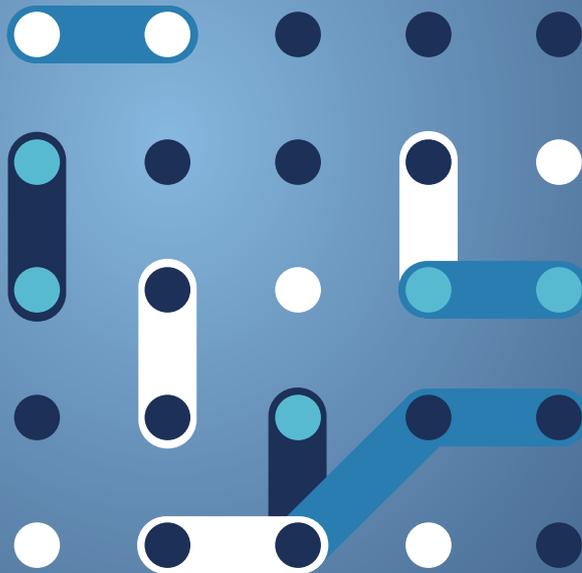




European  
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# bridge

Charter



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# Introduction

BRIDGE is a European Commission and CINEA initiative, established in 2016. It consists of a collaborative community involving projects funded under the Horizon 2020 and Horizon Europe programmes in the areas of Smart Grids, Energy Storage, Islands and Digitalisation.

BRIDGE membership is typically reserved to Horizon projects for which their respective Horizon Call topic identified the need to engage with the initiative. Nevertheless, should other Horizon projects

express interest in joining the BRIDGE community, they could be involved as Observers.

This document represents the charter of the BRIDGE initiative, which is intended to define the vision, mission and main objectives of the initiative, the scope of the Working Groups, including key milestones, the governance and the involved stakeholders as well as the role of the BRIDGE projects and the benefits deriving from the participation to the BRIDGE initiative.

# Mission, vision, strategic objectives

## MISSION

The mission of the BRIDGE initiative is to provide a **platform that facilitates the exchange of knowledge, ideas and best practices** among member projects. BRIDGE also **enables the projects to provide feedback to policy-making processes**, and bring up field experience and lessons learnt. BRIDGE aims to promote effective innovation in the energy sector, focusing on Smart Grids, Energy Storage, Islands and Digitalisation. BRIDGE activity relies on **structured Working Groups that enable focused discussions and knowledge sharing** to tackle specific challenges in the fields of data management, consumer & citizens engagement, regulation, and business models. It emphasizes the importance of cooperation and transparency, ensuring that lessons learnt and project results are openly shared to foster innovation and impactful outcomes, based on BRIDGE community.

## VISION

BRIDGE envisions a sustainable future powered by a resilient, decarbonised and integrated energy system that benefits all, from consumers to stakeholders across the value chain. In this sense, BRIDGE's vision is to drive innovation, collaboration, and the transition to green energy, fostering an efficient and equitable energy landscape for tomorrow.

## STRATEGIC OBJECTIVES

- **Foster collaboration across the BRIDGE community** by engaging in regular Working Group discussions, cross-WG workshops and webinars, and the annual General Assembly to share best practices and collaborate on tailored solutions to tackle common innovation barriers.
- **Gather coordinated, balanced and coherent recommendations presented with a single voice to policy makers**, in view of successfully supporting research and innovation actions, providing inputs to energy policies based on lessons learnt from project implementation, and bridging the gap from innovation to market by exploiting the results achieved by projects.
- **Maximize outreach** by delivering periodic newsletters and an annual brochure that detail project results and cutting-edge advancements, ensuring transparency and engagement among all stakeholders in the wider energy landscape. The different Working Groups within BRIDGE produce Annual Reports to provide an in-depth insight into their activities during the year. These reports are disseminated to the community and other relevant stakeholders. In addition, the Working Groups are actively involved in other activities such as thematic reports, workshops, knowledge exchange sessions, webinars and conference sessions throughout the year.

