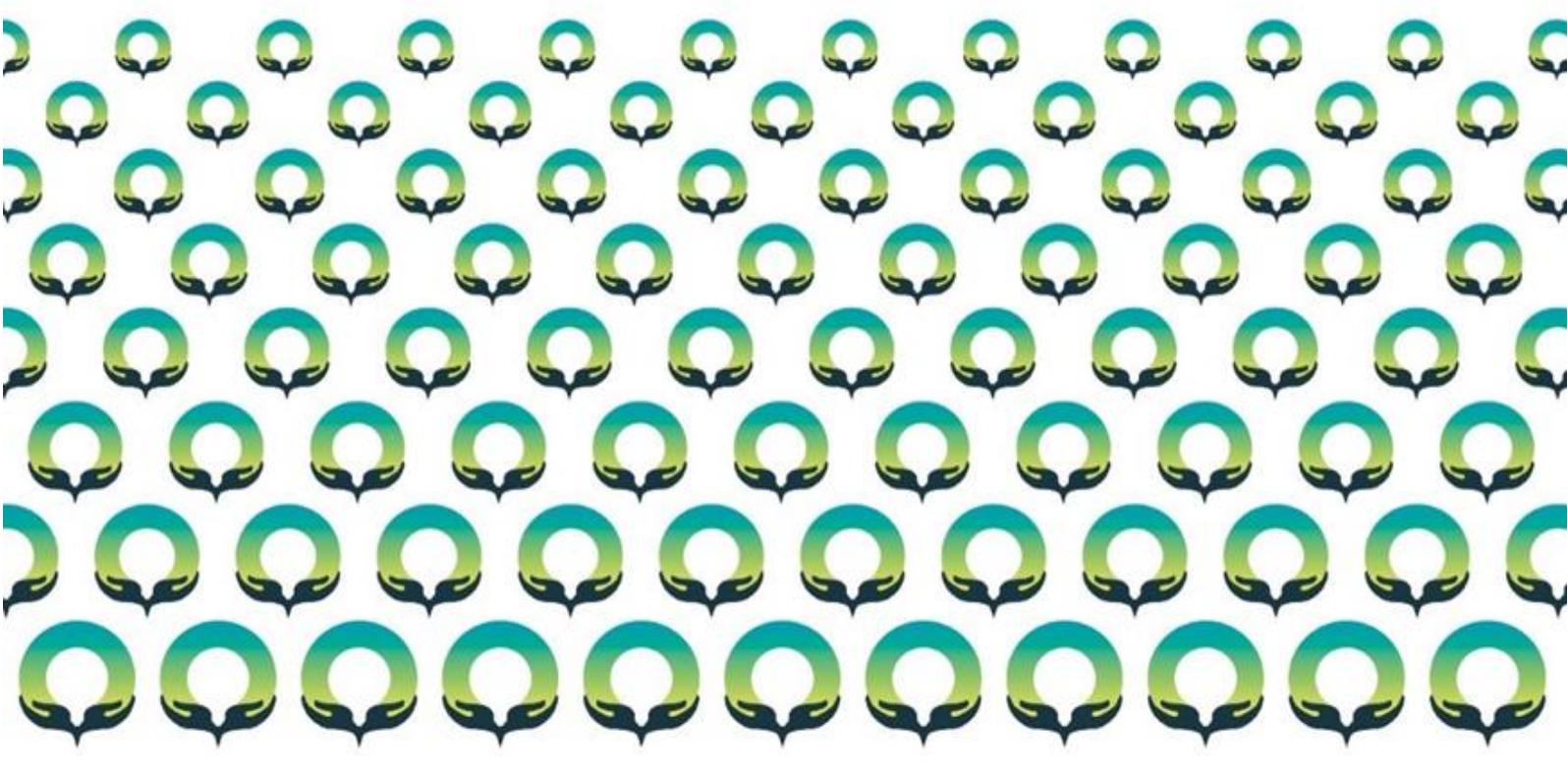




Project Deliverable

D8.3

Clustering and
cooperation on cross-
cutting issues - interim



Project Acronym	HESTIA
Project Title	Holistic dEmand response Services for European residentTIAI communities
Project Coordinator	Andrea Martinez SINLOC Andrea.martinez@sinloc.com
Project Duration	01 November 2020 – 31 October 2023
Deliverable No.	D8.3 Clustering and cooperation
Dissemination level*	Public
Work Package	WP 8 - Project clustering and cooperation under BRIDGE
Task	T8.2 - Cooperation and clustering
Lead beneficiary	R2M
Contributing beneficiary/ies	CLDI, All
Due date of deliverable	30 April 2022
Actual submission date	06 May 2022

Nature: R = Report, P = Prototype, D = Demonstrator, O = Other

Dissemination level PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)



