and exploitation of the results of the projects. This work started at the beginning of the project (M1) and has been and will be continuously carried out until its conclusion in August 2023 (M48).

As part of the task, the organisation of two Coordination Workshops was foreseen in M20 and M40 with the end goal to maximise the uptake of the developed solutions at the EU level. Task 1.4 is associated with Milestone (MS) 15 of the project “*Last coordination workshop executed*” (M40). MS15 is to be considered achieved with the execution of the second and final workshop and the analysis of the lessons learnt during the complete cycle of events.

1.2 Objectives of the Work Reported in this Deliverable

This deliverable provides an overview of the collaboration activities of Platone conducted as part of Task 1.4 and describes in detail the organisation, content, and outcomes of the Coordination Workshops organised among ES-1 projects. The main objective of this document is to analyse the outcomes of the complete cycle of workshops and provide recommendations to maximise the EU-wide uptake of the solution developed by Platone and similar initiatives. The presented analysis contributes to the learnings of the project which will be presented in its Final Conference and will pave the way for the exploitation of the Platone's solution after the conclusion of its activities in August 2023.

1.3 Outline of the Deliverable

Chapter 2 of this deliverable provides an overview of the activities promoted and participated by Platone partners for cooperation with similar projects and initiatives at the EU and international levels. Chapter 3 describes in detail the planning, execution and outcomes of the First Coordination Workshop organised for ES-1 Projects partners. Similarly, Chapter 4 is dedicated to the Second ES-1 Projects Coordination Workshop. Chapter 5 reports on the achievement of MS15 associated with the execution of the two workshops. Lastly, Chapter 6 discusses the impact of cooperation activities on the final results of Platone and the work that will follow its conclusion. Annex A includes the screenshots from the platform used to support the discussion of the Second Coordination Workshop and collect its outcomes.

1.4 How to Read this Document

This deliverable reports on the collaboration activities of Platone realised as part of Task 1.4 and particularly on the Coordination Workshops organised for ES-1 projects. For an in-depth understanding of the project work that contributed to the organisation and content of the workshops it is recommended to read:

- Deliverable 1.2 *“Project KPIs definition and measurement methods”* [2] for the detailed definitions, calculation methodologies, data collection processes and baseline scenario conditions defined for the KPIs selected to assess Platone's performance.
- Deliverable 1.3 *“Overview of regulatory aspects that impact the solutions tested in the demos in European countries”* [3] (M24) for the results of the regulatory analysis carried out as part of WP1.
- Deliverable 1.5 *“Report on Workshops on customer engagement”* [4] for the description of the outcomes of the customer engagement workshops organised as part of the project.
- Deliverable D2.1 (and its update D2.2) *“PlatOne Platform requirements and reference architecture”* for the description of the open source Platone Open Framework [5].
- The latest deliverables on the demonstration activities of the project for an overview of lessons learnt from field testing:
 - For the Italian Demo: Deliverable 3.4 *“Delivering of Technology (v2)”* M38 for Lessons Learnt from Field Testing [6].
 - For the Greek Demo: Deliverable 4.1 *“Report on the definitions of KPIs and UCs”* [7], Deliverable 4.2 *“State estimation tool”* [8], Deliverable 4.3 *“Algorithm for ancillary services”* [9], Deliverable 4.4 *“Algorithm for optimal DER control”* [10].
 - For the German Demo: Deliverable 5.4 *“Use Case 1 Demonstration Report”* [11], Deliverable 5.5 *“Use Case 2 Demonstration Report”* [12], Deliverable 5.6 *“Use Case 3 and 4 Demonstration Report”* [13].
- Deliverable 8.9 *“Communication and Dissemination Plan (v3)”* (M36) [14] for a complete overview of the communication and dissemination activities participated and planned by the consortium it is recommended to consult.

2 Cooperation with twin projects and initiatives

Before describing in detail the organisation and outcomes of the two Coordination Workshops among ES-1 projects, this chapter provides an overview of the cooperation activities of Platone with similar projects and European and international initiatives.

2.1 Platone and the Twin ES-1 Projects

The Platone project is funded under the LC-SC3-ES-1-2019 call “*Flexibility and retail market options for the distribution grid*” of the Horizon 2020 call.

Projects selected under the call were expected to develop and demonstrate integrated solutions to ensure a secure and stable operation of distribution grids while fostering the integration of larger shares of renewable sources and the electrification of the energy sector. The testing activities carried out by the projects were to focus on one or more of the following aspects:

- Flexibility measures and provision of electricity grid services by flexible assets.
- Smart grid technologies for optimal observability, increased resilience, security and higher automation and control of the grid and distributed energy sources (DERs).
- Market mechanisms incentivising flexibility for the mitigation of short-term and long-term congestions and network issues supporting cooperation among System Operators (SOs) and integration with existing electricity markets.

Together with Platone, seven additional projects were funded under the LC-SC3-ES-1-2019 call:

- ebalance-plus,
- EUniversal,
- FEVER,
- FLEXIGRID,
- FlexiGrid,
- PARITY,
- X-FLEX.

In addition to the two Coordination Workshops organised as part of Task 1.4, a series of joint activities among the twin projects were planned since their beginning. A detailed list and description of all joint events can be found in D8.9 [14]. Notably, in addition to these events, the exchange between Platone and the EUniversal project was enhanced by the participation of the project’s coordinators in the respective Advisory and Dissemination Boards.

2.2 Platone and the BRIDGE Initiative

Since the beginning of the project, Platone’s partners have actively contributed to the activities of the Working Groups (WGs) and Task Forces (TFs) of the BRIDGE initiative. Notably:

- In the **Data Management WG**, RWTH and ENG provided an Open Source software approach to the creation of a European database of use cases¹, which the WG adopted as standard. Platone continues to support the advancement of the tool and the creation of new features, including the Platone point of view for interoperability aspects and the definition of market models and processes, as well as the support and contribution for the definition of the DERA 3.0 (Data Exchange Reference Architecture).
- In the **Regulation WG**, areti led the preparation and publishing of an updated version of the Harmonized Electricity Market Role Models (HEMRM) originally prepared by ENTSO-E – eBlX – EFET [15]. The goal of the document was to analyse the possible impact of local and distributed flexibility services on the HEMRM and support future developments of the electricity market in line with the provisions of the *Clean Energy for All Europeans* package. areti was further involved in the WG’s surveys related to barriers, lessons learnt and best practices aimed at improving consumers’ market access to value their flexibility, service provisions by energy communities, flexibility market coordination and integration. The outcomes of the survey will be

¹ Link to the Smart Grid Use Case Repository: <https://smart-grid-use-cases.github.io/>

elaborated into the final WG report of 2022 that is foreseen to be finalised at the end of April 2023.

- Finally, in the **Consumer and Citizen Engagement WG**, partner B.A.U.M. and further Platone representatives have been paving the path for a process developing a coherent and coordinated definition of stakeholder types, investigating their possible roles and parameters for engagement. Since 2022, B.A.U.M. leads the Topic Group 2 “Stakeholder characterization” which is closely connected with Topic Group 1 “Effective strategies for engagement” to secure development, adaption, and alignment. In this context, B.A.U.M. led the development of a stakeholder characterisation survey. The results are expected to be published on a freely accessible database and should help the development of future strategies of engagement with a high variety of stakeholders involved in the future flexible energy system.

