D2.3: Funding Opportunities Report

Delivery Date: May, 2025

Co-funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under the grant agreement № 101160145.

Deliverable Title	D2.3 Funding Opportunities Report
Project acronym and N°	SynGRID - Grant Agreement №: 101160145
Contractual Delivery Date	April 2025 (M12 of the project)
Actual Delivery Date	May 2025 (M13 of the project)
Work package	WP2
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Lead beneficiary	FER
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Dissemination level	R-PU
Abstract	The goal of this deliverable is to identify various funding opportunities and programmes that support research in the fields of renewable energy, digitalization of power systems, flexibility, capacity building, and other topics aligned with the goals of the SynGRID projects. This deliverable also serves as the basis for identifying the most suitable calls for preparing joint proposals.
Keywords	Funding opportunities, Horizon Europe, ERDF, INTERREG

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Control Versions

Version	Date	Description	Author
V0.0	15.10.2024	New document	Tomislav Antić (FER)
V0.1.	17.12.2024	Identification of relevant EU programmes	Tomislav Antić (FER)
V0.2.	15.3.2025	Specification of relevant calls within defined programmes	Tomislav Antić (FER), Hrvoje Pandžić (FER), Tomislav Capuder (FER), Danijel Topić (FERIT), Jan Jeriha (IRI), Edin Lakić (IRI), Alexandros Chronis (ICCS), Uroš Kocjan (PET)
V0.3.	28.4.2025	Finalizing the initial version of the deliverable, describing relevant calls open at the moment	Tomislav Antić (FER), Hrvoje Pandžić (FER), Tomislav Capuder (FER), Danijel Topić (FERIT), Jan Jeriha (IRI), Edin Lakić (IRI), Alexandros Chronis (ICCS)
V0.4.	15.5.2025	Extension of the deliverable with most recent Horizon Europe and LIFE calls	Tomislav Antić (FER)
V1.0.	29.5.2025	Final version ready for submission	Tomislav Antić (FER), Jan Jeriha (IRI)

Executive Summary

This document provides a detailed overview of various funding programmes that support research activities aligned with the objectives of the SynGRID project. Particular emphasis is placed on calls that allow for joint participation by SynGRID partners. The majority of the deliverable focuses on European Union funding programmes especially Horizon Europe, the European Regional Development Fund (ERDF), and LIFE due to the high number of open and upcoming calls that align with SynGRID's goals. However, other funding sources are also considered and presented.

The focus of this deliverable is on currently open and forthcoming announced calls, as they offer opportunities to continue the joint activities initiated during the SynGRID project. One of the key outcomes of the project is the preparation of at least four joint project proposals to be funded through different programmes, including Horizon Europe, the ERDF, and LIFE. This deliverable forms the foundation for achieving that goal by mapping calls that align with the SynGRID consortium's areas of expertise and key research priorities.

Each programme and call were investigated in terms of partners' eligibility, scope, expected outcomes and other key information, which is also a most important result of the deliverable for aforementioned reasons.

The conclusion of the deliverable is that the EU Funding programmes present the biggest opportunity for new project proposals as the most calls are defined within them and the largest funding is expected. However, there are other funding sources that also encourage joint project proposals. All identified programmes will be further assessed in the upcoming period and especially in related tasks and work packages.

Table of Contents

List of Tables

1 Introduction

1.1 Purpose of the document

The purpose of the document is to investigate and identify various funding opportunities at both the national and international levels, including **ERDF (I3 & INTERREG), HE and LIFE**. It aims to identify potential funding sources for scaling and implementing the research outcomes, thereby bridging the gap between European and regional funding mechanisms. This task is related to **WP3** and the task **T3.3 (Valorisation of collaboration – new project proposals),** as it will include the matching of funding mechanisms with validated research outcomes, to prepare for the proposal writing. It will also lay the foundation for the establishment of a cross-border research network by identifying specific national and international funding programmes that can be targeted for joint paper and project proposals. Please answer the following questions:

The deliverable is part of **WP2 – Regional Outcome Assessment and Methodology**, which primary objective is to assess to assess the regional impact of validated research outcomes from HE and H2020 projects in the context of Widening countries like Croatia, Greece, and Slovenia. This WP aims to align these research outputs with the smart specialization priorities of these countries, particularly in the areas of LV grid management and RES integration. It will also identify gaps in the technology environment and explore various national and international funding opportunities. Therefore, this deliverable is related to D2.1 – Technology Environment and Regulatory Gap Analysis Report and D2.2 – Research Outcome Mapping Report. Furthermore, the deliverable is directly related to activities in WP3 – Capacity building and R&I Collaboration, especially task 3.3 Valorisation of collaboration – new project proposals which aims to develop new project proposals by leveraging various funding options like ERDF (I3 and INTERREG), IPA, and RRF. It will focus on preparing research outcomes for market introduction and policy impact. One of the primary objectives is to draft and submit a detailed project proposal under the ERDF's I3 instrument, which aims to support interregional innovation projects during their commercialization and scale-up phases. Additionally, project proposals for HE and LIFE will be prepared and submitted. New project proposals in task 3.3. will be direct results of identified project calls presented in the deliverable D2.3.

FER is the task leader and the lead beneficiary of this deliverable. The main task of FER was to identify relevant programmes and specific calls within them that align with the topic of the SynGRID project. Other partners participated in different activities including identifying relevant funding programmes, with the emphasis on national funding programmes and reviewing the deliverable.

1.2 Scope of the document

This deliverable provides a curated list of potential funding sources and relevant call topics, accompanied by an analysis of their suitability for implementing the research outcomes and recommendations for future funding applications. It includes a range of funding programmes such as **Horizon Europe, the European Regional Development Fund, LIFE**, and various national and international schemes. In addition to describing each programme, the document identifies specific project calls - where available - focused on distribution networks, particularly low voltage networks, with an emphasis on observability, controllability, automation, flexibility, and local electricity markets. It also highlights relevant technologies including energy communities, aggregators, and distributed energy resources. These identified calls will serve as a foundation for preparing joint project proposals, a key objective of the SynGRID project.

1.3 Structure of the document

The rest of the document is structured as follows:

- **Section 2 – European Union Funding Programmes:** This section identifies opportunities within EU funding programmes, including Horizon Europe, ERDF, LIFE, and others. It provides an overview of the most relevant open and upcoming project calls that align with the SynGRID project's goals and the consortium's interests.
- **Section 3 – International Funding Programmes:** This section highlights relevant funding sources outside the European Union, offering opportunities for SynGRID partners to strengthen collaboration with third-country partners by sharing knowledge and expertise on topics potentially relevant to the European context.
- **Section 4 – National Funding Programmes:** This section presents project calls funded by national agencies that support joint applications, either between partners from the same country (e.g., FER and FERIT) or through bilateral cooperation between Croatian and Slovenian partners.
- **Section 5 – Conclusions:** The final section of this deliverable provides a brief summary of funding opportunities and outlines partner eligibility for specific calls.