DOCUMENT HISTORY

Version	Date	Authors	Description
0.1	21/03/2022	Fabio Aprà, Laura Pérez, Raymond Sterling, Juan Manuel Espeche (R2M)	ToC, Sister project collaboration description
0.2	31/03/2022	Tatiana Loureiro (R2M)	SP2021 description
0.3	14/04/2022	Fabio Aprà, Laura Pérez (R2M)	BRIDGE GA
0.4	20/04/2022	Christian Moscardi (CLDI), Alex D'Elia (GRB), Aggeliki Aggeli (AAU)	ReDream collaboration, Data Management WG, User Engagement WG
		Lazar Berbakov (IMP), Anthony Hua (CFS), Stephan Pouffary (ENE), Marta Arniani (GRB)	Citizen Engagement WG, NEON & LocalRES collaboration
0.5	28/04/2022	All	Final draft version
0.6	29/04/2022	Andrea Vinci (AXPO)	Peer-review
1.0	06/05/2022	Fabio Aprà (R2M)	Final version

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ACKNOWLEDGEMENT

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 957823



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1 Executive Summary

This report is an interim document to provide relevant information regarding the efforts that have been done to establish interconnections with other projects and initiatives, in the same field of HESTIA's topics. D8.3 is the first document, reporting the accomplished goals of "T8.2 - Cooperation and clustering associated with cross-cutting issues" until M18 by HESTIA's consortium. The task description in the HESTIA GA focuses on looking for collaboration with cross-cutting issues projects and initiatives, such as the open innovation topics and socio-economic science and humanities. Furthermore, specific mention is given to the potential collaboration with the INTERFACE and CoordiNet projects, which have been reached and initial discussions are reported in Section 3.2. This collaboration would be further exploited to enable joint research and alignment with activities that will provide the grid perspective and approach to solving the challenge of DR services. In addition, strong efforts were devoted to creating a strong synergy with other projects from the same call as HESTIA (H2020-LC-SC3-2020-EC-ES-SCC). The intent is to generate increased awareness among the general audience in the common pilot countries and increase the participation of external stakeholders in the decision-making process for DR services. Further activities, like the participation to the BRIDGE initiative working groups as a basis for the further work of T8.4 - Analysis of innovation obstacle and policy issues (BRIDGE initiative) with final deliverable due to the end of the project (M36).

2 Introduction

Scope

HESTIA's main objective is to create a low cost and efficient solution for the implementation of DR services linked with an active social engagement. Since the residential sector is currently the least involved in DR schemes (compared to industrial and commercial ones), HESTIA aims at increasing the customer participation importance through the exploitation of the DR flexibility in the pilot dwellings thanks to the creation of a dedicated and user-centered ICT platform. The consumers will have an active role in the development of this DR strategy and to engage them, a tailored methodology is being developed, taking into account financial, environmental and social drivers. Therefore, it is essential to educate and raise the awareness of the potential prosumers who can get many benefits with the implementation of DR services in their communities. The starting point is to give the opportunity to the users to co-design the future energy services that would be part of their community. Using the excess of produced energy or the lack of consumer demand, HESTIA wants to be the reference point for future replication projects. Therefore, the collaboration between local and European projects and initiatives is fundamental for reaching this objective, and for creating a cross-cutting knowledge for all the organisations involved in the project on how to involve the general public and the stakeholders in the field in collaborating with existing EU projects. The final goal is for HESTIA to create a ready-to-use open energy marketplace, disrupting the current ideal of the electricity grid, while democratising the access and use of energy, promoting renewable energy sources (RES) and enhancing a more efficient user behaviour, always taking into account the grid requirements.



Audience

The intended audience of the HESTIA D8.3 consists of members of the HESTIA Consortium, the Project Officer, the projects/initiatives with which the HESTIA consortium collaborated, the stakeholders in the field following the project and the general audience subscribed to the newsletter and/or visiting the website/social media.

Relationship with other tasks

As described in the GA: "The results of these projects will be directly exploited as part of the research activities to be carried out in WP4, WP5 and WP6. This will serve as tangible input for Task 5.4 in enabling the connectivity with aggregators and grid stakeholders, which will provide means for respecting the grid constraints and requirements. The grid perspective will be further analysed in WP4 activities (such as in Tasks 4.2 and 4.3) for energy dispatch optimization and delivery of a holistic DR model, as well as in WP6 (Task 6.2) in terms of P2P/P2G interaction of residents." This is especially convenient at this time in the project, in which the HESTIA platform services integration needs to be adapted to the requirements of the electrical grid. Since there is no such a figure as that of the aggregators, HESTIA technical partners need to overcome the gap between the prosumers and the distribution grid in an efficient way. The feedback provided by cross-sectoral projects such as INTERRFACE and CoordiNeT can be the needed connection for the comprehensive development of the HESTIA platform. Furthermore, D8.3 serves as a future basis for the development of T8.4 - Analysis of innovation obstacles and policy issues (BRIDGE initiative), thanks to the initial description of the work done in BRIDGE and reported in this document.