2.3 Platone and the OPEN DEI project

In addition to the BRIDGE activities, Platone partners have been actively engaged in the OPEN DEI project which served as a platform for the exchange of best practices and maximisation of dissemination efforts until its conclusion in 2022. Specifically, the project contributed to the publication of the following reports:

- The *OPEN DEI Energy Pilots Explorer* booklet [15]. The report is an outcome of the **OPEN DEI Energy WG “Use-Cases Explorer”** and summarises the pilot activities of the Innovation Actions projects InterrConnect, INTERFACE, BD40PEM, and Platone.
- The *Data Spaces for Energy, Home and Mobility* report [17], reflecting on the challenges related to data exchange in the energy sector with a focus on common information models, data formats and standards.
- The “Impact Assessment and Portfolio Analysis”, reporting the business case of the Italian demo as a relevant Internet of Things (IoT) application case.

2.4 Platone and ETIP SNET

Platone’s partners have also been involved in the activities of the European Technology & Innovation Platform Smart Networks for Energy Transition (ETIP SNET), currently co-chaired by E.DSO, increasing the impact and visibility of the project. Specifically:

- In **WG1 “Reliable, economic and efficient energy system”** RSE was active in the drafting of a white paper as part of the Energy Community TF, including the Italian Demo of Platone to the presented set of Use Cases (UCs).
- **WG4 “Digitalisation of the electricity system and customer participation”**, focused on supporting the European Commission in the digital transition of the power system, has been co-chaired since 2022 by Platone’s coordinator Prof. Antonello Monti. Within this WG, RWTH provided input on the use of the Smart Grid Architecture Model (SGAM) approach for multi-energy systems.

2.5 Platone and the FlexCommunity

In the light of consortium partners having an active role in other H2020 projects and initiatives and the successful kick-offs for collaboration and cooperation activities during the first phase of Platone, the idea of creating a joint community on flexibility evolved. The goals of this initiative were to bring work on flexibility solutions to a new level of exchange, to join forces for reducing barriers in regulatory and standardisation bodies, to sustain discussion and a community beyond project lifetimes, to act as a (European) family of projects and to draw on project synergies.

The Horizon 2020 projects FEVER, edgeFLEX, DECIDE and Platone already confirmed to join in this effort at the beginning of 2020 and initiated the FlexCommunity². A kick-off event in November 2020 hosted by BRIDGE and the ERA-Net Smart Energy Systems (SES) Task Force on Energy Communities addressed the idea of a flexibility community. A pre-event to promote the FlexCommunity was organised

² The FlexCommunity is accessible via the link: <https://flex-community.eu/>. Communication is also upscaled by a LinkedIn profile of the FlexCommunity: <https://www.linkedin.com/company/flexcommunity-eu/>.

in October 2021 when Platone hosted an Energy Talk at the EUSEW 2021 Networking Village together with the project FEVER, raising the question of how energy democracy and system stability can come together. The subgroup “FlexOffer” had its constitutional meeting in December 2021, followed by the official launch event of the FlexCommunity by the projects FEVER, edgeFLEX and Platone in February 2022 which was joined by more than 150 participants. Project consortia from other H2020 or national research projects were invited as well as representatives from the European Commission (EC) and other relevant institutions and organisations. The working groups of the FlexCommunity, the FlexGroups, met regularly throughout 2022. For the one-year anniversary of the FlexCommunity, a two-day online conference with a panel discussion, interactive workshops and FlexGroups meetings was organised on February 22nd and 23rd, 2023³. Representatives from Platone actively contributed to the panel discussion and sessions.

The community is built on the active contribution of its members, moderated by selected experts within the community and coordinated by representatives of participating projects. Special community events, e.g., workshops and sessions at events, are offered to strengthen the community, convey its messages, and attract new members. A joint online hub for the community provides additional value, including a project and trial site database and contact options. The FlexCommunity is organised in different FlexGroups (FG). The group members meet regularly to discuss focus topics of their choice. There are currently four groups, **FG1: Technical management of flexibilities**, **FG2: Flexibility market and organisational design**, **FG3: Solutions for utilities and energy communities** and **FG4: FlexOffer User Group**.

Since the official kick-off at the beginning of February 2022, the FlexCommunity has grown to more than 200 members, from academia to industry and policy. The founding projects edgeFLEX, FEVER and Platone are supported by other EU projects that are actively involved in the community including BD4OPEM, FLEXGRID, FlexiGrid, GIFT. Partners and initiatives like E.DSO, ETIP SNET, OPEN DEI and the EC Directorate-General Energy have shown their support by joining the official FlexCommunity events.

2.6 Platone and the DEMI Initiative

In addition to its EU collaborations, Platone has established since its beginning a cooperation with the DEMI initiative in Canada, a partnership between the Northern Alberta Institute of Technology (NAIT), ATCO, Siemens and the Future Energy Systems research programme at the University of Alberta. The Platone approach was brought by the University of Alberta to the “Towards future interconnected electric system” project funded under a Natural Sciences Engineering Research Council of Canada (NSERC) grant. The collaboration provided the potential of extending the Platone UCs to microgrid flexibility, thanks to the testing and validation facilities of the Centre for Grid Innovation (CGI), initiated by DEMI in 2018 and located at NAIT.

As part of the collaboration with DEMI, two joint workshops were conducted in November 2020 and July 2022. The first workshop focused on the Platone Open Framework and the involvement of the University of Alberta in replicating the use of the platform on the Canadian site, networking with relevant stakeholders (particularly DSOs) for the adoption of the Platone solution and contributing to the Linux Foundation Energy WG in charge of supervising the long-term development of the platform. On the other hand, the second joint workshop focused on the insights from the scalability, replicability and Cost-Benefit-Analysis work conducted by RSE and NTUA in WP7 of Platone. The outcomes from the discussion led to the development of a questionnaire targeting Canadian stakeholders across the whole value chain of power system flexibility. The questionnaire will investigate regulatory conditions, technological state-of-the-art and stakeholder engagement levels to support the qualitative assessment of the replicability potential of Platone’s solutions to a set of new use cases. The outcomes of this evaluation will be elaborated in D7.5, to be published at the conclusion of the Platone project.

³ Link to the publication on the Platone’s website:

<https://platone-h2020.eu/Events/1049/FlexCommunity-Conference-2023>

3 First ES-1 Projects Coordination Workshop

The First Coordination Workshop for the ES-1 projects was held on April 26th, 2021, in a virtual format.

3.1 Planning and organisation

The organisation of the workshop was led by E.DSO with the support of all the partners involved in WP1 of Platone. The planning of the event started in February 2021 and an overview of its organisation actions and timeline is provided in Table 1.

Following discussion among WP1 partners, it was decided to limit the participation to the workshop to the ES-1-2019 projects' consortia and the Canadian partner to maximise active participation in the discussion. Moreover, it was opted to include two main sessions in the workshop:

1. A project pitch session directed to all participants, allowing to familiarise with the project's work and the different actions implemented to respond to the ES-1 challenge.
2. A discussion session, for which participants were split into thematic breakout rooms, bringing together experts from each project and fostering knowledge sharing in smaller groups before sharing the key outcomes with all the attendees.

The topics for the breakout rooms discussions were chosen starting from the challenges to innovation identified by the ES-1 call, the regulatory analysis performed as part of WP1 and the regular exchanges among Platone partners. Finally, the list of topics to be addressed in the event was shortlisted as seen below:

1. Data Management and Data Economy.
2. Regulatory Obstacles to Innovation.
3. Key Performance Indicators (KPIs).
4. Customer Engagement.
5. Operation of battery storage – the role of DSOs in the Clean Energy Package (CEP).