2 European Union Funding Programmes

2.1 Horizon Europe

The Horizon Europe Work Programme 2025 outlines the European Union's strategic research and innovation priorities, offering over €7.2 billion in funding across key thematic areas such as health, climate, energy, digital technologies, and inclusive societies. It also sets the general conditions for participation, including eligibility rules, submission procedures, and evaluation criteria.

This programme is designed to deliver on the EU's policy objectives by supporting the green and digital transitions, increasing resilience, and enhancing Europe's competitiveness. Through targeted R&I actions, the EU aims to drive scientific breakthroughs, develop critical technologies, and secure strategic autonomy. Applicants can explore calls on the Funding and Tenders Portal [1] and receive tailored support from the network of National Contact Points across Europe.

Cluster 1, Health, focuses on preventive healthcare, biotechnology, artificial intelligence in medicine, and mental health, particularly for vulnerable populations.
Cluster 2, Culture, Creativity and Inclusive Society, addresses challenges such as disinformation, polarisation, social exclusion, and threats to democracy, while also promoting the role of cultural and creative industries.
Cluster 3, Civil Security for Society, supports actions to boost European security through enhanced crisis preparedness, cybersecurity, and protection against hybrid threats, terrorism, and climate-related risks.
Cluster 4, Digital, Industry and Space, prioritises trustworthy and human-centric AI, digital sovereignty, sustainable manufacturing, and space technology, contributing to the EU's strategic autonomy.
In Cluster 5, Climate, Energy and Mobility, research focuses on clean, affordable, and secure energy, sustainable transport solutions, industrial decarbonisation, and circularity, with digital tools playing a key role in productivity and skills development.
Cluster 6, Food, Bioeconomy, Natural Resources, Agriculture and Environment, aims to protect biodiversity, promote sustainable agriculture and blue economy practices, and support the circular and bioeconomy transitions in alignment with major EU environmental strategies.

Beyond the clusters, the European Innovation Ecosystems programme supports the development of interconnected and efficient innovation environments. The Widening Participation and Strengthening the European Research Area (ERA) actions reduce regional disparities, boost research capacity, and implement reforms to make Europe's R&I system more inclusive, open, and excellent.

Eight new European Partnerships will be launched, coordinating national and industry efforts in strategic fields such as brain health, forestry, raw materials, solar energy, and textiles. Additionally, the EU will invest over €652 million in EU Missions that aim to address global challenges through bold, time-bound goals, such as climate adaptation, fighting cancer, restoring oceans, creating climate-neutral cities, and improving soil health.

The New European Bauhaus Facility will support sustainable and inclusive neighbourhood transformation, integrating arts, culture, and circular design. International cooperation remains a priority, with Horizon Europe fostering partnerships across the globe, particularly with Africa, Latin America, and countries associated with the programme. These collaborations are vital for tackling shared challenges and strengthening Europe's scientific and technological leadership.

To simplify participation, the 2025 work programme introduces shorter and less prescriptive topics, broader use of lump sum funding, and more flexible evaluation formats, including two-stage and blind evaluations. These measures aim to reduce applicant burden and enhance accessibility.

Horizon Europe also commits to investing at least 35% of its funding in climate-related goals and around 40% in the digital transition, with €1.6 billion allocated to AI-related topics in 2025 alone. Additionally, strong contributions will be made to biodiversity protection and clean technology development.

Each part of the work programme presents clearly defined challenges, expected impacts, and scope for action, encouraging applicants to propose creative and impactful R&I solutions. Together, these efforts will help the EU address urgent societal and environmental challenges while fostering innovation, competitiveness, and global leadership in research and technology.

2.1.1 Cluster 5 – Climate, Energy and Mobility

Cluster 5 – Climate, Energy and Mobility plays a central role in supporting the EU's Green Deal objectives and the transition to a climate-neutral, resource-efficient, and resilient society. It addresses the urgent need to decarbonize energy systems and transport, ensure secure and affordable energy supply, and enhance climate adaptation and mitigation capabilities.

This cluster promotes integrated approaches to tackling climate change through innovations in renewable energy generation, energy storage, smart grids, and energy efficiency across sectors. It supports the development of clean energy technologies and their integration into energy systems, with special focus on sector coupling and digitalization to optimize performance and flexibility.
In the mobility domain, Cluster 5 aims to make transport systems more sustainable, connected, and safe, while reducing emissions and congestion. This includes advancements in zero-emission vehicles, intelligent transport infrastructure, modal shifts to cleaner transport modes, and sustainable urban mobility strategies.

Research in this cluster also supports circular economy models in energy and transport, advances low-carbon fuels and electrification technologies, and promotes citizen engagement and behavioral change. It integrates climate science with socio-economic research to better understand vulnerabilities and enable just transitions for all regions and communities.
By addressing key energy and mobility challenges together, Cluster 5 contributes to energy sovereignty, industrial competitiveness, and environmental sustainability, while aligning with broader strategic priorities such as the Fit for 55 package and the REPowerEU Plan.

There are 86 calls opened in Cluster 5. The full list and detailed description of all calls is available at web pages of the European Commission [2]. In this deliverable, only the calls that are mostly related to the topic of the SynGRID project.

2.1.1.1 HORIZON-CL5-2025-02-D3-11: Novel inverter technologies and flexibility in PV systems (EUPI-PV Partnership)

The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The total indicative budget for the topic is EUR 18.00 million. The type of action is Innovation Action. The deadline date is September 2nd, 2025.

Expected outcome: The integration of renewable and distributed energy sources, like photovoltaic (PV) systems and energy storage, into the electric distribution network demands the use of advanced

power electronics, commonly referred to as smart inverters. These inverters are essential for delivering grid-support services, including voltage and frequency regulation, fault ride-through, dynamic current support, and anti-islanding protection. Achieving successful integration involves several key steps: innovating smart inverter technologies, creating resilient control algorithms to enhance inverter performance, studying the interactions between multiple smart inverters and the utility grid, contributing to the development of relevant standards, and assessing how smart inverters influence the behaviour and performance of distribution systems.

Scope: Projects are expected to:

- Demonstrate new inverter technologies with increased power density and reliability at lower cost (e.g., allowing for medium voltage PV systems), that integrate new power device technologies based on wide bandgap semiconductors (e.g., GaN, SiC) that could supply synthetic inertia and a range of grid services.
- Design of smart (e.g., integrating condition and health monitoring), and with improved capabilities, inverter hardware and firmware.
- Ensure inverters' electromagnetic compatibility proposing optimal mitigation techniques for the causes and propagation pathways of electromagnetic interference, and conformity with current and under development standards.
- Use of control and power hardware-in-the-loop techniques to determine interactions between multiple inverters at multiple points of common coupling.
- Demonstrate integrated communication connection between inverters and other components (e.g., battery, PV modules, grid, etc.) to automatically gather their information (serial number, geolocalisation, etc.) and support the creation of Digital Twins and PV data models, towards a real predictive monitoring of electricity production.
- Evaluate system integration and cybersecurity, while providing guidance for future developments (e.g., recyclability) in both hardware and software.