Abbreviations and Acronyms

CA	Consortium Agreement	IP	Intellectual Property
CCE	Consumer & Citizen Engagement	IPR	Intellectual Property Right
CEP	Clean Energy Package	KER	Key Exploitable Result
DR	Demand Response	KPI	Key Performance Indicator
EC	European Commission	LV	Low Voltage
ER	Exploitable Result	MV	Medium Voltage
GA	Grant Agreement	NILM	Non-intrusive Load Monitoring
ICT	Information and Communication Technology	RES	Renewable Energy Sources
		WP	Work Package



3 Cooperation activities with other projects

Sister projects' collaboration (ACCEPT, REDREAM, SENDER, I-FLEX)

One of the first steps taken by R2M in the project, in collaboration with the communication manager CLDI, was to contact different EU projects to establish the first connection and evaluate potential opportunities for collaboration. R2M organised various virtual meetings from the beginning of 2021 and the four projects that showed the highest interest were REDREAM, ACCEPT, SENDER, I-FLEX. These four projects, in terms of the topics (DR, Energy Communities, Public participation, etc.), the starting date/duration and the pilot sites' location are complementary to HESTIA (see. Table 1). Following a brief description of the 4 sister projects is provided.

ACCEPT: The Core of the ACCEPT project is the concept of “energy communities” with the collective approach to bring citizens, local businesses and organizations together, to produce and consume locally generated, renewable energy. The EU-funded project intends



to develop and deliver a digital toolbox, that allows such energy communities to offer innovative digital services to reduce the dependency on fossil fuels, save energy in the users' households and thus be able to reduce their electricity bill without compromising the quality of living, but ideally increasing the comfort in their homes through smart devices. In ACCEPT, these developed tools will be demonstrated and validated in four pilot sites in Greece, the Netherlands, Spain and Switzerland involving more than 3.000 people and 750 residences.

REDREAM: ReDREAM project wants to overhaul the energy sector and to empower consumers – households and industry – by putting them at the heart of an all-new co-creative ecosystem. To achieve this, the project brings



together 15 partners from 8 European countries. Underlying this ecosystem is a platform that uses cloud services and artificial intelligence to collect and evaluate information. This provides for more efficient production, distribution and use of energy, thus reducing CO2 emissions. All the major stakeholders from the energy sector are to be involved in the ecosystem – from energy suppliers who provide gigatons of electricity every day, to consumers who use this electricity. Information on weather and renewable energies will be fed into the ecosystem while smart devices will contribute with data on energy consumption patterns.

SENDER: In SENDER, innovative strategies will be developed to include consumers in the design of the solutions. The innovative



solutions will optimise smart systems for demand response, home automation, convenience, and security. During the project, external events with multiple stakeholders will be created: co-creation workshops. These workshops will prepare the demonstration phase of SENDER in the three demonstration sites. The SENDER partners will work from lab-scale to live-scale to develop solutions



meeting the criteria. 15 partners will be involved in the activities spread along with the project and the 10 Work Packages.

I-FLEX: The aim of the iFLEX project is to empower energy consumers by making it as easy as possible for them to participate in demand response programs, in which they adjust their energy consumption in response to signals or incentives coming from energy actors, such as price signals or bonuses. To support the consumer in managing when and how to be flexible, the project is developing an intelligent personal assistant, called the iFLEX Assistant. The assistant is a software agent which handles all the complexity of the system interactions and optimises the comfort, energy cost and environmental footprint on behalf of the consumer and according to consumer wishes. While the consumer has full control of the flexibility, the operation can be fully automated so that the consumer does not have to do anything on a daily basis.



Project	HESTIA	ACCEPT	REDREAM	SENDER	I-FLEX
1 st pilot location	Italy (Berchidda, Sardinia)	Switzerland	Italy (Gallese, Lazio)	Austria	Greece (Athens, Thessaloniki & Volos)
2 nd pilot location	France	Spain (Murcia)	Spain (Castilla y Leon)	Spain (Alginet, Comunidad Valenciana)	Slovenia
3 rd pilot location	The Netherlands (Voorhout)	The Netherlands (Culemborg)	Croatia	Finland (Otaniemi)	Finland (Helsinki and Oulu)
4 th pilot location		Greece (Aspra Spitia)	The UK		
Starting	Nov 2020	Jan 2021	Oct 2020	Oct 2020	Nov 2020
Ending	Oct 2023	June 2024	Sep 2023	Sep 2024	Oct 2023

Table 1: Starting-ending date of the HESTIA's sister projects, pilots' location (the locations colors are related to one or more pilot in the same country)

Starting from the end of May 2021, three different meetings organized by R2M as coordinator of the working group and one collaboration activity have been performed. A brief recap of these actions is presented below:

Thematic meeting 1 – Consumer engagement and DR (May 2021): the project representatives present their project and provided the current status of the activities from the users' engagement perspective. Each project presented its objectives and its constraints and a brainstorming session has been conducted trying to solve some questions such as: "When and how to engage the users?", "How to keep users motivated to use iFLEX platform?", "How to develop co-creation of the DR platform and user recruitment during a pandemic?", etc. Initial action points were developed to improve and create a framework for collaborative actions and a Microsoft Teams repository of documents was created. The deliverables on user-engagement developed until that moment were uploaded and open for



review to all projects. An existing [LinkedIn group](#) (From Demand Response to Energy Communities: the energy transition with a user-centric approach) was established to be the dissemination channel of project results and actions.