# Benefits deriving from the participation to Bridge

Engaging in BRIDGE initiative yields a multitude of benefits, fostering a collaborative environment and promoting the collective advancement of participating projects. Some of these advantages include:

## **Knowledge exchange**

The initiative facilitates the sharing of best practices, results and valuable lessons learnt among the diverse range of projects involved. This exchange contributes to establishing synergies with other ongoing projects, gaining a richer understanding of successful strategies and practices, and identifying best approaches for innovation implementation.

## **Access to a community of practice and benchmarking results.**

The projects could rapidly identify existing tools, methodologies and approaches that they could use and/or further adapt, and they could compare results with other projects working on similar topics.

## **Issue resolution support**

BRIDGE provides a supportive framework for addressing common challenges and issues encountered by participating projects. This collaborative problem-solving approach can lead to more effective and structured solutions to barriers hindering innovation.

## **Stay informed on technological developments**

Participants benefit from being kept up to date of the latest technological advancements and emerging processes within the energy sector. This knowledge sharing ensures that projects are informed by the most current and innovative practices.

## **Optimized utilization of project results**

The BRIDGE initiative assists projects in effectively applying and capitalizing on the results they achieve. This support ensures that the outcomes of each project are maximized and contributes to broader advancements in the energy field.

## **Networking opportunities**

Engaging with BRIDGE allows stakeholders to connect with key players in the energy sector. This networking not only enhances collaboration among ongoing projects but also opens doors to potential future partnerships and collaborations.

## **Innovative idea generation**

The collaborative nature of BRIDGE fosters a space for brainstorming and the generation of new project ideas. By bringing together diverse perspectives and expertise, the initiative contributes to the development of innovative solutions and approaches.

## **Policy advise**

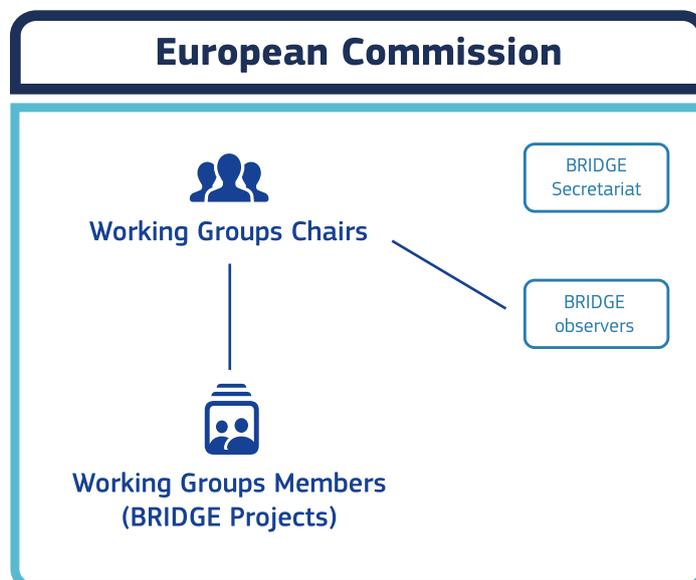
The BRIDGE initiative offers a collaborative platform for developing recommendations aimed at policy makers, with the goal of enhancing support for research and innovation actions and upscaling the results of member projects.

The participation in the BRIDGE initiative initiatives goes beyond the immediate project context, offering a holistic and interconnected approach to addressing challenges, fostering innovation, and promoting sustainable advancements within the energy sector.

# Governance of the initiative

To guarantee active engagement with stakeholders and to successfully attain its objectives, the BRIDGE initiative has organized itself into **specialised Working Groups**, composed of Horizon 2020 and Horizon Europe projects' representatives.