For each of the topics, a list of questions to support the discussion was defined together with the moderators appointed to each breakout room.

Representatives and partners from the other projects were invited via email by E.DSO, which also organised the collection of presentation material for the pitch session. All the contacted projects accepted to take part in the event.

Table 1: Overview of the actions and timeline followed for the organisation of the First Cooperation workshop.

Action	When	How	Who
Definition of planning timeline and responsibilities	Mid-February 2021	Internal planning	E.DSO
Date setting	Early March 2021	Discussion with partners	E.DSO, WP1 partners
Definition of workshop scope, format and draft agenda	Early March 2021	Discussion during WP1 meetings	All WP1 project partners
Invitation of projects representatives	Mid-March 2021	Email invitation	E.DSO
Definition of agenda, speakers and	Late March 2021	Discussion during WP1 meetings	All WP1 project partners

moderators for the event			
Definition of content for the workshop (e.g. topics and questions for breakout rooms)	Early April 2021	Discussion with identified moderators	All WP1 project partners
Set up of supporting tools and sending invitations to all ES-1 projects' partners	Mid-April 2021	Set up of Zoom platform, email invitations	E.DSO

3.2 Structure and content of the workshop

The First ES-1 Projects Cooperation Workshop took place on April 26th, 2021, virtually on the Zoom platform. The event saw the participation of 75 representatives of the eight projects funded under the ES-1-2019 Horizon 2020 call and the DEMI initiative in Canada. The full agenda of the event can be seen in Figure 1.

Agenda	
3 pm Introduction & Housekeeping Rules	4:15 pm Breakout sessions
3:15 pm ES-1 Projects Pitch: How did you answer to challenges of the call? (3 minutes)	1) Data Management and Data Economy
- ebalance-plus	2) Regulatory Obstacles to Innovation
- EUniversal	3) KPIs
- FEVER	4) Customer Engagement
- FLEXIGRID.eu	5) Operation of battery storage – the role of DSOs in the Clean Energy Package
- FLEXIGRID.org	
- PARITY	
- PLATONE	4:35 pm Discussion of the key outcomes of the breakout session
- NAIT – Distributed Energy Initiative	
- X-FLEX	
4 pm Q&A and discussion	4:50 pm Discussion, Wrap-up and Conclusion

Figure 1: The agenda for the First ES-1 Projects Cooperation Workshop.

The event was opened with a short welcome and introductory session, presenting the agenda and an overview of the ES-1 call challenge. Following this, the nine participating projects had the chance to present their work by delivering a three-minute pitch responding to the question “How did you answer the challenges of the call?”.

Following a short Q&A session, the participants were divided into five breakout rooms for five parallel thematic discussion sessions. The discussion in each of the breakout rooms was moderated by one consortium partner of Platone and facilitated through the set of guiding questions identified during the planning phase of the workshop. Here below are indicated the discussion topics, moderators and guiding questions for each room.

1. Data Management and Data Economy. Moderated by **Prof. Antonello Monti**, RWTH, Project Coordinator.

- The Data Management WG of BRIDGE has started an exercise for the definition of data architectures. Are you aware of the status of the work? What is your view on this exercise?
- What do you think will be the role of Data Spaces in the energy sector?
- Are grid operators progressing at the right pace when it comes to data management?

- What is the most critical missing element for the creation of a data economy in the energy sector? Do you foresee the nature of possible barriers to being mainly regulatory, cultural or technical?
 - Are customers ready and willing to be part of a data economy?
- 2. Regulatory Obstacles to Innovation.** Moderated by **Sophia Giovanetti, E.DSO**, WP1 leader.
- Which regulatory areas did you identify as barriers or drivers for the innovation you propose?
 - How are the EU and national legislation influencing the harmonisation of the demos' activities in your project?
 - How does legislation impede the rollout of the solutions of your project?
 - Are there regulatory aspects that can impact the scalability and replicability potential of the solutions tested in your demos?
 - What are the key regulatory aspects that should be addressed by the institutions?
 - What are the key issues faced by your project regarding future market design?
- 3. Key Performance Indicators (KPIs).** Moderated by **Elisa Anderson, E.DSO**, WP1 leader.
- Is there a methodology for the definition of UCs in a demo that facilitates the identification process of KPIs? How can this be better tailored to each project?
 - Can you share your experiences on the KPIs identification process you have followed? What were the assumptions and literature that you based your work on?
 - Classification of KPIs
 - How have you classified the KPIs identified for your project? How is an appropriate balance between the technical, social, economic, and environmental domains found?
 - Have you included KPIs from the regulatory domain in your list? What are your opinions regarding this?
- 4. Customer Engagement.** Moderated by **Manuel Haas and Janina Katona, BAUM**, WP8 leader.
- What are the advantages and disadvantages of passive (inform) and active (involve and understand) engagement strategies, respectively?
 - What kind of stakeholders and users did you integrate in your project?
 - How did you engage end-users in your project?
- 5. Operation of Battery Storage – the Role of DSOs in the Clean Energy Package (CEP).** Moderated by **Benjamin Petters and Navreet Dult, Avacon**, WP5 leader.
- What is the status of the transposition of the CEP in your country?
 - In which case can SOs currently operate battery storage? What are the prerequisites? Are there any exceptions?
 - What are the potential needs and UCs for battery storage?

Back to the main session, the moderators of each breakout room reported the key findings of their respective discussions. The event was concluded with a short Q&A session and a wrap-up of the outcomes of the event.

3.3 Outcomes and evaluation

The participants of the **Operation of Battery Storage** breakout room agreed on the capability that battery storage has in avoiding and decreasing the amount of grid congestion in selected areas of the distribution grid, relieving the physical infrastructure from high penetration of renewables, improving voltage quality, and increasing the reliability of energy supply. The projects recognised the potential of this technology in improving the efficiency of distribution grids and allowing for the delay in grid expansion and reinforcement.

Overall, the event received positive feedback from the participants who actively contributed to the event. As the inputs for discussion were many, one suggestion was to extend the duration of the session for the breakout rooms which was perceived to be too short.



Figure 2: Concluding slide of the First ES-1 Projects Coordination Workshop

4 Second ES-1 Projects Coordination Workshop

The Second Coordination Workshop for the ES-1 projects was held on December 6th, 2022, in a virtual format.

4.1 Planning and organisation

The organisation of the workshop was led by E.DSO with the support of all the partners involved in WP1 of the project. The planning of the event started in September 2022 and an overview of its organisation actions and timeline is provided in Table 2.

As in the case of the previous workshop, it was decided to open participation to the ES-1-2019 projects' consortia and the Canadian partners. Moreover, it was decided to follow a structure similar to the one of the First Coordination workshop with a project pitch session and a discussion session in breakout rooms. In addition, an extra session was dedicated to stakeholder characterisation, aimed at strengthening the link between the activities of Task 1.4 and Task 1.5 "*Harmonization with customers and partners needs and expectations*" led by partner BAUM and the participation in the BRIDGE Consumer and Citizen engagement WG.

A survey was circulated among the Platone consortium to identify the expectations regarding the outcomes of the event and a preliminary list of topics for the discussion. The survey clarified that partners saw the event as an occasion to develop recommendations for the next steps of the project and to contribute to future innovation and research. On the other hand, the topics for discussion were agreed upon during a project General Assembly to be:

1. New regulatory impact on innovation.
2. Lessons learnt from field testing.
3. Customer engagement strategies.
4. Energy communities and active user participation.
5. Open Source for Distribution System Operators.