Thematic meeting 2 – Participation in the conference Sustainable Places 2021(June 2021): this meeting was held to understand the potential creation of a dedicated workshop on DR and energy communities at the [Sustainable Places Conference 2021](#) in Rome. Different options to organize a workshop were taken into account, regarding different topics of interest, the pilot presentations, the challenges and opportunities in each pilot, best and worst practices in the projects, etc. In the end, all the projects participated in the workshop, which had the title of “Fast Track on Energy Communities” with three different sub-groups on Innovative Business Models, Enabling technologies and Social Engagement. 25 different EU projects participated and shared their view on these three important aspects. HESTIA participated in the Social Engagement sub-group with a joint presentation from AAU and DW on the participatory design approach in the three pilot sites. Three proceeding publications were developed after the conference, in which the sister projects collaborated ([link](#)). A detailed description of HESTIA participation in the conference is available in the last update of the C&D plan (D8.1). All presentations and recorded sessions are available at: <https://www.sustainableplaces.eu/energy-communities-in-europe/>.



Thematic meeting 3 – How to improve the collaboration between H2020 projects for better knowledge transfer - (December 2021)

After the successful collaboration in SP2021, the sister projects met once again to discuss ways and opportunities to improve the collaboration between EU projects, enhance knowledge transfer and reach the goal of involving as many potential stakeholders and increasing the general audience awareness. The discussion was especially focused on how to improve the communication between consortiums and external stakeholders due to the continuous COVID pandemics. This was especially focused on the difficulties met in establishing long-term relationships with the technology end-users. The concept of energy poverty and the need for providing solutions affordable to everyone were other



two topics of discussion that the sister projects would like to pose at the centre of debate in the energy transition events and activities.

Future activities: The last update regarding the sister projects' collaboration is the ambitious objective to provide a concrete set of suggestions for all the interested parties that would like to develop an energy community in one of the 5 pilot countries that the sister projects have in common (Greece, Spain, Italy, Finland, the Netherlands). Initial ideas were discussed, like the development of a whitepaper including the lessons learnt in terms of the regulatory framework, social acceptance and user engagement, and attractive business models in the five countries. The intended audience, the scope of the document and publication dates are still to be defined.

Collaboration with the RE-DREAM Project

Additionally to the sister projects collaboration, HESTIA has been in communication with the REDREAM project since the beginning of 2021. The initial discussions resulted in general presentation sessions of the project activities and objectives, together with the definition of shared promotional actions within their websites and social media channels. Thanks to these first meetings the project has established further regular meetings in order to explore more elaborated actions. One outcome of these meetings between the two projects has generated the design and elaboration of a series of collaborative workshops, under the title "The BRIDGE Energy Dialogue Days", which initially includes both projects, but pretends to incorporate another H2020 project for each additional session.

These "dialogues series" are being organized in the form of participatory workshops that will take place during the 3rd/4th quarter of 2022. The workshops are intended not only to identify or generate synergies between the projects but specially to share experiences and best practices in the execution of their activities and gather this content in the form of Reports or guidelines that can be shared with the BRIDGE Community. From the HESTIA perspective, these workshops are an opportunity to activate the activities planned within task T8.3 "Best practice exchanges and methodology workshops" from WP8. The task aims at gathering those best practices developed or put into action although the project tasks can serve as guidance and ultimately methodology to showcase advances and development conducted within HESTIA. Organizing these workshops together with other H2020 project like Re-DREAM, and also incorporating more projects, we expect it will result in a perfect scenario for the gathering of failed and successful experiences, feedback and insights from the partners and the pilot sites of each project and their inhabitants, ways and mitigation actions to conduct or redirect processes, and finally to transform these inputs into work or report that will not only put in value the activities conducted by HESTIA, but will also serve to other projects as a guidance or reference document to plan, conduct or adapt their own activities.

Collaboration with INTERFACE and COORDINET (distribution grid perspective)

As depicted in the HESTIA Grant Agreement and in the description of T8.2, *"Task 8.2 will be dedicated to establishing the link with projects [...], to enable joint research and alignment with activities that will provide the grid perspective and approach to solving the challenge of DR services. This will consider*



establishing the cooperation and initiating the joint research with INTERRFACE and CoordiNet projects.”.

In line with the need for HESTIA to enter in contact with projects and initiatives more related to the distribution grid side of DR activities, R2M and CLDI have been in contact with both projects to evaluate synergies and get their feedback on the development of the technical platform for DR actions. Since these two projects are in their ending phases (2nd quarter of 2022), HESTIA initially provided the needed support to the two projects which were looking for a more user-related perspective of the DR concept. Once the two project will be ended, their contribution will be needed to evaluate the HESTIA platform interoperability with the distribution grid and the figure of the aggregator (e.g. in the whitepaper mentioned in Section 3.1).