Each Working Group within the BRIDGE framework operates under the leadership of a designated **chairperson**. The WG chairs are selected among the members actively engaged in the various projects affiliated with BRIDGE. They play a crucial role in steering the direction of the group's activities and ensuring effective collaboration among its members.



The process of **appointing chairpersons** for the Working Groups involves requesting **expressions of interest from the BRIDGE community**. Members who demonstrate a commitment to advancing the objectives of their respective groups are considered for these leadership roles. Ultimately, the appointments are endorsed by the Commission services, underscoring the community-driven and collaborative nature of the selection process.

In addition to the core BRIDGE projects, there are also **BRIDGE observers** — projects that, while not required to participate in BRIDGE as per their grant agreements, opt to engage with the initiative due to their own interests and objectives. These observers contribute to the diversity of perspectives and expertise within the BRIDGE ecosystem, enriching the collaborative environment.

A dedicated secretariat is established to support the **BRIDGE initiative**. The **Secretariat**, led by the **Head of the BRIDGE Secretariat**, supported by dedicated contact points, is facilitating communication, coordination, and support across various aspects of the BRIDGE initiative.

Do not hesitate to contact the Secretariat at the following email addresses:

## Consortium

Secretariat BRIDGE

Secretariat@horizon-bridge.eu

Communication and dissemination

Communication@horizon-bridge.eu

# Scope of the Bridge Working Groups

The scope of the BRIDGE Working Groups is to facilitate a seamless exchange of knowledge among projects on specific topics, and to develop common deliverables. The working groups enable collaborative efforts to articulate findings and recommendations regarding future policy and technology developments, and the future application of project results.

Through these Working Groups, the BRIDGE initiative advances its mission across four distinct areas of focus:



Each Working Group serves as a dedicated platform for project members to delve into specific topics, share expertise, and collectively address challenges and opportunities within their respective domains.

By fostering collaboration and interdisciplinary dialogue, the Working Groups play a crucial role in driving innovation, informing policy decisions, and ultimately contributing to the advancement of sustainable solutions and societal impact within the BRIDGE community and beyond.

## Data Management

The Working Group on Data Management aims to cover a wide range of aspects ranging from the technical means for exchanging and processing data between interested stakeholders to the definition of rules for exchange, including security issues and responsibility distribution in data handling. Accordingly, to its mission, the WG has identified 3 areas of collaboration around which mutual exchange of views and discussions have been set:

- **Communication infrastructure** embracing the technical and non-technical aspects of the communication infrastructure needed to exchange data and the related requirements;
- **Cybersecurity and data privacy** entailing data integrity, customer privacy and protection;
- **Data handling** including the framework for data exchange and related roles and responsibilities, together with the technical issues supporting the exchange of data in a secure and interoperable manner, and the data analytics techniques for data processing.

Data Management Working Group is currently articulated in 5 actions:

- 1. Use-cases-repository.** Its core activities are to provide an overall view of all the simplified and homogenized projects Use cases in a simple format; provide data set with detailed information for cross-project analysis; identify similarities between projects; and facilitate the reuse of existing use-cases and solutions from past/on-going projects.
- 2. EU data exchange reference architecture (DERA).** The work on DERA aims at contributing to the discussion and practical steps towards truly interoperable and business process agnostic data exchange arrangements on European scale both inside energy domain and across different domains.
- 3. Reference framework.** This task force aims at developing a methodology and reference framework to enable the interoperability within flexibility-based use-cases but also beyond (e.g. P2P energy trading, energy monitoring, ...), based on the analysis of the solutions implemented in the projects including the definition of Generic Business Processes (GBPs) used as the common denominator between similar use-cases from different projects.
- 4. Bridge Standards User group (BSUG).** The BSUG aims at gathering and diffuse (i.e., through webinars) collective knowledge, at system level, including outcomes such as a catalogue of standards (i.e., existing solutions, identified gaps, etc.), practices related to standards (i.e., feedback, recommendations, proposed extensions, etc.), and feedback from the scale-up and roll-out following finished projects (i.e., setting-up of a repository & process for code components to be reused by projects). It establishes and maintains liaisons with standardization committees (e.g. CEN/CENELEC).
- 5. Interoperability of home appliances.** Its objective is to characterize and compare the solutions used by BRIDGE projects to achieve home appliances interoperability, in particular the used “common languages” and the developed adapters. Additionally, it investigates the functional commonalities of home appliances among BRIDGE projects identifying takeaways from projects and existing standards (features, overlaps, etc.) as well as devices used in projects and support identification of suitable device for projects.