For each of the topics, a list of questions to support the discussion was defined together with the WP1 partners and thanks to a survey circulated among the representatives of projects invited to the event. These were contacted and invited via email by E.DSO, while a registration form was set up to be circulated among all the members of their consortia. Representatives from the other projects were invited via email by E.DSO. The ebalance-plus, EUniversal, FEVER, FLEXIGRID, PARITY, and X-FLEX projects confirmed their participation in the workshop and contributed to the definition of its content by answering a survey and providing their slides for the project pitch session.

Table 2: Overview of the actions and timeline followed for the organisation of the Second Cooperation workshop.

Action	When	How	Who
Definition of planning timeline and responsibilities	Early October 2022	Internal planning	E.DSO
Date setting	Early October 2022	Discussion during PMT	E.DSO, WP1 partners
Definition of workshop scope, format and draft agenda	Mid-October 2022	Survey circulated among partners, open discussion during General Assembly	All project partners
Invitation of projects representatives	Late October 2022	Email invitation	E.DSO

Definition of content for the workshop (e.g. topics and questions for breakout rooms)	Early November 2022	Survey to ES-1 projects representatives and discussion with partners	All project partners, ES-1 projects representatives
Opening of registrations to the event	Early November 2022	Email to Platone partners invited projects' representatives, Eventbrite sign up	E.DSO
Finalisation of the agenda	Early December 2022	Confirmation of speakers and contributions from invited projects	E.DSO
Set up of supporting tools and organisation of the moderation	Early December 2022	Zoom meeting set up, Conceptboard set up, preparatory meeting with moderators	E.DSO, moderators

4.2 Structure and content of the workshop

The Second ES-1 Projects Cooperation Workshop took place on December 6th, 2022, virtually on the Zoom platform. The event saw the participation of around 40 representatives from the seven ES-1 projects ebalance-plus, EUniversal, FEVER, FLEXIGRID, PARITY, Platone and X-FLEX. Figure 3 shows the speakers and moderators of the event, while the full agenda can be seen in Figure 4.

The event was opened with a short welcome, introducing the agenda and an overview of the ES-1 call challenge, and a presentation on how to promote flexibility solutions in the energy system through knowledge exchange by **Ludwig Karg, BAUM**, representing the FlexCommunity. Following this, the seven participating projects provided an update on the advancement of their work with three-minute pitches responding to the question “What steps did you take, and which ones are needed next to overcome the challenges faced by the projects?”.



Figure 3: The speakers and moderators of the Second ES-1 Projects Coordination Workshop.

The participants were then divided into five breakout rooms for a parallel thematic discussion session moderated by consortium partners of Platone and facilitated through the set of guiding questions

identified during the planning phase of the workshop. Here below are indicated the discussion topics, moderators and questions for each room.

1. New regulatory impact on innovation. Moderated by **Selene Liverani, E.DSO**, WP1 leader.

- How has the regulatory and legislative landscape (in the EU or specific Member States) changed since your project started? How did this affect your project activities?
- What are the regulatory barriers that still remain? And what are your recommendations to overcome them?
- Did you involve or successfully reach out to regulators or other policymakers in your project? What were the concrete results of these interactions?
- Regulatory sandboxes: How can these foster regulatory innovation? Do you have any experiences to share for your project work or your countries?

2. Lessons learnt from field testing. Moderated by **Froso Gralista, HEDNO**, WP4 leader.

- Market-based approaches for the procurement of flexibility: what are the experiences from your project or pilots? What were the lessons learnt?
- Did you face any challenges related to interoperability among DSOs' legacy systems and novel IoT solutions (e.g. for communication and data elaboration)? How did you approach them?
- What is the potential of integration of different energy vectors (e.g. electricity and heat) and what are the challenges?
What were your practical experiences from the active engagement of prosumers in your demos (challenges and drivers to participation, barriers to involvement in flexibility markets, need for education and information campaigns, ...)?

3. Customer engagement strategies. Moderated by **Andreas Corusa, BAUM**, Task 1.5 leader.

- What barriers did you identify hindering the widespread establishment of local flexibility markets in terms of customer engagement? Do you have any recommendations for policies or strategies that could be adopted to overcome them?
- Do you have experience in user engagement strategies that involved the use of Information and Communication Technologies (ICT)? What were your lessons learnt?
- Impact of participation in flexibility markets on customers: did any issue (real or perceived) of conflict of interest emerge from your pilot activities (e.g. on the core business of participants)? How did you face them?

4. Energy communities and active user participation. Moderated by **Gianluca Nori, Acea Energia**, leader of customer engagement activities for the Italian Demo.

- Do the pilot activities of your project involve some form of energy community? How do these look like and how did you define the concept of energy community? How did you involve them in your pilots?
- From your pilot activities, which strategies proved to be more successful in attracting users' participation as part of an energy community? Which ones less?
- What kind of information did you share with the users involved in the pilots and what are the needs for information/education to motivate them to participate in future flexibility markets?

5. Open Source for DSOs. Moderated by **Ferdinando Bosco, Engineering**, WP2 leader.

- How did you integrate Open Source solutions in the projects and how did you deliver those to DSOs?
- DSO's reluctance to adopt Open Source solutions: what were the concerns you encountered (e.g. lack of professional support or security)? How does your proposed solution manage to overcome them?
- What is the role of data governance entities (e.g. energy Data Spaces, BRIDGE, GAIA-X) in supporting the gradual adoption of Open Source in the energy sector?
- How can Open Source solutions coexist with (existing) commercial ones?
- What is the role of open standards and open source in accelerating the energy digital transition? What are their main advantages and what are the next steps for development?

Back to the main session, **Andreas Corusa** presented the *stakeholder characterisation survey* created as part of the BRIDGE Initiative, diving into how the insights from projects and experts' research could

support the development of future engagement strategies. Afterwards, the moderators reported the key outcomes of each breakout room to all participants to conclude the event.

Time	Item
2:00 – 2:10	Welcome. Selene Liverani, E.DSO.
2:10 – 2:20	Opening presentation: <i>Fostering knowledge exchange to promote flexibility solutions in the energy system.</i> Ludwig Karg, B.A.U.M. Consult.
2:20 – 3:00	3' Projects Pitches: <i>What steps did you take and which ones are needed next to overcome the challenges faced by the projects?</i> <ul style="list-style-type: none"> • Platone: Antonello Monti, RWTH Aachen University. • ebalance-plus: Juan Jacobo Peralta, CEMOSA. • EUniversal: Carlos Pedro Marques, E-REDES. • FEVER: Isidoros Kokos, INTRACOM Telecom. • FLEXIGRID: Marily Efstratiadi, Elin Verd. • PARITY: Stelios Zikos, CERTH. • X-FLEX: Elena Boskov, Blueprint Energy Solutions.
3:00 – 3:15	Q&A
3:15 – 3:25	Coffee break
3:25 – 3:55	Breakout sessions discussion. <i>Knowledge sharing and discussion in five parallel breakout rooms:</i> <ol style="list-style-type: none"> 1. New regulatory impact on innovation. 2. Lessons learnt from field testing. 3. Customer engagement strategies. 4. Energy communities and active user participation. 5. Open Source for Distribution System Operators.
3:55 – 4:30	Stakeholder characterisation session. <i>Diving into the survey we have created within the BRIDGE Initiative to characterize stakeholders in the flexible energy system.</i> Andreas Corusa, B.A.U.M. Consult.
4:30 – 5:00	Discussion of key outcomes. Breakout rooms moderators.
5:00 – 5:05	Wrap up and conclusion. Selene Liverani, E.DSO.