[INTERRFACE](#): in the framework of the [Flexibility Solutions Webinars](#) from INTERRFACE, the second activity was focused on the consumers' role in the energy value chain and their potential impact on the energy transition. The webinar was focused on new solutions that can connect the consumers to the power system by unlocking their potential flexibility capacities. HESTIA provided its view on the potential acceptability of end-users. CPS and Energies2050 made a short presentation of the HESTIA project, especially on the stakes and process of recruitment in the French situation. They presented the tools that the French partners use to recruit end-users in Camille Claudelle and the issues in engaging people into the experimentation. Further information is presented in the last update of the C&D plan (D8.1).



[CoordiNeT](#): the collaboration with the CoordiNeT project was followed by AAU and IMP. In the framework of the [Stakeholder Forum](#) by CoordiNeT, the project consortium was involved in interviewing different stakeholders in the Smart Grids and Demand Response fields, trying to



understand the different feedback from the various actors involved in the sector. AAU and IMP replied to a questionnaire specifically designed for flexibility service providers, therefore their contribution was only partially beneficial for the questionnaire outcome, but still valuable according to the CoordiNeT consortium. From HESTIA's replies, it was extrapolated that the two most important pushes for service providers to participate in the flexibility market are to contribute to the energy transition and the economic benefits. The main existing barriers to an expansion of the flexibility market were recognised in the regulatory restrictions and complex technical requirements to provide flexibility to the distribution grid.

Regarding the intention of HESTIA's consortium to understand the barriers and opportunities of the implementation of its DR platform and the integration with the distribution grid, it is valuable to mention R2M's participation in the [ETIP-SNET Working Group 5 \(WG5\) on "Innovation implementation in the business](#)



[environment](#)". In fact, in the context of the work of WG5, the analysed EU projects have a strong involvement in the grid-related perspective of smart-grids projects implementation. The participation in the working groups is being the occasion to establish networking connections and learn from national and EU projects' perspectives on how the relationship between the distribution and transmission grid with the prosumers should be established to enhance the wider uptake of energy communities. As an example, R2M usually participates in the [ETIP-SNET Regional Workshops](#) and in the last [ETIP SNET Webinar](#) on the Presentation of the R&I Implementation Plan 2022-2025, which was recently published by the [EU Publication Office](#). This collaboration provides R2M, and therefore the HESTIA consortium, with the latest trends in the smart-grid sector and works as a knowledge pool for understanding the DSO/TSO perspective on residential DR projects.

Collaboration with LocalRES and NEON (Berchidda pilot)

The municipality of Berchidda owns the local electric grid, which makes it a Km0 DSO oriented by public good and not only by revenue. Because of this ideal sandbox environment, GridAbility has successfully proposed the town of Berchidda as pilot in different EU-funded research and innovation projects. Besides HESTIA, Berchidda is currently a pilot site for LocalRES and NEON.

[LocalRES](#): the project exploited HESTIA's early work in characterising the pilot (both technically and socially) and testing different citizen engagement approaches. The project will provide heat pumps and smart meters to 20 households, which in parallel with HESTIA's equipment (batteries, sensors and smart meters) will increase the efficiency of the local energy system.



[NEON](#): the project focuses on the advancement of the technical and business ecosystem for integrated energy services to the benefit of energy communities. It expands the reach of the REC beyond residential users and provides an extra ground for improving the smart contracts and remuneration mechanisms provided by GridAbility's member Prosume.



The global strategy is to leverage the three projects to support the establishment of a local energy community with a coordinated citizen engagement effort that avoids overlaps in recruitment. Moreover, technological developments concerning smart contracts and remuneration modules will be enhanced by the collaboration among projects. Between April 12-14 2022 the three projects hosted face to face workshops, each facilitated by GridAbility, in Berchidda.

HESTIA participation in the BRIDGE initiative

The participation of HESTIA in the BRIDGE initiative is certainly an indirect collaboration with other EU projects in the energy sector. In HESTIA, there is a dedicated task devoted to analyse the impact of



HESTIA's effort in BRIDGE, especially related to the current and future market design contexts, as well as to coordinate the research on policy relevant issues with other projects (Task 8.4: Analysis of innovation obstacle and policy issues (BRIDGE initiative)). Anyway, the only deliverable related to T8.4 is due to the end of the project (M36). Therefore, Section 3.4 of D8.3 is devoted to set the basis for the future work of T8.4.



The HESTIA partners are involved in all the [4 Working Groups \(WGs\) of the BRIDGE initiative](#) (Data Management, Business Models, Regulation, Consumer and Citizen engagement). HESTIA's partners, R2M and SIN, also expressed their interest in participating in the BRIDGE Task Force on Energy Communities, but they did not receive any formal reply that this is active at the moment (the BRIDGE website seems to confirm this hypothesis). In Table 2, the current division of HESTIA partners in the different WGs is provided.