## Business Models

The Working Group on Business Models aims at defining common language and frameworks around business model description and valuation, identifying and evaluating existing and new or innovative business models from the project demonstrations or use cases. Moreover, the WG aims to develop standardized processes and effective mapping allowing for the comparison of the different business models development approaches for smart grids.

The efforts of the Working Group are directed towards two specific areas of interest, namely:

- **The design of tools to evaluate the benefit and values of the services and solutions developed** in the activities of the projects, including the investigation of the tools to capture business ideas and build the Business Model and the quantification methods for Business Models benefits of services and solution under various Use Case scenarios.

- **Designing a business model that better incorporates the integration of the data value chain and the monetisation of data**, where better observability creates additional social value. This involves delving into the investigation of the types and characters of the data value chains in BRIDGE projects.

These two topics, are served by 3 different task forces, as follows:

- 1. Investigate the tools** to capture business ideas and build Business Models.
- 2. Quantification methods for Business Models** benefits of services and solution under various UC scenarios.
- 3. Investigate the types and characters of the data value chains** in Business Models of BRIDGE projects

## Regulation

The Working Group on Regulation was established with the aim of fostering knowledge sharing among projects addressing the different regulatory aspects in the energy domain. The Working group structures its activities by focusing on various regulatory aspects in the energy sector to identify best practices to overcome them and making suitable recommendations.

To achieve these objectives, the Working Group is divided into several Actions, each dealing with specific aspects within the overarching areas.

The actions are annually revamped, covering diverse topics within the energy sector, such as:

- 1. Market access:** today's market access for consumer flexibility is hindered and the value of flexibility via implicit or explicit flexibility mechanisms is still limited. The Working group explores the elements that need to be addressed and would need further elaborations, such as the design of flexibility products and services, aggregation models, baseline-methodologies, tariff design, market processes (prequalification), submetering and settlement.
- 2. Collective flexibility:** The concept of Energy Communities, providing both community and grid services, is gaining ground and developing in several countries. However, there are several barriers that need to be tackled as grid services currently need some adaptations to support the participation of energy communities. It is important to understand the potential value of energy communities to the grid, looking at peer-to-peer and energy sharing in the context of overall market design. Specific areas for further exploration include the redesign of grid services, the relationship between energy communities and grid operators, optimal financial models as well as barriers and facilitators for the uptake of energy communities.
- 3. Sector coupling/sector integration:** Recently, increased attention is given to the possible synergies between different energy carriers at wholesale level and different services across different

sectors (e.g. mobility). The extension from the overall regulatory/market framework towards new energy carriers and new sectors results in potential synergies for both consumers, market actors and the overall system. To maximise these synergies, it is important to address some key barriers.

- 4. Market coordination and integration:** Supporting system operators in preparing the grid for 2030 is crucial. Several new services, markets and platforms for energy and flexibility have been developed in recent years. However, the lack of an integrated market and the fragmentation of products, services and processes hinder the realisation of potential synergies in a more interconnected system. In addition, the action addresses best practices on how system operators should make a trade-off between grid investments and the use of flexibility.
- 5. Data spaces:** The relevance of data spaces in the collaboration between regulated and commercial actors, with a focus on defining roles, allocating responsibilities, and clarifying the regulatory aspects within data spaces, is at the center of this task force work.