2.1.1.2 HORIZON-CL5-2025-02-D3-17: Control and operation tools for a RES-based energy system

The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The total indicative budget for the topic is EUR 20.00 million. The type of action is Innovation Actions. The deadline date is September 2nd, 2025.

Expected outcome: Enhancing the electricity system's readiness to meet the EU's binding 2030 target of at least 42.5% renewable energy in gross final consumption, with the ambition of reaching 45%, is a key objective. This includes enabling grid operators to adopt advanced forecasting tools for renewable energy generation and demand prediction. Additionally, innovative energy management systems and smart grid technologies will be essential for the efficient integration of renewable energy sources (RES) across all voltage levels. Transmission and distribution system operators must also expand their capabilities to leverage system flexibility and access services such as demand response and energy storage. Moreover, system operators should establish structured collaboration frameworks with energy suppliers and service providers, especially under critical grid conditions. Finally, to address the challenges posed by increasingly variable renewable generation, both transmission and distribution operators must develop coordinated strategies and mechanisms to mitigate associated system risks.

Scope: Projects are expected to:

- Design and test innovative technologies, processes, and control mechanisms for the seamless integration of massive volumes of RES at distribution and transmission levels. The solutions are expected to incorporate both hardware and software aspects.
- Address network constraints and increase flexibility capabilities of grids, through advanced operation and control mechanisms and tools, for improving the overall grid performance and the efficiency of RES uptake.

Proposals should clearly demonstrate an in-depth understanding of both the challenges and opportunities related to integrating renewable energy sources into the current energy system. Building on this foundation, they must present a holistic strategy for developing and validating advanced technologies and control systems capable of addressing these challenges. At the same time, proposals should leverage digitalisation to enhance the functionality and adaptability of the energy system.

Furthermore, each project should outline a comprehensive set of best practices and policy recommendations to facilitate the effective adoption of higher shares of renewables. These outcomes should support progress toward the EU's binding 2030 target of at least 42.5% renewable energy in gross final consumption, with the aspiration to reach 45%.

Projects are required to include the participation of at least two Transmission System Operators (TSOs) and four Distribution System Operators (DSOs), which may be allocated across different pilot sites within the same project.

Additionally, collaboration is encouraged with the following entities:

- at least three suppliers of energy from renewable sources, out of which at least two should supply energy from non-dispatchable energy sources. The supply covered by the project should include both wind and solar energy sources,
- at least two providers of energy services for the grids (e.g., aggregation of energy supply and/or energy demand, energy storage).

2.1.1.3 HORIZON-CL5-2026-02-D3-18: Next generation distribution substation for increasing the system resilience

The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The total indicative budget for the topic is EUR 18.00 million. The type of action is Innovation Actions. The opening date for this call is September 16th, 2025, with the deadline date February 17th, 2026.

Expected outcome: Enhancing the observability, monitoring, and control of electricity distribution grids is essential to support the evolving energy landscape. System operators should implement optimized grid management strategies, including predictive and condition-based maintenance, to improve overall system resilience, enabling the grid to better withstand natural hazards and cybersecurity threats.
Real-time decision-making must become a standard practice among grid operators, potentially supported by artificial intelligence (AI) algorithms where appropriate, to increase responsiveness and operational efficiency.

Additionally, the development of a comprehensive smart substation ecosystem is crucial. This ecosystem should bring together DSOs, technology and solution providers, system integrators, and application developers to collaboratively advance substation capabilities across both high-to-medium and medium-to-low voltage levels.

Scope: Projects are expected to:

- Demonstrate the integration of power electronics, intelligent electronic devices, and software solutions in the distribution substations or in their proximity.
- Demonstrate real-time monitoring and analysis of grid conditions (including power quality, voltage levels, grid component monitoring, and overall system performance) that allow operators to quickly identify and address any potential issues or disturbances, help to prevent outages and minimize the impact of service disruptions.
- Consolidate data streams from otherwise dispersed sources to create unified visualizations and consolidated analytics that offer insights into the performance of distributions substations.
- Develop the concept of a flexible and programmable electricity distribution grid in which the substation is a center of intelligence that facilitates optimal power routing while ensuring the resilience of the electricity grid.

Projects should deliver a well-defined set of best practices and recommendations that outline effective overarching principles and operational strategies for building smart distribution substations and integrating them into a more resilient, intelligent, and adaptive distribution grid. This grid should be capable of addressing disturbances and managing network congestion efficiently. To ensure the scalability and relevance of proposed solutions, each project is expected to involve a minimum of five distribution system operators operating across different geographical regions and climate conditions. These operators may be engaged across various pilot sites within the same project framework.

Additionally, collaboration is encouraged with the following entities:

- at least two suppliers of technologies for smart power substations,
- at least one TSO.

2.1.1.4 HORIZON-CL5-2026-02-D3-19: Innovative solutions for a generative AI-powered digital spine of the EU energy system

The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The total indicative budget for the topic is EUR 16.00 million. The type of action is Innovation Actions. The opening date for this call is September 16th, 2025, with the deadline date February 17th, 2026.

Expected outcome: The availability of generative AI tools offers significant potential for electricity system operators, energy service providers, households, and energy communities to accelerate the digital and green transformation across energy, mobility, and buildings. Decentralised IT solutions powered by generative AI can play a critical role in optimising local grid operations, thereby facilitating greater integration of renewable energy sources, electric vehicles, and the electrification of both household and industrial demand at the distribution level. These advancements are expected to enhance the reliability, resilience, security, and overall energy efficiency of the system. By leveraging

state-of-the-art AI technologies, stakeholders will gain valuable insights for modernising and managing energy networks, while seamlessly integrating digital services, renewables, and increased electrification. In parallel, the development of smarter demand-side tools will empower industries and consumers to optimise energy production and consumption patterns using AI-driven strategies.