Surname	First name	Partner	Working group / Task Force
Font	Angel	EIM	Regulation
Loscos	Eduard	EIM	Regulation
Moscardi	Christian	CLDI	Data Management
D'Elia	Alex	GRB	Data Management
Puaté	Joan	CLDI	Data Management
Aprà	Fabio	R2M	Business Models
Montanelli	Alessandra	SIN	Business Models
Boaretto	Cristina	SIN	Business Models
Pérez	Laura	R2M	Consumer & Citizen Engagement
Arniani	Marta	GRB	Consumer & Citizen Engagement

Below, a short description of HESTIA's partners involvement in the different WGs is presented.

1) Regulation (EIM)

As the goal of the electricity market is to provide electricity in an efficient way, satisfying the demands of the consumers, the traditional electricity market is facing challenges in integrating the new sources of generation of electricity, technology, infrastructure, increasing demand and the consumer-oriented market. There is a shift of the paradigm toward a new market design, being able to fit in the existing market structure. Among such electricity markets, there is the local market (LM). The Regulation WG focuses on the experience of a selection of BRIDGE projects in designing the Local market model/structure and its implementation in a demo pilot, highlighting the implementation barriers in terms of Regulation, Legislation, Market, and Technical Issues and Standardisation. EIM, participating in the Action 5 of the WG on LMs, shares with the HESTIA consortium valuable feedback on the discussion for the design of flexibility markets. This includes the importance of the local character in which the market should be developed, the need to include network information, the option to include



Low Time reservation of flexibility and the integration with other flexibility solutions such as dynamic connection agreements, dynamic grid tariffs and technical solutions using grid assets.

2) Data Management (CLDI, GRB)

Since the beginning of the project both CLDI and GRB have participated in the specific Data Management Working Group (DM-WG) meetings and also the General Assemblies of the BRIDGE Initiative.

The scope and discussions within the DM-WG are to support energy system integration, and ensure interoperability of energy data, platforms and services.

Specifically, the activities are focused around different technical aspects, activities or developments, such as:

- The interoperability of Flexibility Assets
- The interoperability of Home Appliances
- The Data Exchange Reference Architecture
- Use-Case Repository
- BRIDGE Contribution to Standardisation

The outputs of these WGs, the ongoing tasks and parallel discussions, methodologies, tools, best practices, architecture / frameworks, and standards, are analysed, changed, promoted and adopted in a collaborative manner by very active participating H2020 projects.

This allows within BRIDGE to achieve a shared vision and standardization processes that contribute to a harmonized strategy towards the development of the European energy sector, contributes to the Digitalization of the Energy Action Plan, and helps developing a competitive market for digital energy services and digital energy infrastructure that are secure, efficient, and sustainable.

Some of the discussions are advanced at different levels and is a good exercise for the partners participating in the WG, to collect, evaluate and translate how these outputs can benefit HESTIA.

In that sense, the reason why participation is still observational relies on the fact that the proper collection of data within HESTIA is just starting and we are still considering how these BRIDGE recommendations can contribute to the developments, tools and solutions planned within HESTIA, and those activities directly relate to the different interactions with end-user.

What appears to be clear from the outcomes of the BRIDGE GA is that all the different projects addressed and involved in BRIDGE are still pretty much focused on standard provider / customer model and that there is a lack of "Energy Communities Projects" which would be better addressing what the requirements and tools needed can be for properly increasing consumer (prosumer) involvement in a new local energy market that can support the harmonization and implementation of energy communities. HESTIA can be valuable for BRIDGE even though the project still focuses much on the DR actions and does not promote prosumer interaction apart from the demand/response participation.

3) Business models (R2M, SIN)



Since the launch of the Working Group of Business Models (December 2021), HESTIA has actively participated in meetings and works sessions organised by the WG leaders. The Working Group has divided the overall work in 3 different tasks:

- Task 1: Define the Value Analysis Methodology, covering the relationship of Use Cases, Business Models, Services, Actors, and value chain segments
- Task 2: Identify the best practice for monitoring and impact analysis of Use Case demonstrations using standardized Key Performance Indicators.
- Task 3: Highlight concrete results from projects, and identify good practices and possible barriers to be used in benchmarking (e.g. examples of benefits).

The main efforts provided by R2M and SIN are related to the brainstorming sessions on how to provide beneficial impact on the EU projects business models and the following development of a survey that was shared between the participating projects (including HESTIA). The results of the survey were presented in the last BRIDGE GA, and the outcomes were of interest for the project and will be used in the definition of innovative business models by R2M in Task 7.6 - Products, services and supporting business model definition. However, the survey only present partial results from the involved projects since the majority of them are still in early stages and their products/services are still being developed.