## Consumers and Citizen Engagement

The Working Group on Consumer and Citizen Engagement was established with the aim of creating a structured cross-cutting understanding of the role and methodologies of engagement in European R&I projects towards better understanding, triggering, and leveraging the action of consumers and citizens in the energy landscape. Focal points are smart tools, indicators, and engagement strategies. Consumers and citizens are crucial actors to consider and engage when aiming to realize a just and sustainable energy transition in Europe – and beyond.

The Consumer and Citizen Engagement Working Group is currently working on 3 overarching themes, which are the core focus of 3 different task forces, specifically:

- 1. Smart Tools:** The design of Smart Tools for consumer-users often targets user engagement in developing technology solutions and success hinges on aligning the technology solution with users' needs and values. However, there is no unified position on the extent and timing of user involvement, leading to different interpretations of “user-centered” approaches. Few truly user-centric methods include consumers in the entire design process of smart tools, ensuring broad representation in recruitment and engagement activities for increased acceptance, usage, and adoption.
- 2. Indicators of engagement:** In energy-related projects, there is a common need to establish engagement indicators. Project members need metrics to identify the most promising engagement strategies. Funders want standardised metrics and targets to consistently monitor project progress. Implementers of engagement strategies want measures that can guide their approaches. Overall, there is a need for a comprehensive and standardised set of engagement indicators.
- 3. Strategies of engagement:** : In recent years, there has been a significant improvement in the integration of social innovation in R&D projects, but there are still several barriers that make it difficult to design, implement and maintain an engagement strategy. There is a need to define a better structure around engagement strategies from BRIDGE projects, including planning them in advance.

# Involved stakeholders and activities

Different types of stakeholders are participating in the BRIDGE initiative, as presented below:



**Consumers** include residential, professional, public institutions, and industrial consumers, as well as cities acting as consumers in projects, involved through associations.



**Regulated Operators** are TSOs and DSOs as defined by the Electricity Directive.



**Regulators** are the National Regulatory Authorities as defined by the Electricity Directive.



**Local Energy Communities** are defined as associations, cooperatives, partnerships, non-profit organisations, or other legal entities which are effectively controlled by local shareholders or members, generally value rather than profit-driven, involved in distributed generation and in performing activities of a distribution system operator, supplier or aggregator at local level, including across borders.



**Power technology providers** are hardware manufacturers for power transmission, distribution, and generation technologies.



**Storage providers** are considered in a separate category (all storage technologies are considered, including batteries from EVs and hot water tanks).



**ICT providers** are software and telecommunication vendors.



**Research & Innovation stakeholders** include research centres, universities, academic institutions, think-tanks, research and innovation consultants.



**Energy Suppliers** include power generators, retailers, energy service companies (ESCOs) acting in the competitive energy market.



**Aggregators** are market participants that combine multiple customer loads or generated electricity for sale, for purchase or auction in any organised energy market.



**Market operators** include power exchanges, brokers and traders on the energy markets.



**Others** is a category that covers stakeholders that do not fall in any of the above - defined categories such as international organisations, communication agencies, water supply operators, IT consultancy, technology manufacturers, engineering.

The activities of BRIDGE members are diverse, involving a range of tasks and duties crucial for the effective operation of the initiative. Below are the primary responsibilities:

**Attend regular online meetings of the working group**, adhering to detailed agendas and reviewing minutes to ensure effective communication and documentation.

**Formulate and implement the necessary work of internal WG Tasks** in line with the bottom-up activities outlined in the Work Program. Each project is required to appoint experts to all working groups. These experts will be responsible for formulating and implementing the necessary tasks within their respective internal working groups.

Work in conjunction with project consortia on **webinars and events** associated with papers and WG deliverables.