Scope: Reaching the Green Deal objectives for 2030 and 2050 requires major investments in a smart, digital energy system that can integrate more renewables, electrify demand, and support energy storage. This includes sectors like transport, industry, and residential heating. Intelligent grid planning and operation, enabled by technologies such as smart meters, EV charging networks, and building platforms, must be supported by flexibility markets, demand response, and seamless data exchange. Innovations in energy data, IoT, digital twins, and energy market design, combined with generative AI and emerging AI Factories, will drive the next generation of energy system intelligence. The overall scope is the development of a prototype of an automated, AI-powered, software-defined smart energy system leveraging and further developing existing (open-source) digital solutions of lower TRLs developed in EU and national research, innovation- and deployment- programmes, as well as AI algorithms and tools provided by the AI Factories, namely to:

- Develop and test the potential for generative AI to develop apps/programs for local system optimization and for system planning and operation.
- Develop and test generative AI that can identify sources of flexibility and provide solutions for interoperability and data exchange to enable decentralized optimization of distributed assets. This includes the integration with various data sources and sectors, such as mobility, to promote decentralization, energy-efficiency, and cost-efficiency and to enable interoperability across different parts of the energy system.
- Explore the potential of generative AI for system optimization through scenario generation, simulation, and time series forecasting, while also developing optimization tools for both supply-side and demand-side management using forecasts and data for renewable energy, transmission assets, storage, and energy-saving applications for consumers.
- Propose tools and control systems to apply generative AI solutions developed in a high-risk use-case (as defined in the AI act).

The developed solutions should be dynamic, flexible, offering reconfigurable automated management, control and data exchange to ensure seamless operations across a decentralized setting. Projects should demonstrate advanced AI-powered energy services and tools for power system planning, grid operation, and smart functionalities such as demand flexibility, EV charging, and potentially transmission system support. These demonstrations must span at least three EU Member States and/or associated countries, showcasing innovative solutions that drive decarbonization and energy efficiency across diverse contexts.

A key focus should be the integration of generative AI, including the use of foundational tools developed by AI Factories. Proposals must clearly outline which generative AI tools will be employed and describe how energy sector stakeholders such as system operators, service providers, and end users, will be actively involved in the development, testing, and potential adoption of these tools.
The projects must specify the types of assets (e.g., grid infrastructure, EVs, smart appliances) and data sources (e.g., operational, meteorological, market data) to be used, ensuring alignment with the needs of AI-driven applications. Active participation is expected from both established and emerging stakeholders, including energy service companies, aggregators, digital infrastructure providers, system integrators, manufacturers, energy communities, and prosumers.

To ensure broad interoperability and future scalability, projects should adhere to relevant European and international standards and engage with standards development organizations. Contributions to the BRIDGE initiative are essential, with active participation in its activities to foster knowledge exchange and coordination across projects.

Solutions developed must build on open-source tools and prior Horizon Europe outcomes, particularly those related to flexibility markets, IoT, edge-cloud computing, and data exchange. Where applicable, new systems should integrate with or partially replace existing legacy infrastructure, such as SCADA systems, especially in DSO environments.

Finally, each project is expected to showcase a diverse portfolio of generative AI applications, demonstrating their practical value and potential for broad deployment across the energy sector.

2.1.1.5 HORIZON-CL5-2026-02-D3-20: Innovative tools and services to manage and empower energy communities

The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The total indicative budget for the topic is EUR 20.00 million. The type of action is Innovation Actions. The opening date for this call is September 16th, 2025, with the deadline date February 17th, 2026.

Expected outcome: The integration of home and building energy assets should be carried out efficiently, using common Internet of Things communication standards for smart homes, and following established frameworks such as the Smart Grid Architecture Model and data models like IEC CIM for load, generation, and storage devices. This integration should support local energy trading and distributed, grid-oriented services through mechanisms such as micro-markets and peer-to-peer transactions, thereby improving citizen participation in energy markets.

Efforts should also focus on enhancing the role of energy communities within European energy grids by increasing the share of renewable energy and the use of flexibility, enabled through transparent and efficient market-based cost-sharing mechanisms. Strengthening data security in the exchange of information, particularly for prosumers, end-users, and independent commercial asset operators, is essential to building trust and system resilience.

A cross-sectoral approach should be adopted to foster synergies across electricity, gas, mobility, and heating or cooling sectors at the level of both citizens and energy communities. In parallel, empowering local governments and intermediaries is critical. This includes supporting the development of robust community energy policies across EU Member States and improving access to tools and capacity-building initiatives at the local level, in order to promote a decentralized, participatory, and co-owned energy transition.

Scope: The project should:

- Develop innovative and open-source tools for managing shared energy community assets (e.g., energy storage facilities) and optimizing energy community management (e.g., selection

and switching of aggregators, preparation and trading of smart contracts, peer-to-peer and energy sharing, self-consumption).

- Develop open-source tools for forecasting, prediction and advanced data analysis using AI tools and in-depth data analysis for customers and prosumers for autonomous optimization of consumption, production, storage, smart devices (appliances), and electric vehicle both at household and energy community levels.
- Extend DSO SCADA and substation systems for autonomous control of grid assets and seamlessly integrate these systems with home and building energy management systems for direct and fast control and data acquisition to implement local (distribution) grid services (constrain alleviation, grid reconfiguration, restoration of supply, maintenance, and enhancement of energy quality), real-time assessment and monetization of the use of grid resources.
- Integrate the three elements above as a basis to establish a platform for cooperation between individual customers or prosumers, entire energy communities, wide area aggregators, and DSOs to provide, acquire, and settle energy system-oriented services (system-wide balancing, support of frequency regulation). The cooperation platform should be based on a plug-and-play integration of the energy community eco-system components (hardware and software), using and extending relevant communication standards and data models. The integration mechanism should be embedded within the core systems used by customers/prosumers, DSO (and TSO), aggregators and market operators, fully aligned with SGAM.
- Develop tailored security solutions for private and public communication networks used by IoT apps and devices (smart appliances) across energy carriers.
- Ensure the follow-up and implementation of EU policy measures, including by conducting quality assessments and introducing national community energy targets.
- Foster institutional allies at local and regional levels.
- Provide access to and capacities for using digital planning tools.
- Identify the barriers for network operators (e.g. legal, economic, regulatory etc.) who want to introduce smart consumption options for their customers.

Projects should ensure semantically interoperable interactions, preferably using ETSI SAREF ontologies, and align with the IEC TR 63097 Smart Grid Roadmap. Solutions must support open, off-the-shelf integration through common communication and data standards. Active participation is required from energy communities, smart appliance and home energy device manufacturers, home and building energy management system developers, DSOs, and aggregators. However, in line with Directive (EU) 2019/944, TSOs and DSOs involved may not own, develop, or operate energy storage facilities or EV recharging points, and the DSOs' role in peer-to-peer trading must comply with legal provisions.

Projects must test solutions in at least three energy communities across different European countries, preferably with varying socio-economic contexts and resource availabilities. These communities should be technologically advanced, located near secondary substations with advanced monitoring and control, and support diverse energy vectors, flexible topologies, local generation, and a high degree of energy self-sufficiency.

Close collaboration with similar communities is encouraged to increase replication potential. Projects must contribute to the BRIDGE initiative and are encouraged to engage with AIOTI and other relevant digital and coordination initiatives. The integration of social sciences and humanities (SSH) expertise is essential to enhance the societal relevance and impact of the research.