4) Consumer and Citizen Engagement (R2M, GRB)

The objectives of the Working Group on Consumer & Citizen Engagement are to build an engagement framework for R&I projects to motivate, assess and mature collective action schemes of consumers in the energy markets; to promote knowledge exchange and best practice sharing around consumer engagement throughout the BRIDGE initiative; and to analyse barriers and propose solutions for BRIDGE projects to build community-based engagement strategies and processes. The roadmap for 2021 (until the BRIDGE GA in March 2022), was to address the gaps identified during the previous year by building concrete recommendations to future and on-going R&I projects and to the European Commission. In order to cover a very wide variety of topics, the CCE WG is divided into 4 sub-groups, each tackling a piece of the broader framework:

- 1) Socio-cultural drivers and indicators of engagement.
- 2) Strategies of engagement.
- 3) Organisational and governance models.
- 4) Smart Tools.

During the past year, the partners R2M and GRB have been involved, representing HESTIA, in two of these sub-groups. A similar methodology has been followed across the sub-groups:

- i. Analysis of the findings from the previous year's work, published on the 2021 Annual Report.
- ii. Development of a research questionnaire to gather data from BRIDGE projects.
- iii. Interviews with selected BRIDGE projects for further (qualitative) data collection.
- iv. Analysis of the responses received from the questionnaire and the interviews.
- v. Preparation of the CCE WG 2022 Annual Report (to be delivered to the EC), summarizing the conclusion of the work carried out by each sub-group, and including recommendations.

R2M and GRB have contributed actively in all the above steps, gaining knowledge and lessons learnt from other BRIDGE projects that will be beneficial for the on-going consumer engagement process in



HESTIA (WP2). More details about the work carried out in the two sub-groups where R2M and GRB have been involved are presented below.

Socio-cultural drivers and indicators of engagement Sub-group (R2M)

The sub-group on socio-cultural drivers and indicators of engagement has two main goals: to collect evidence around the incentive strategies implemented by the BRIDGE projects to ensure participation and involvement of consumers; and to identify a range of indicators and monitoring techniques to understand, monitor and assess the development of collective action groups. The scope of the work carried out by this sub-group during 2021 was to collect evidence around user profiles and drivers triggering consumer engagement, and indicators to assess this engagement.

Resulting from the research, conclusions and recommendations were drawn around 3 focal points:

- Types of user groups and their drivers to engage.
 - Include public sector as promising actor in engagement efforts.
 - Careful design of user-specific and context sensitive engagement strategies.
- Engagement strategies related to each type of user group.
 - Strategies used in BRIDGE R&I projects are usually tailored to specific user groups. However, there is a need and opportunity to diversify the kind of strategies to be employed, going beyond conventional formats such as interviews, questionnaires or workshops. To foster such diversification, ensure space for “engagement-innovation” within EU-funded projects.
 - When aiming to foster diverse and meaningful engagement formats in R&I projects, “space for engagement impact” has to be created. This needs the acknowledgment that engagement can: a) alter the (engagement) course of the projects, and b) asks for flexibility in project structure, plan and reporting of the projects.
- Indicators of engagement over time
 - Projects want to secure engagement over time. The way to measure this should also allow enough flexibility so that projects can adapt according to the users’ needs.
 - Clear engagement strategies and concepts should distinguish between: 1) indicators of what influences engagement, 2) indicators of activities of engagement, and 3) indicators of results of engagement.
 - Qualitative indicators (e.g., effect of an engagement on participants) in some cases might be more beneficial in mapping engagement over time than quantitative indicators (e.g., number of participants in a workshop). So, besides “hard” quantitative KPIs aiming more strongly on capturing technical aspects of the projects, BRIDGE R&I projects should also include softer qualitative KPIs aiming at evaluating participants engagement (e.g., quality and depths of engagement, quality of user feedback, etc.).

Strategies of engagement Sub-group (GRB)

The overall goal of the sub-group on Strategies of Engagement is to study and uncover the ways to mobilize consumers to act collectively and build a consumer group. The scope of the work carried out by the sub-group during 2021 was to collect and process the information and experience from the BRIDGE projects implementing strategies of engagement as part of their project development. Based



on the gathered data, a set of strategies with a different degree of maturity or implementation were analysed and recommendations were provided to mobilize consumers to act collectively and build a consumer group.

The sub-group focused on surveying methodologies and challenges from R&I projects participating in BRIDGE. Beyond group discussion, the knowledge sharing has been formalised with 2 deliverables:

- Strategies of Engagement analysis, conclusions, and recommendations in the Annual Report.
- BRIDGE projects' Strategies of Engagement Handbook - A guide for engaging EU citizens in energy projects supporting both awareness and action aspects of engagement, based on a sample of projects (HESTIA was not considered mature enough to contribute at this stage).

The main insights from this sub-group are:

- Need for more structured engagement.
- Lack of a European common framework of strategies and methodologies.
- KPIs are often quantitative and say little about the quality of engagement.
- Engagement is hampered by complicated administrative processes.

Ontologies Group - HESTIA participation

Being part of the BRIDGE initiative, gives HESTIA the opportunity to promote itself and become part of external initiatives and wider working groups. This is the case of the Ontologies Group, led by different EU projects such as BIM4REN and SPHERE, in which EIM is involved. This Working Group is currently focusing on the use of ontologies in R&D projects (including guidelines and good practices about it, as well as difficulties and next challenges). The group, firstly presented in a side event of the [LDAC/CIB Congress](#) is formed by 9 EU on-going projects trying to federate Ontologies, with focus on Buildings and their Digital Twins.