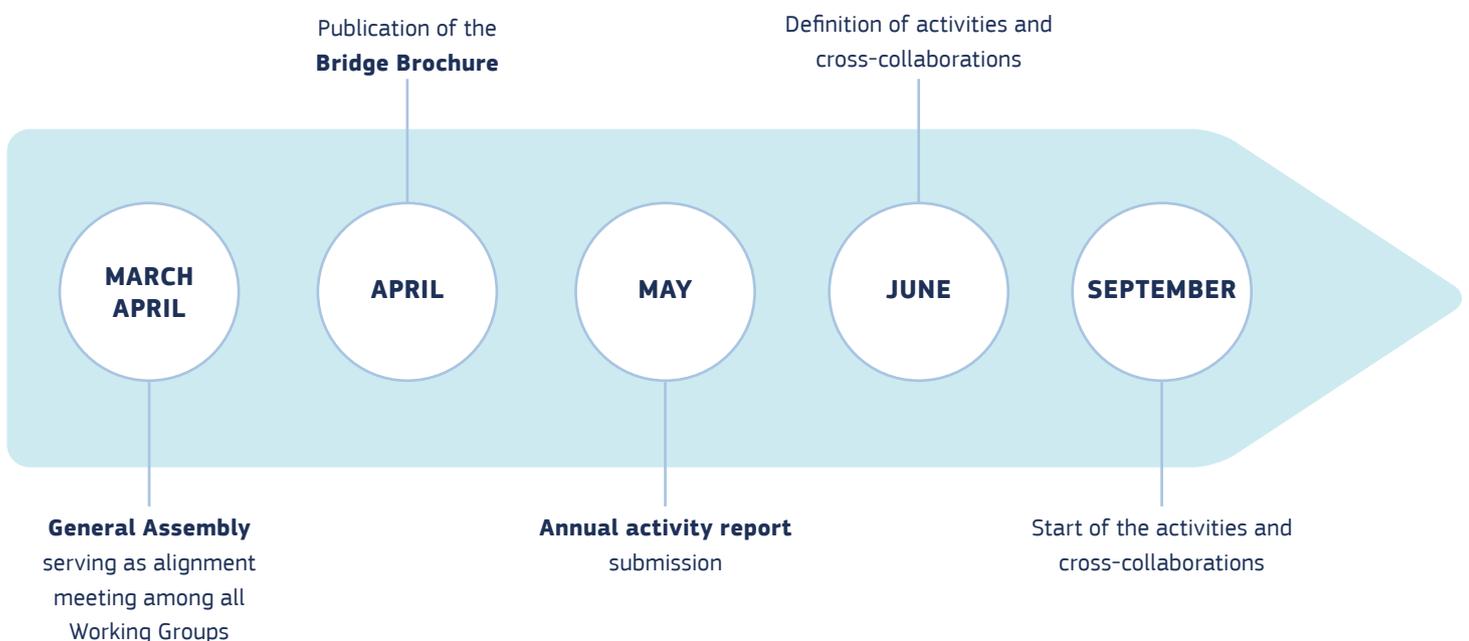
Provide data and pertinent information through **dedicated surveys** initiated by the Secretariat, guaranteeing transparency and facilitating well-informed decision-making processes.

Collaborate on the content and organisational aspects of **BRIDGE General Assemblies and other related events**.

**Foster connections with pertinent external organisations** to accomplish specific objectives and deliver tangible outcomes.

## Key milestones

Given the overarching mission, vision and strategic objectives of the BRIDGE initiative, the following milestones have been identified as indicators for evaluating progress, identify potential deviations, and shape future directions.



## Annex I

# BRIDGE in numbers

Below are provided a few statistics on the BRIDGE initiative, including number of projects, overall EU-contribution, number of organisations involved and number of countries covered, updated in May 2024.



All EU countries with BRIDGE projects are considered, as well as non-EU countries with at least two active projects. This method ensures a comprehensive count, providing appropriate representation of established BRIDGE ties at global level.



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The service contract support BRIDGE activities,  
funded by the EU.