2.1.1.6 HORIZON-CL5-2025-02-D3-21: Cross-regional network and market model for optimisation of long duration storage

The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The total indicative budget for the topic is EUR 14.00 million. The type of action is Innovation Actions. The deadline date is September 2nd, 2025.

Expected outcome: Energy system planners and operators will develop advanced tools to optimize the overall system value of Long-Duration Energy Storage (LDES) within cross-regional networks and markets increasingly reliant on variable renewable energy sources. Strategic integration of LDES at key grid locations will enable stakeholders to maximize lifetime cost-benefit, enhance grid operation, reduce fossil fuel use and CO_2 emissions, support renewable energy balancing, and minimize the need for network reinforcement. Finely tuned business cases for revenue stacking, along with insights into marginal abatement costs of different technologies and their combinations across regions, will support informed long-term decisions by operators, planners, and investors. Improved market mechanisms, such as nodal and locational pricing, will enhance LDES economics, increase investor confidence, and accelerate deployment.

Scope: The project should:

- Develop and test new, advanced, integrated models and tools for cross-regional networks and markets that are dominated by intermittent and stochastic renewable energy sources. This spatial-temporal model should be designed to create, analyze and optimize scenarios for strategically integrating, locating and dimensioning LDES (here defined as: >12h) for a future European energy system.
- The proposed solution will be tested under different scenarios in a relevant/operational environment. The project should be based on a complete understanding of existing operational systems in at least two adjacent regions (NUTS 2 or 3) – best represented in the form of a digital twin (or similar). Consortia should include the respective system operators, service providers, technology providers, potential financial actors and other relevant stakeholders.
- Produce practical, operationally useful knowledge on cross-regional strategies for combining a variety of clean flexibility LDES solutions/technologies and cross-sector integration, focusing on the optimal combination of LDES with RES production sites, industrial complexes and districts (e.g. co-location and hybridization), to support the grid.
- This topic will analyze the overall system value of integration of LDES (>12h) in the energy system under different future decarbonization pathways, assessing the impact on operation and planning of energy infrastructure costs as well as security of supply, system reliability and resiliency.
- The scope is to maximize the benefit of LDES integration within the context of system wide optimization of long-term grid enhancement strategies. This encompasses relevant, validated

historical data sets, visualization, scenario analysis, model sensitivity analysis and data set optimization, optimal use of previously developed models and digital twins, cyber security, use of open-source solutions and free licensing.

- The project is expected to identify technical and regulatory barriers, and propose possible recommendations and policy actions, to promote the best solutions tackling these barriers and support replication of the solutions.

2.1.1.7 HORIZON-CL5-2026-02-D4-04: Innovative approaches for the deployment of Positive Energy Districts

The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The total indicative budget for the topic is EUR 15.00 million. The type of action is Innovation Actions. The opening date for this call is September 16th, 2025, with the deadline date February 17th, 2026.

Expected outcome: The project should deliver more approaches and solutions that achieve a net positive annual energy balance at the district level and enable the export of surplus renewable energy beyond the district's boundaries. These solutions should be scalable and replicable across other Positive Energy Districts (PEDs) in diverse contexts. Additionally, the project should lead to a measurable increase in public acceptance and inclusiveness in PED implementation, along with improved user-friendliness and awareness of guidelines, tools, and training materials for key professionals to help overcome barriers to PED realization.

Scope: While recent projects have shown the feasibility of PEDs, there is still a need to demonstrate their climate-neutral impact and to develop innovative solutions that address remaining technical, business, social, and organizational challenges. These challenges span areas such as climate mitigation, renewable energy and storage integration, grid connectivity, distributed energy systems, permitting, data privacy, and the use of advanced technologies like artificial intelligence. Overcoming these barriers requires close collaboration between public and private sector professionals, including municipal and regional authorities, as well as experts from the energy and construction sectors. Proposals are expected to address all of the following:

- Demonstrate innovative approaches and solutions for overcoming constraints which prevent the successful implementation of PEDs.
- Develop supportive local planning frameworks for the design and realization of PEDs.
- Demonstrate the proposed approaches, solutions, and supportive local planning frameworks in at least three districts in diverse geographical areas that implement energy efficiency measures alongside renewable energy installations, storage solutions, digital and smart technologies, and local energy communities.
- Develop and/or update existing guidelines, tools, and training materials for key professionals that will enable other cities to successfully replicate these innovative approaches, solutions and supportive local planning frameworks in their district/cities.
- Ensure the active involvement of all relevant public and private stakeholders, including citizens, through co-creation processes and community engagement activities.

2.1.1.8 HORIZON-CL5-2025-04-D5-02: Cybersecure and resilient road e-mobility ecosystem (2ZERO Partnership)

The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The total indicative budget for the topic is EUR 10.00 million. The type of action is Innovation Actions. The deadline date is September 4th, 2025.

Expected outcome: The project should develop a holistic architecture integrating cyber-resilient hardware and software modules, such as Hardware Secure Modules, incorporating advanced cryptographic technologies like Post-Quantum Cryptography to strengthen the security, resilience, and robustness of e-mobility systems. It should include the implementation and real-life demonstration of cybersecure e-mobility tools, based on open-source frameworks and tested through relevant use cases for verification and certification. The initiative should also produce guidelines for rapid cybersecurity mitigation strategies, including advanced cryptographic methods and over-the-air software updates, as well as a comprehensive data breach response plan outlining roles and responsibilities across the ecosystem. Additionally, Electric Vehicle Supply Equipment (EVSE) should be reinforced to withstand natural hazards, vandalism, and both cyber and physical attacks.

Scope: The e-mobility system involves the interconnection of various actors, such as EVs, charging infrastructure (EVSEs), users, and energy stakeholders, through integrated ICT, front-end, and back-end systems. Charging infrastructure must be universally open and accessible, supporting all EV types, software, protocols, and networks, while also meeting the Cyber-Resilience Act (CRA) requirements by November 2027. As the automotive industry shifts toward software-defined vehicles with continuous Over-The-Air updates, securing these interactions becomes critical. Cyber-attacks at any point in the e-mobility ecosystem could lead to significant financial, operational, and potentially nationwide disruptions, underscoring the need for a secure, resilient, and reliable system. Proposals are expected to address all the following aspects:

- Develop a secure-by-design architecture and secure design principles encompassing all components and direct interfaces with EVs, EVSE, Charging Point Operators and E-Mobility Service Providers (EMSP) within the e-mobility ecosystem194 considering governance models involving the roles and responsibilities of the different actors.
- Conduct a thorough threat analysis and risk assessment to identify potential security vulnerabilities within the ecosystem, also analyzing the security of interfaces with all involved actors (e.g., EV Aggregators, Facility Managers, Flexibility Providers, Distribution System Operators, etc.) when applying V2X services.
- Define a comprehensive testing framework for penetration including reacting against live attacks to EVSE as well as to vehicle network on hardware (HW) and software (SW) components to uncover potential weaknesses and vulnerabilities, including behavioral aspects such as sub-standard repair or vehicle tampering.
- Implement a shared system of systems testing approach and develop co-designed verification and certification methods (also via Hackathon).
- Demonstrate in real-life operational environment the use of the framework for testing the cyber security and resilience of vehicles and charging infrastructure isolated and in connection to situations like charging, preparing for charging and payment processing.