Figure 4: The agenda for the Second ES-1 Projects Cooperation Workshop.

4.3 Outcomes and evaluation

The following paragraphs summarise the key outcomes of the discussion of each breakout room. For additional detail, Annex A includes the screenshots of the *Conceptboards*⁴ used by participants to support the discussion. The outcomes were shared by email to participants and published both on the Platone⁵ and E.DSO's websites.

After the conclusion of the workshop, an evaluation survey was circulated among participants. Overall, the event received very positive feedback, especially with respect to the relevance of its content, the level of engagement from participants, and the quality of the discussion.

New regulatory impact on innovation.

The first thematic breakout room was dedicated to *new regulatory impact on innovation*. Participants first discussed the changes that had taken place since the beginning of the ES-1 projects' activities in the **regulatory and legislative landscape** of the EU and its Member States MS. Since 2019, an

⁴ The Conceptboards can also be accessed through this link:

<https://app.conceptboard.com/board/g35m-6i4s-r0xi-z9xx-q25r>

⁵ Link to the publication on the Platone's website:

<https://www.platone-h2020.eu/Events/1046/Second-interproject-workshop>

increasing interest in the **procurement of flexibility to provide grid services and support long-term planning of distribution networks** has triggered EU-wide discussion and pushed for **increasing TSO-DSO coordination**. The CEP has been unevenly transposed into national law by numerous MS, as in the case of Citizen Energy Communities (CECs) and Renewable Energy Communities (RECs).

The analysis of **remaining regulatory barriers**, despite the recognised advancements, highlighted how the national transposition of EU directives as “distinct concepts” rather than as a package, resulted in a **lack of harmonisation across the EU**. Among the obstacles to the establishment of (local) flexibility markets, the projects identified the difficulty of **capturing the long-term value of flexibility in clear business models**, the gaps in **regulation on aggregation**, and the too-slow introduction of **tariff schemes, new connection agreements and incentives** for the procurement of flexibility from DSOs. Lastly, the need for **real-time** exchange of consumption data registered by smart meters, and **investment in advanced monitoring and measurement systems** was recognised as a paramount challenge to address to unlock flexibility potential. A fast response to these requirements from national policy, together with the EU-level one, is needed to foster **scalability and replicability** of developed flexibility solutions. Differences across MS and regional specificities shall be addressed by the development of interoperable but tailorable tools.

Regulatory sandboxes were recognised as enablers of regulatory innovation, fostering engagement of different stakeholders in the energy ecosystem (market operators, aggregators, DSOs, TSOs, ...). Although the implementation of sandboxes varies across MS in terms of organisational and legal structure, a common fundamental need that emerged is the necessity to keep calls for sandboxes updated to reflect overall challenges to innovation and society overall. In this context, Horizon-funded projects can be regarded as sandboxes themselves, offering a strong example to lead innovation in the industry, facilitating interaction across pilots from different countries and fostering the involvement of regulators and policymakers.

Lessons Learnt from Field Testing.

The second thematic breakout room was dedicated to *lessons learnt from field testing*. Participants exchanged on their **different approaches to exploit flexibility in distribution grids**, ranging from **dynamic electricity tariffs to market-based solutions and trading platforms**. The ES-1 projects are testing the use of flexibility offered by a variety of resources including storage systems, electric vehicles, heating technologies and energy management systems. While highlighting **the importance of cross-sector integration** to boost the energy transition, experience from the field remarked the need to consider the **different requirements and drivers of stakeholders in the energy ecosystem** when designing new successful business models.

The projects then discussed the challenges they faced during the implementation of their demo activities and agreed on the fact that many **regulatory barriers are yet to be overcome**. Differences across member states' regulations, incentives and approval processes call for an **EU-wide solution driving a common understanding and value creation for flexibility**. Special attention was dedicated to **interoperability challenges** hindering the integration and interaction among DSO's legacy systems and novel IoT solutions, which call for the **harmonisation of communication protocols** across the EU. On top of these, the existence of **different standards for connection, baselining and control of flexible resources** also posed technical challenges in the pilot activities.

Lastly, looking at learnings from **engagement strategies** in the demos, the projects recognised that **well-designed incentives to prosumers** play a fundamental role in the procurement of flexibility, offering an alternative to costly reinforcements of distribution grids. In this respect, **awareness and information campaigns** have proved to be powerful measures to foster interaction with users and increase the know-how of DSOs.

Customer Engagement Strategies.

The discussion first looked at the obstacles to customer engagement in local flexibility markets and identified three main ones: the (perceived) **impact on lifestyle**, the **change in costs and potential revenues**, and the **barriers posed by regulation**. It should be noted that, while electricity has historically been a low involvement good, current developments have made the **role of the user in the power system increasingly interactive and visible** and involvement strategies should evolve according to this change.

Based on these findings, the projects recognised four target areas for policy action and engagement strategies. First, the design of **action plans for education and communication**. Second, the **provision of incentives to minorities** and stakeholder segments that are harder to reach. Third, the **management of conflicts of interest** among market stakeholders and lastly, the **application of behavioural research and methods**.

Later, participants discussed the **interaction across user engagement strategies and ICT**. While digital solutions can offer support and increase outreach, engagement activities should not solely rely on them. The **establishment of an emotional connection** represents an important factor to gain the attention of involved actors. The creation of a physical space for interaction, managed by experienced moderators or mediators, has proved to be beneficial. At the same time, barriers connected to the **acceptance of new technologies** should be taken into account: **information needs to be communicated in a simple, understandable and trustworthy way**.

Energy Communities and Active User Participation.

The projects first discussed the needs to be addressed for the active participation of CECs and RECs in flexibility solutions. Firstly, establishing **effective communication with community members is fundamental**. Technical aspects should be explained easily and understandably while benefits from participation for the community should be made clear. In this respect, the involvement of energy communities through bottom-up approaches that leverage on social responsibility has proved to be successful. Secondly, **minimum requirements and characteristics of ECs should be defined** to allow **both DSOs and prosumers to benefit respectively from the procurement and offering of flexibility**. Lastly, tools such as **blockchain and smart contracts** should be investigated and integrated to effectively unlock the flexibility potential of ECs.

Lastly, the projects looked at the opportunities stemming from the **cooperation between DSOs and ECs**. ECs offer a valuable platform to **investigate user participation** and understand their behaviour in a context in which **social responsibility emerges as an important driver besides economic return**. At the same time, ECs allow **testing the provision of bundles of services** to and from its members and evaluate the efficacy of implemented tools at an aggregated level. To this end, a recommendation from the projects' experience is to **organise workshops** at the beginning of pilot operations to **understand the characteristics of the involved ECs and optimally design interactions among stakeholders**.

Open Source for Distribution System Operators.

The projects first shared insights from the development and testing of different open solutions, which include modular frameworks that are interoperable with DSOs' legacy systems and APIs that aim to fulfil DSOs' needs while integrating information from third-party platforms. Among the identified barriers against the adoption of Open Source by DSOs were the **lack of ICT know-how, data access and privacy concerns, and gaps in specific regulations**. Nevertheless, the projects highlighted that the adoption of **blockchain and distributed ledger technologies** can significantly lower these concerns by **increasing transparency and trust**.