The Ontologies working groups organizers are looking for EU projects who can provide the connection in between BDT Environments Common Data Models, to include the point of view of Smart Grids and Local Energy Communities. HESTIA, through ALB, could bring to the group its approach to the semantic model for smart grid connectivity, data modelling, energy-related initiatives at the grid vs building level. Further discussion for the potential inclusion of HESTIA in the Ontologies working group envisioned, potentially at the [BDTIC 2022 event](#) (end of May 2022) in which the working group will make a presentation on the next steps and objectives for the next period.

IEA Users-TCP – User-Centred Energy Systems

In the context of the International Energy Agency's (IEA) purpose to create technology collaboration programmes for the development and acceptance of clean and user-friendly renewable energy technologies, different tasks are being developed by international partners. This facilitates the cross-



cutting knowledge transfer between countries and organizations and facilitates the wider uptake of novel technologies for the energy transition (such as energy-trading platforms like the one developed by HESTIA). [UsersTCP is one of the existing programmes by the IEA](#) and has the objective to provide “Socio-technical research to inform policymaking for clean, efficient, and secure energy transitions”. Five different tasks are implemented in the programme about: i) Hard-to-Reach Energy Users; ii) Social License to Automate; iii) Global Observatory on Peer-to-Peer Energy Trading; iv) Energy Sector Behavioural Insights Platform; v) Gender & Energy Task. In this last task, which clarifies through focus groups and survey how men and women deal differently with the challenges of smart grids, HESTIA’s partners DW and AAU participated get the word out on experiences in HESTIA pilot sites so far through two conference presentations (ECEEE, ERSS) and two academic papers (in review and in preparation, respectively). Further information can be found in WP2 deliverables and will be updated in the next C&D periodic report (D8.1).



Collaboration with LIGHTNESS and CREATORS

In line with the objectives of T8.2 on the collaboration with sister projects, R2M takes the opportunity to connect the EU projects in which the organization is involved on DR and energy communities and maximize their impact. R2M is currently the innovation and exploitation manager of the [LIGHTNESS](#) (R2M coordinates too) and [CREATORS](#) projects.



Both projects have as a final objective to facilitate the development of energy communities in their pilot sites through different technical and non-technical tools, such as the cocreation of the DR platform interface, the development of local market places, early-stages flexibility studies, etc.

As an initial step, some of the HESTIA partners (AAU, CPS, ENE) are now part of the Lightness Actors Community and receive information about the project's activities and results. HESTIA’s partners are being informed on how to empower citizens to generate, share and sell renewable energy and thereby contribute to making the European energy sector more sustainable and democratic. The shared information includes the implementation of technological solutions, assessment of environmental, social, and economic impacts, development of guidelines and political roadmaps, creation of new partnerships and business models, as well as dissemination and potential collaboration with a forming community of market actors.

Initial discussion has been ongoing between R2M and CLDI on how to potentially collaborate in the next phases of the two projects. Being one of the CREATORS’ pilot sites the Port of Barcelona and at



the same time the CLDI's headquarters' city, the two projects are planning to organise a joint event to show the financial, social and environmental benefits of the development of energy communities, both residential (HESTIA) and industrial (CREATORS). Further information will be shared in the next C&D plan periodic report (D8.1).

4 Conclusions and next steps

R2M, CLDI and the consortium's partners created a framework of connections with different EU projects and initiatives during the first part of the project (M1-M18). The variety of the established relationships, both in terms of projects' topics and focus of the activities, generates great potential for dissemination and exploitation during the last phase of HESTIA. The sisters' projects' collaboration with ACCEPT, REDREAM, SENDER and I.FLEX can be used to provide a practical set of guidelines for replication purposes in the common countries of the pilots. The feedback received from projects and initiatives with a grid-perspective focus will help the HESTIA platform developers to understand which are the requirements to be followed in order to have an interoperable tool. The HESTIA partners' participation in the BRIDGE and ETIP-SNET initiatives provides a pool of opportunities to learn best practices from other projects and organise dissemination events. The created contacts for SP2021 could be extended and deepened to find further opportunities of collaboration. Specific participation in the Working Groups like the Ontologies' one or the UsersTCP gives partners' a horizontal knowledge on specific topics that could be applied in the project's next phases, such as for the ENLIT, EUSEW events. Further partners, such AIT will further look for potential synergies with projects in which they are participating and other partners would follow their example. The potential to join a future federation of platforms (organised by the SPHERE project) coming from other H2020 could be really interesting to take into account as a better road for future exploitation of the HESTIA platform or even of other KERs as standalone solutions. The presence of CSP as member of the Intelligent Cities Challenge ([ICC - network of local authorities, exchanging information and practice around the topics of energy and environment](#)), would create an opportunity for networking and find partnerships, since CPS is thinking about hosting an event at the end of 2022 with other French regions.