- Compliance with existing standards and best practices for security, resilience, and robustness of e-mobility systems for more secured systems should be ensured, making use, where applicable, of generative AI.
- Extend Public Key Infrastructure (PKI) deployment, while considering emerging cryptography threats (i.e., quantum crypto) and exploring solutions, particularly focusing on pre-emptive measures against Post-Quantum Cryptographic attacks.
- Support to the set-up and implementation of the EC's PKI ecosystem governance based on ISO 15118-20 standard.
- Develop digital twins to help define vulnerable elements of infrastructure and identify measures for risk mitigation.
- Consider the HW/SW elements and communication channels spanning from vehicles to charging stations and the electricity grid as a proactive design to mitigate vulnerabilities across the entire chain.
- Exploitation of synergies with projects related to the Software-Defined Vehicle of the Future is encouraged where applicable.

2.1.1.9 HORIZON-CL5-2025-04-D5-05: Road Battery Electric Vehicles (BEV) optimised user-centric solutions for energy efficiency design and consistent range throughout weather conditions (2ZERO Partnership)

The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. The type of action is Innovation Actions. The deadline date is September 4th, 2025.

Expected outcome: The project should deliver a validated set of user requirements and acceptance thresholds, such as tolerable range loss due to cabin climatization, tailored to various user groups by age, income, gender, location, and driving habits under diverse weather conditions. It should demonstrate innovative, cost-effective energy management solutions for Light Duty and Light Commercial Vehicles in a relevant environment using a prototype system, showing clear improvements over the current state of the art. These solutions must balance user comfort (e.g., temperature, humidity, CO_2 levels) with driving range in extreme temperatures ranging from -15°C to at least +40°C, aiming for +45°C. The goal is to reduce range loss due to climate control at extreme conditions by at least 30% compared to current technologies, without increasing system costs. The project should also integrate smart city standards to optimize energy management, targeting a 10% reduction in energy demand for both thermal systems and powertrains.

Scope: To maintain the affordability and resource efficiency of right-sized BEV batteries while minimizing the impact of extreme weather on driving range- especially for LDVs and LCVs on long trips- new systemic thermal management approaches are needed. These solutions must balance user needs, technical feasibility, and cost-effectiveness, guided by user research on preferences and usage scenarios. Innovations should meet automotive standards and focus on user-centric, intelligent system-level designs that simplify thermal management and reduce energy use without increasing vehicle or system costs. Proposals are expected to address all the following aspects:

- Analyze user requirements to identify personalized thresholds of thermal comfort and their different expectations and behaviors, sensitivities, tolerances, and acceptance with regard to various use cases.
- Establish a holistic approach to optimizing energy efficiency and relevant thermal functions (system-oriented and simplified solutions based on usage scenarios and inclusion of external data to use energy optimally and avoid oversizing that could also result from cascading engineering safety margins).
- Explore and exploit the potential that connection to the grid offers without overloading the grid, especially during extreme weather conditions.
- Develop innovative, safe and intelligent solutions that reduce the loss of range within acceptable limits also addressing the balance of costs, usage models and system complexity when considering extreme weather conditions while meeting automotive standards under normal use.
- Develop innovative vehicle energy management solutions for seldom extreme weather conditions also using predictive energy management, e.g., AI-based functions and intelligent management of auxiliaries, in order to fulfil user preferences and tolerances.
- All developed solutions and concepts must be integrated in a prototype or mock-up vehicle and demonstrated on system level in a relevant environment.

2.2 European Regional Development Fund

2.2.1 Interregional Innovation Investments (I3) Instrument

The Interregional Innovation Investments (I3) Instrument [3], under the European Regional and Development Fund (ERDF), supports the scale-up and commercialisation of interregional innovation projects by addressing regulatory and market barriers. By promoting Smart Specialisation and collaboration among regions, it strengthens regional innovation ecosystems, fosters sustainable investment links, and accelerates the market uptake of research results.

The budget for the 2021–2027 programming period includes over €490 million in available funding, with up to €10 million allocated per project. The EU covers 70% of costs for all beneficiaries and cost categories, and provides 100% funding for financial support to third parties.

Investment projects must include a minimum of 3 to 5 partners from different Member States and regional ecosystems, focusing on innovation and impact-oriented investments. Projects should be close to market, with a Technology Readiness Level (TRL) between 6 and 9. The SynGRID consortium, comprising partners from three different Member States, meets the eligibility criteria for application; however, the inclusion of partners from non-university ecosystems is required to ensure a diverse and application-driven collaboration.

ERDF funds interregional innovation projects (TRL 6-9) to reshape EU value chains and bring innovations to market.
It supports investments under shared smart specialisation (S3) in:

- **Green transition**
- **Digital transition**
- **Smart manufacturing**

The I3 Programme is structured in a following way:

- **Strand 1** supports consortia from regions with shared smart specialisation areas, ready to invest in interregional innovation projects.
- **Strand 2a** funds value chain development in less developed regions, integrating them into EU value chains.
- **Strand 2b** strengthens regional innovation ecosystems, building capacity for interregional business cases.

On 22 May 2025, the European Commission launched two new calls for proposals under the I3 Instrument, with a total budget of €47 million. The calls are open to consortia comprising private organisations (including SMEs and start-ups), public institutions, and academic entities such as universities and research organisations [4]. The deadline date is November 13th, 2025.

Strand 1 targets consortia of innovation actors from regions (of different levels of development and innovation performance) with shared or complementary smart specialisation areas, which are ready to make investments in interregional innovation projects. **Strand 2a** focuses on supporting interregional innovation investments aiming at developing value chains in less developed regions and reinforcing the integration of innovation actors in EU value chains.

The estimated total budget for the current call is €23 million for Strand 1 and €24 million for Strand 2a. As a Cohesion Policy instrument, the I3 Instrument promotes interregional cooperation in innovation by supporting consortia of public and private stakeholders from across EU regions in advancing joint investment projects to market. It encourages the integration of regions at varying development levels into EU-wide value chains, enabling less developed and transition regions to engage in innovation through targeted support, knowledge sharing, and alignment with EU priorities. Both strands aim to bring investment-ready ideas closer to market and foster sustainable European value chains through collaborative interregional efforts.