Moreover, the participants discussed the benefits of the adoption of open solutions and recognised that these **accelerate innovation and adoption of standards** while offering **easiness of adoption, integration and use**. To further support their uptake in the power distribution sector, however, **Open Source approaches should be supported and incentivised at the EU policy level**. The **establishment of a European entity focusing on the promotion of interoperability** should be regarded as beneficial. While initiatives such as BRIDGE support the progress and interaction of projects during their implementation, **an entity to support the exploitation of projects' results after their conclusion is still lacking**.

5 Milestone MS15

Task 1.4 of Platone was connected to Milestone (MS) 15 of the project “*Last coordination workshop executed*”, to be achieved through the successful organisation of Coordination Workshops and the analysis of the lessons learnt.

Following the conclusion of the Second Workshop, a report on the key outcomes from the discussion, as reported in Chapter 4.3, was produced to share the results of the cycles of workshops and promote further knowledge exchange among Platone and similar initiatives. The document was sent to all the participants of the workshop by email, made publicly available on Platone’s website⁶ and disseminated through the project’s social media and other partners’ channels. Thanks to the execution of the workshop and the subsequent analysis of the ongoing discussions and respective conclusions, MS15 was successfully achieved by the end of December 2022.

⁶ Link to the publication on Platone’s website:
<https://www.platone-h2020.eu/Events/1046/Second-interproject-workshop>

6 Discussion and Conclusion

Since the beginning of the Platone project activities, fruitful interactions and collaborations have been established with Horizon 2020 sister projects and European initiatives in the smart grids' domain. Notable examples include the participation in the BRIDGE and OPEN DEI activities and the co-funding of the FlexCommunity. International cooperation was sought through the partnership with the DEMI Initiative, exploring the potential of replication of Platone's solutions in Canada.

In this context, two Coordination Workshops were organised for Platone and the other projects selected under the Horizon 2020 call "*Flexibility and retail market options for the distribution grid*". The events promoted knowledge sharing, focusing on the key challenges faced by the twin projects and their learnings, and proving the value of cooperation as an enabler of innovation. Participants worked together to identify remaining barriers to the rollout of flexibility solutions, exchange best practices and formulate recommendations for the final steps of their activities and future initiatives. The results of the coordination workshops and other cooperation activities, as part of the successful engagement and cooperation strategy of Platone, will pave the way for the exploitation of the project's solution after the conclusion of its activities in August 2023.

A significant role in exploitation will be played by the FlexCommunity, whose achievements to date include the engagement of over 200 registered members, the organisation of ten FlexGroup meetings and two FlexConferences, the establishment of strategic cooperations with the National Stakeholder Coordination Groups of ETIP SNET and the participation at SmarterE, EUSEW 2022 and Enlit 2022. The community developed and published a Memorandum of Understanding (MoU) through which members committed to:

- Enable large-scale use of (distributed) flexibility resources in the energy system.
- Foster knowledge exchange among stakeholders from research, industry, and regulatory organisations.
- Promote networking at national, transnational and international levels.
- Progress innovation beyond the timelines of partner projects.

Based on this MoU, the FlexCommunity has defined its next steps and goals and announced its next conference for February 2024.

The future uptake of the results and learnings from the Platone project will also be guaranteed by further collaboration of its consortium partners in European-funded projects and initiatives. Notably, the Horizon Europe projects FLOW⁷ and BeFlexible⁸, which started in the second half of 2022, will leverage the architecture and data management approach developed within Platone to progress its maturity and extend its application to new use cases. While FLOW aims at boosting the uptake of a user-centric model of electromobility and its optimal integration with the power system, BeFlexible focuses on enhancing energy system flexibility by promoting stakeholders' cooperation across the whole value chain. The involvement in both projects of Platone's partners E.DSO, areti, ENG, RSE and RWTH will guarantee the continuity of the work and the exploitation of synergies.

The results of the fruitful collaborations and knowledge-sharing initiatives led by Platone will pave the way towards overcoming the barriers identified by the experience of the project and its twin initiatives and will facilitate the deployment of the solutions they have tested. Altogether, these will foster the uptake of flexibility solutions and smart grid technologies for the decarbonisation and electrification of the European power system.

⁷ More on the FLOW project: <https://www.theflowproject.eu/>

⁸ More on the BeFlexible project: <https://beflexible.eu/>

7 List of Tables

Table 1: Overview of the actions and timeline followed for the organisation of the First Cooperation workshop.	12
Table 2: Overview of the actions and timeline followed for the organisation of the Second Cooperation workshop.	16

8 List of Figures

Figure 1: The agenda for the First ES-1 Projects Cooperation Workshop.....	13
Figure 2: Concluding slide of the First ES-1 Projects Coordination Workshop.....	15
Figure 3: The speakers and moderators of the Second ES-1 Projects Coordination Workshop.....	17
Figure 4: The agenda for the Second ES-1 Projects Cooperation Workshop.	19

9 List of References

- [1] European Commission, “2050 long-term strategy”, [Online]. Available: https://ec.europa.eu/clima/policies/strategies/2050_en
- [2] “D1.2 Project KPIs definition and measurement methods”, Platone EU Horizon 2020 Project, 2020.
- [3] “D1.3 Overview of regulatory aspects that impact the solutions tested in the demos in European countries”, Platone EU Horizon 2020 Project, 2021.
- [4] “D1.5 Report on Workshops on customer engagement”, Platone EU Horizon 2020 Project, 2023.
- [5] “D2.1 Platone Platform requirements and reference architecture (v1)”, Platone EU Horizon 2020 Project, 2020.
- [6] “D3.4 Delivering of Technology (v2)”, Platone EU Horizon 2020 Project, 2022.
- [7] “D4.1 Report on the definitions of KPIs and UCs”, Platone EU Horizon 2020 Project, 2020.
- [8] “D4.2 State estimation tool”, Platone EU Horizon 2020 Project, 2020.
- [9] “D4.3 Algorithm for ancillary services”, Platone EU Horizon 2020 Project, 2022.
- [10] “D4.4 Algorithm for optimal DER control”, Platone EU Horizon 2020 Project, 2021.
- [11] “D5.4 Use Case 1 Demonstration Report”, Platone EU Horizon 2020 Project, 2021.
- [12] “D5.5 Use Case 3 and 4 Demonstration Report”, Platone EU Horizon 2020 Project, 2022.
- [13] “D5.6 Delivering of Technology (v2)”, Platone EU Horizon 2020 Project, 2023.
- [14] “D8.9 Communication and Dissemination Plan (v3)”, Platone EU Horizon 2020 Project, 2022.
- [15] BRIDGE, “Harmonized Electricity Market Role Model, A Differential Analysis with Respect to the ENTSO-E – ebIX – EFET Model”, [Online]. Available: https://energy.ec.europa.eu/system/files/2021-06/bridge_wg_regulation_eu_bridge_hemrm_report_2020-2021_0.pdf
- [16] OPEN DEI, “Open Dei Energy Pilots Explorer”, [Online] Available: <https://www.opendei.eu/case-studies/opendei-energy-booklet/>
- [17] A. Dognini, et al., “Data Spaces For Energy, Home And Mobility”, OPEN DEI, 2022.