These two project calls have several defined aspects in common, starting with the expected impact of project proposals. **Expected impact at the closure of the project are:**

- Creation of new value chains in less developed regions and transition regions;
- Application and deployment of innovative technologies and solutions (new to the region) in less developed and transition regions (innovation diffusion);
- Exploitation of research results;
- Innovative technologies tested and adopted by companies and public administration;
- Innovative solutions deployed improving businesses confidence, competences and means to digitalise and grow;
- Contribution to digitisation and health systems transformation, through various types of innovation and the supply of IT services;
- Uptake of technologically/economically reliable and viable solutions on the market;
- Deployment of new green and digital technologies fostering the growth of Europe's manufacturing sector;
- Innovative technologies adopted by SMEs;

- Identification of possible sources of funding/funding mix, to cover the residual investment needs (public-private partnerships for the deployment of innovation, the collaboration with venture capitals, EIB group loans etc)
- Strengthening innovation diffusion channels;
- Reinforcing the capacity of regions to co-invest together, joining forces on common S3 investment priorities (interregional investments).

Expected long term impact is defined as follows:

- Reduction of the innovation divide and regional disparities between more and less developed areas
- Increased companies' productivity and efficiency
- Improved, user-friendly, accessible, and interoperable public services
- Enhanced digital skills across the workforce
- Strengthened EU innovation capacity and global competitiveness
- Creation of new market opportunities for EU companies
- Increased efficiency and sustainability of the EU industry
- Improved quality of life and business practices
- Greater social and territorial cohesion and enhanced personal well-being
- Improved education and vocational training systems (indirect impact)
- Reinforcement and reshaping of EU value chains to boost global competitiveness
- Unlocking the innovation potential of EU regions and Member States
- Contribution to European Green Deal objectives
- Positive impact on environment, health, security, climate, society, and the economy
- Support for the twin transition (green and digital) and increased sustainability, efficiency, and competitiveness of the EU manufacturing sector
- Economic growth and job creation

As mentioned before there are three key priorities that are common for all strands – green transition, digital transition and smart manufacturing.

Green transition

This priority supports Europe's shift toward climate neutrality and a sustainable, resource-efficient economy. In line with the Clean Industrial Deal and the European Green Deal, it promotes investments that combine environmental responsibility with economic competitiveness. Projects under this theme may address decarbonisation, air quality improvement, renewable energy, energy efficiency in industries and buildings, sustainable blue economy practices, and circular economy initiatives such as recycling and modular design. It also includes support for sustainable agriculture, forestry, and bioeconomy innovations. The goal is to develop green value chains, reduce reliance on fossil fuels, and enhance resilience and autonomy in critical sectors. Investments are expected to contribute to new business models, the scale-up of circular practices, and technological neutrality, empowering less developed regions to participate in the green transition while fostering quality jobs and competitive industries.

Digital transition

The digital transition priority aims to harness the potential of digital technologies to foster innovation, efficiency, and accessibility across both businesses and public administrations. Aligned with the "Europe Fit for the Digital Age" agenda, this theme supports investments that accelerate digital transformation, particularly in innovation-driven sectors. Eligible projects may include the deployment of artificial intelligence in strategic sectors, support for SMEs in adopting ICT solutions, and demonstration of digital innovations for market readiness. Special emphasis is placed on fostering digital skills, cybersecurity, big data utilisation, and the creation of digital innovation ecosystems such as living labs and hubs. Public sector investments may focus on enhancing e-government services, improving interoperability, and adopting user-friendly, secure, and efficient IT systems, especially in areas like healthcare. The overarching goal is to reduce the digital divide, increase resilience, and improve service delivery for citizens and businesses alike.

Smart manufacturing

Smart manufacturing focuses on driving innovation in production processes and enabling the manufacturing industry to become more competitive, digital, and sustainable. This priority encourages interregional cooperation to adopt advanced manufacturing technologies such as robotics, artificial intelligence, high-performance computing, and 3D/4D printing. It supports the demonstration of efficient and environmentally friendly industrial processes, valorisation of research results, and testing facilities for innovation scaling. Projects should aim to reduce material and energy consumption, lower waste and pollution, and improve the reuse of natural resources. Additionally, investments may promote circular production models, de- and remanufacturing, and carbon-neutral strategies. A strong emphasis is placed on involving SMEs and regional ecosystems in EU-wide value chains, co-creation with end-users, and ensuring participation from educational institutions, public authorities, and civil society. Overall, this priority strengthens the EU's industrial base while advancing the green and digital transitions.

The scope of this call is to implement projects through an investment portfolio approach, where multiple investment-ready sub-projects collectively address specific bottlenecks within EU value chains. These sub-projects, led by beneficiaries and potentially involving SMEs as third parties through Financial Support to Third Parties (FSTP), aim to test, validate, and demonstrate innovative technologies and solutions to accelerate innovation uptake and enhance the competitiveness of EU industries. Each proposal must clearly describe the expected progress from innovation to commercialisation and scaling, and provide an exploitation plan outlining the steps to be taken post-project, particularly for outcomes not yet ready for market entry.
Target investments can be both tangible and intangible investments in the form of one or more of the following activities:

- Financial support for producing plans and arrangements or designs for new, altered or improved products, processes or services such as demonstrating, testing and piloting activities by companies, large-scale product validation and market replication (new to Europe and new to the application sector);
- Adaptation of existing prototypes (i.e., by combining two or more key enabling technologies) and tailoring them to the companies' needs for the demonstration in a real environment (ex-novo prototyping is not eligible);
- Development of portfolios of projects for close-to-market investments that deploy new or improved technologies or processes;
- Activities directly aiming at producing plans, arrangements or designs for new, altered or improved products, processes or services (adaptation to the companies' needs). This can

include testing, demonstration, piloting, large-scale product validation and market replication;

- Activities connecting or making complementary use of testing and demonstration facilities to accelerate market uptake and scale-up of innovative solutions in shared smart specialisation areas;
- Innovation services for the development of the business investment interconnecting value chains;
- Test beds and complementary activities needed to improve regulations, standards and/or to remove barriers and bottlenecks to innovation;
- Activities bringing innovative ideas and new products to the market;
- Advisory support for investment (developing or implementing interregional business and "go to market" investment plans in specific value chains).

2.2.1.1 Interregional Innovation Investments Strand 1

Strand 1 of the I3 Instrument aims to enhance the competitiveness and resilience of EU value chains through interregional cooperation and shared smart specialisation strategies. The current call for proposals supports consortia of innovation actors from quadruple helix ecosystems, industry, academia, public authorities, and civil society, by providing financial and advisory support to advance innovations toward market readiness, commercialisation, and scale-up. With a strong focus on cohesion, the strand promotes the integration of less developed regions into European value chains, helping bridge the innovation divide.