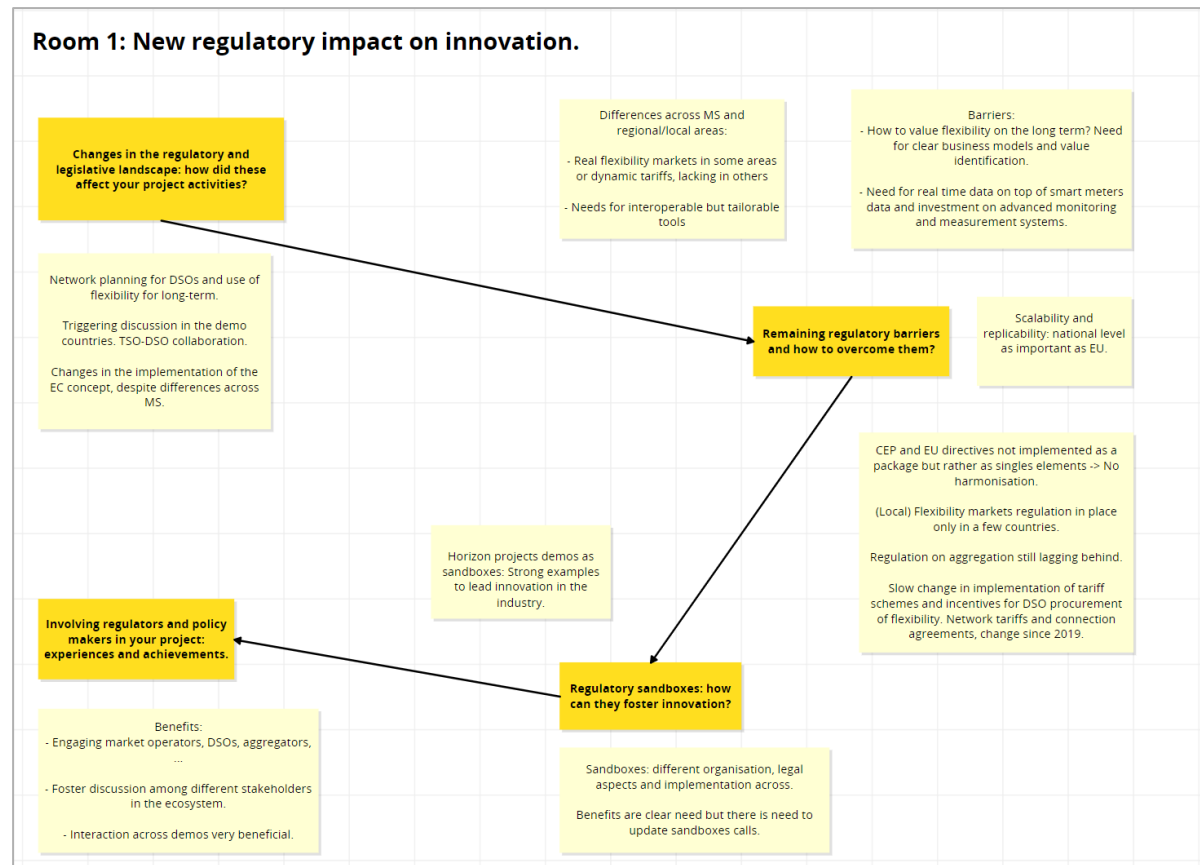
10 List of Abbreviations

Abbreviation	Term
API	Application Program Interfaces
CEC	Citizen Energy Community
CEP	Clean Energy Package
CGI	Centre for Grid Innovation
DEMI	Distributed Energy Management Initiative
DER	Distributed Energy Resources
DG ENER	Directorate-General Energy
DSO	Distribution System Operator
ETIP SNET	European Technology & Innovation Platform Smart Networks for Energy Transition
EC	European Commission
FG	FlexGroup
HEMRM	Harmonized Electricity Market Role Models
ICT	Information and Communication Technology
IoT	Internet of Things
KPI	Key Performance Indicator
MoU	Memorandum of Understanding
MS	Milestone
NAIT	Northern Alberta Institute of Technology
NSCG	National Stakeholder Coordination Groups
NSERC	Natural Sciences Engineering Research Council of Canada
REC	Renewable Energy Community
SES	Smart Energy Systems
SGAM	Smart Grid Architecture Model
SO	System Operator
TF	Task Force
TSO	Transmission System Operator
UC	Use Case
WG	Working Group
WP	Work Package

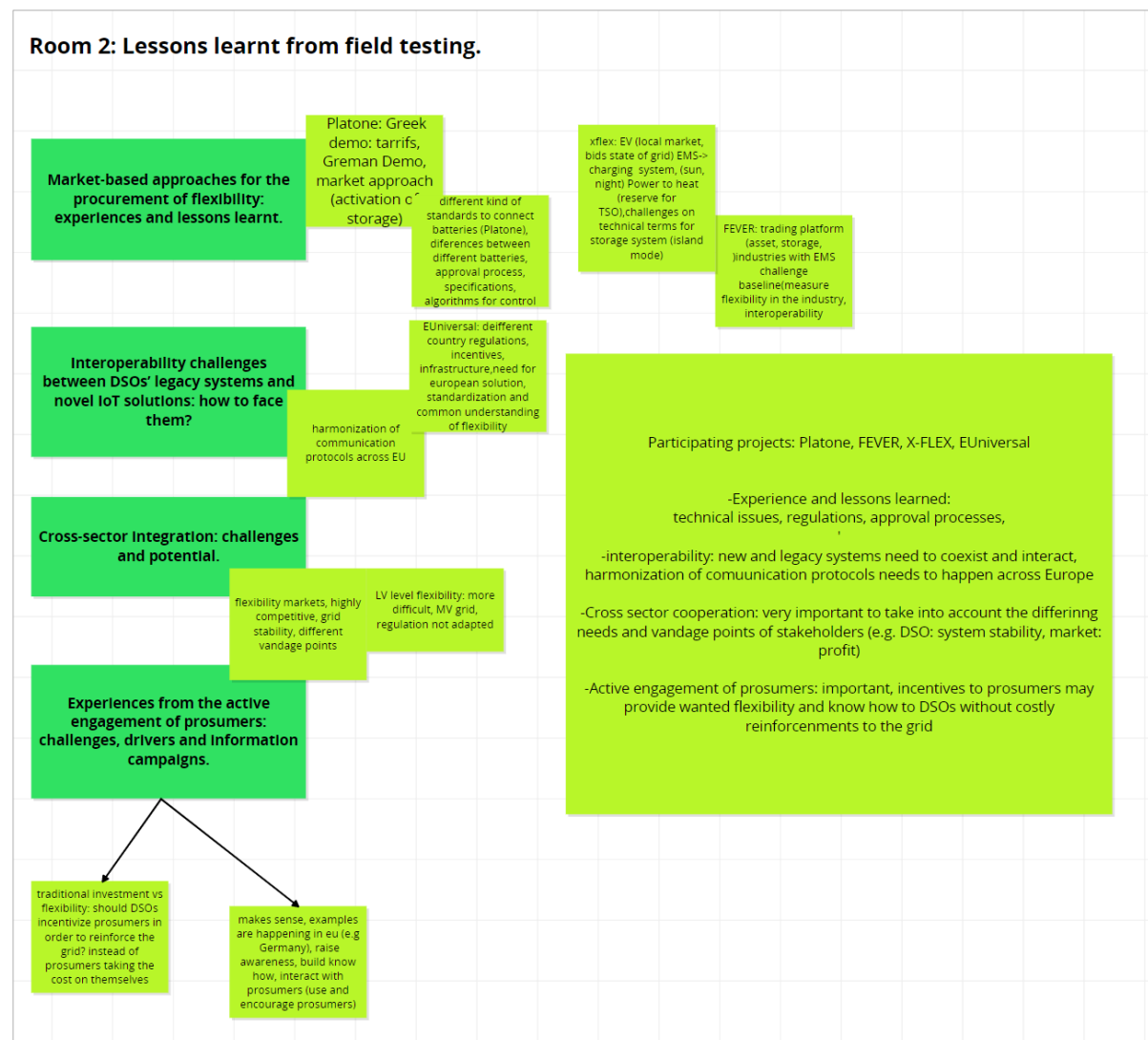
Annex A Outcomes of the Breakout Rooms of the Second Coordination Workshop

This Annex includes the screenshots of the *Conceptboards* used to support the discussion and collect the outputs from the five breakout rooms of the Second Coordination Workshop.

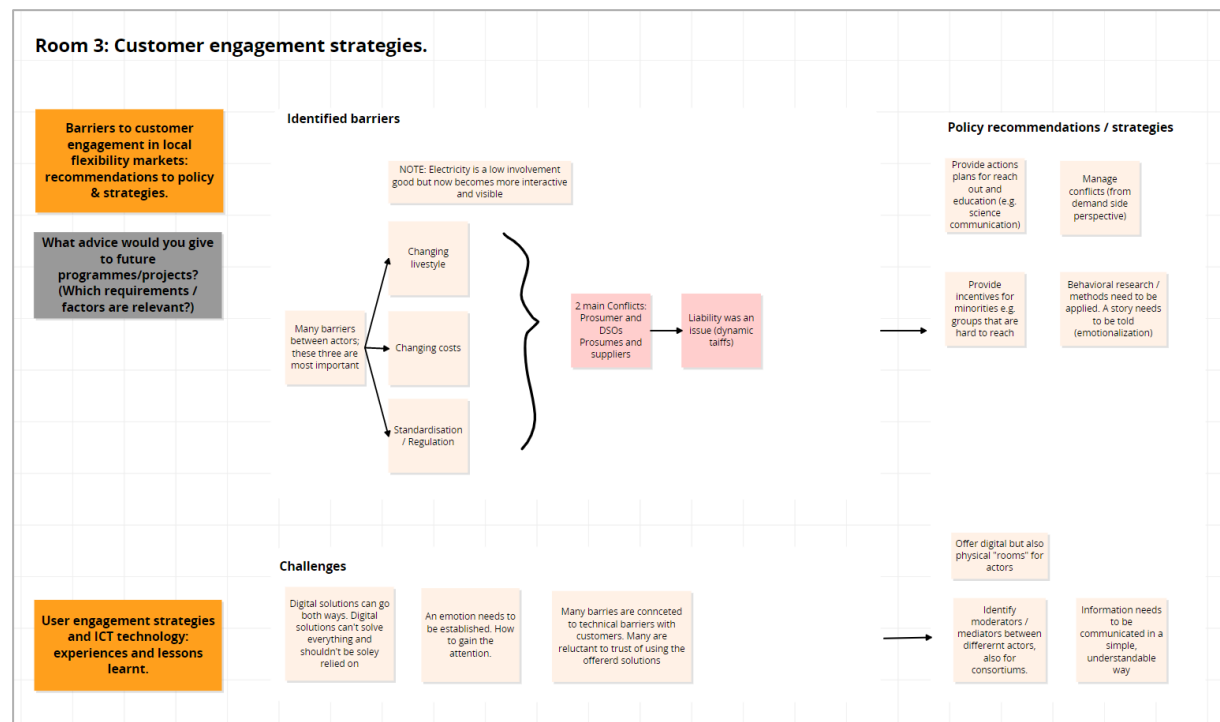
A.1 New Regulatory Impact on Innovation



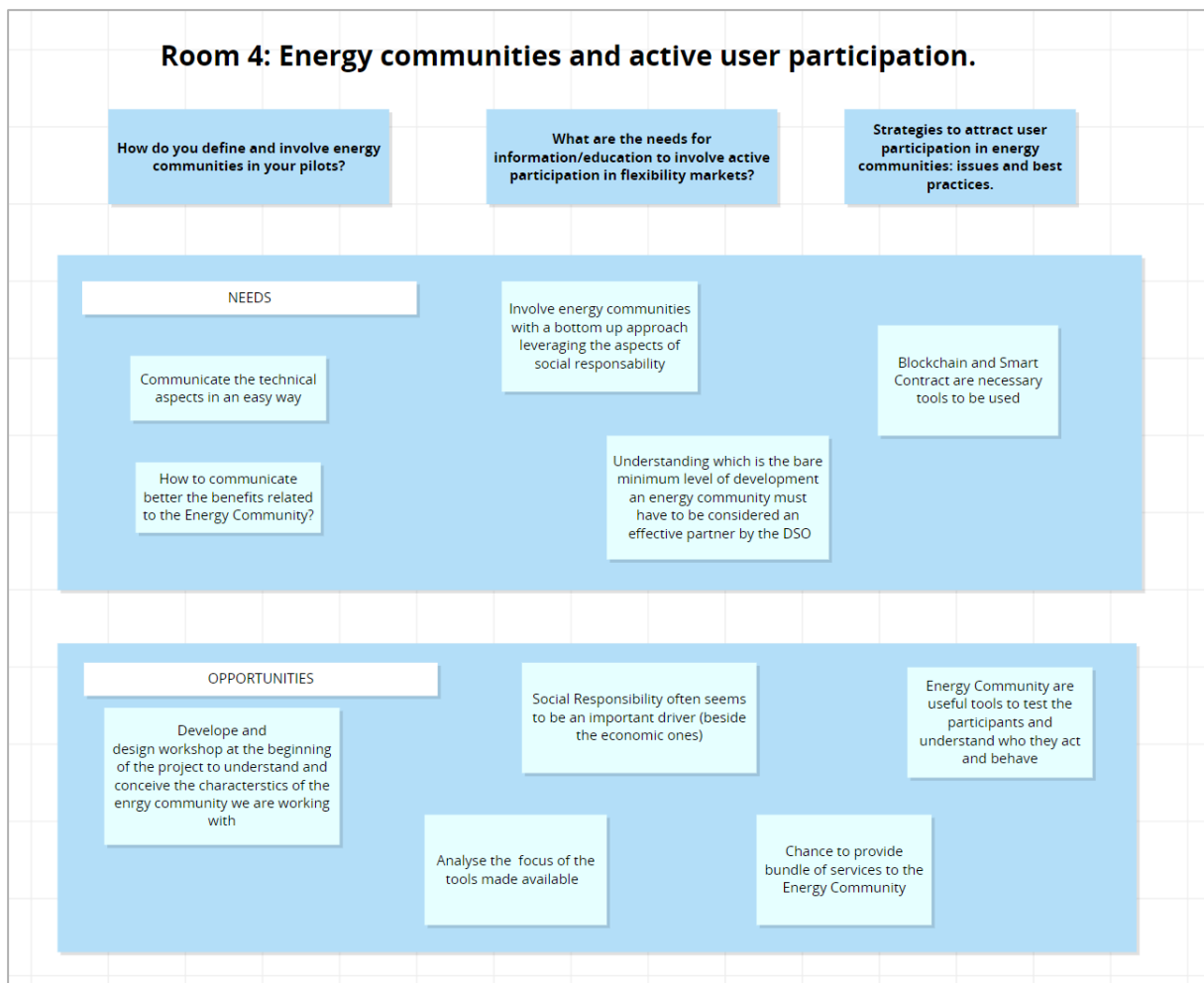
A.2 Lessons Learnt from Field Testing



A.3 Customer Engagement Strategies



A.4 Energy Communities and Active User Participation



A.5 Open Source for Distribution System Operators