The call facilitates the development of new or existing interregional and cross-border value chains, strengthens collaboration between innovation actors, particularly SMEs, from both less and more developed regions, and supports investment-ready innovation ideas through tailored business case development. It also encourages the identification of new regional technological and market opportunities aligned with EU priorities, helping overcome market failures by bridging the gap between supply and demand.

Projects must start at a minimum TRL 6, with the ambition to demonstrate, scale, and commercialise their solutions. Regional innovation ecosystems, with companies taking the lead, play a key role in shaping investment cases. Support will include direct funding to consortium beneficiaries or cascade funding to third parties, alongside non-financial assistance such as business planning, IPR protection, certification, and support for testing, standardisation, and integration of key enabling and deep technologies.

By the end of project implementation, all participating regions and partners should have a clear pathway for exploiting project results, enabling the broader rollout of innovative products, services, or processes.

2.2.1.2 Interregional Innovation Investments Strand 2a

Strand 2a of the I3 Instrument focuses on strengthening the integration of innovation actors from less developed and transition regions into EU value chains, while fostering local opportunities for innovation and smart economic transformation in areas with shared or complementary smart specialisation strategies. This call for proposals supports interregional innovation investments by providing consortia from quadruple helix ecosystems with financial and advisory support to mature their innovations toward scale-up and commercialisation. With a strong cohesion policy orientation,

the call aims to reduce the innovation divide across Europe by integrating less advanced regions into broader European value chains.

The call supports the development of investment-ready ideas into robust business cases, the identification of new regional technological domains and market opportunities aligned with EU priorities, and the deployment of innovative technologies in less developed regions. It also encourages the creation of new value chains in these regions, their integration into interregional and cross-border value chains with more developed regions, and active collaboration between SMEs and innovation actors from regions with different development levels.

Emphasising technology transfer and specialised advisory support, projects should demonstrate practical applications through experiments and pilot cases within companies. Participation must reflect shared or complementary smart specialisation priorities and ensure balanced representation across regions with varying innovation capacities.

Projects must begin at a minimum TRL 6 and aim to accelerate market uptake and commercialisation. Regional innovation ecosystems, with businesses in the lead, will drive the development of these investment cases. Support includes both financial assistance, direct funding or cascade funding (FSTP), and non-financial measures such as coaching, mentoring, and matchmaking.

By the end of the project, all participating regions and partners should have a clear plan for leveraging project outcomes, including the broader introduction of innovative products, services, or processes.

2.2.2 Interreg

Interreg is a series of EU funding programmes aimed at promoting cooperation. It connects organizations from across Europe and beyond to address shared challenges and establish enduring partnerships. Projects funded by Interreg contribute to economic growth, regional cohesion, environmental protection, and sustainable development, making a tangible impact on people's lives. These efforts help build a more unified, resilient, and prosperous Europe where every region can thrive. Interreg is a significant initiative of the European Union that links countries, regions, and communities through various funding programmes. These programmes foster cooperation across borders, transnationally, interregionally, and with outermost regions. By supporting projects that address common challenges and provide sustainable solutions, Interreg works to reduce regional inequalities while encouraging economic, social, and environmental development throughout Europe.

Since it started in 1990, Interreg has helped support cooperation on important issues that affect everyone, like protecting the environment, driving innovation, and building stronger communities. For the 2021-2027 period, its focus is on key challenges such as fighting climate change, advancing digital transformation, and promoting social inclusion. With 86 programmes, each focusing on a specific area, Interreg covers all of Europe and beyond, playing a vital role in boosting regional development, improving cohesion, and reducing economic disparities.

Interreg helps fund joint solutions for challenges that go beyond borders and need cooperation between organizations from different countries. To support these solutions, Interreg programmes regularly announce calls for projects. Organizations can team up and apply by submitting a project proposal that matches the goals of each call. Each programme has its own set of rules and requirements for project applications.

Interreg works with a seven-year budget cycle. For the 2021-2027 period, the 86 Interreg programmes have a total budget of EUR 8 billion to distribute to projects through calls for applications. Each project

gets financial support from Interreg, but organizations applying for funding must also contribute some of their own money. The amount that Interreg covers depends on the programme, but it will never exceed 80% of the total project cost.

2.2.2.1 Programmes

There are nine Interreg programmes for which project calls SynGRID partners are eligible. Table 1 shows the list of the programmes, and which partners can submit a project proposal on a call within a certain programme. Currently, there are no open calls within any of these programmes. However, SynGRID partners will follow the changes and news published on the official Interreg website and identify relevant project calls if any of them open before the end of the project.

Table 1: Eligibility of SynGrid partners for Interreg programmes

	Croatia	Slovenia	Greece
Interreg CENTRAL EUROPE	✓	✓	×
Interreg ESPON	✓	✓	✓
Interreg EURO Mediterranean	✓	✓	✓
Interact	✓	✓	✓
Interreg Europe	✓	✓	✓
Interreg IPA Adriatic-Ionian	✓	✓	✓
Interreg Slovenia-Croatia	✓	✓	×
URBACT	✓	✓	✓
Interreg Danube Region	✓	✓	×

2.2.2.1.1 Interreg CENTRAL EUROPE

Interreg CENTRAL EUROPE [5] is a transnational funding program focused on boosting regional development across Central Europe. It tackles shared issues like climate change and the digital transition, bringing together public institutions, private businesses, and civil society groups to create real, lasting change. With a strong central European identity and a history of collaboration, Interreg CENTRAL EUROPE fosters a culture of trust that goes beyond geographical and administrative borders. By 2027, the goal is to fund over 100 projects and support more than 1,000 organizations, helping build a more resilient, united, and future-ready Central Europe. Innovation is key for Central Europe, given its strong industrial base and the importance of sectors like agriculture, food, and tourism. It's also crucial for boosting the region's economic resilience. To make the most of innovation, it's especially important to support regions that are facing challenges in adapting to a more globalized, digital, and green economy. There's a big need for knowledge and technology transfer, particularly for small and medium-sized enterprises (SMEs). In December 2022, 53 new transnational cooperation

projects were selected, with a total budget of nearly 100 million EUR from the ERDF. Among these, 14 projects are working together to make Central Europe smarter.

2.2.2.1.2 Interreg ESPON

ESPON [6] generates evidence and knowledge by conducting studies tailored to the needs of European public authorities at all levels. Local, regional, or national authorities, as well as EU institutions, can reach out to ESPON to share their policy support needs and become stakeholders. Their studies focus on specific territories, meaning the analyses are customized to fit the unique needs and characteristics of the people and places being studied.

Thematic Action Plans (TAPs) are research-based initiatives led by ESPON to tackle various territorial development challenges across Europe. These plans provide valuable insights for policymakers at all levels on a range of issues, including climate change adaptation, social inequalities, and economic development in different regions. By continuously evolving, TAPs ensure that ESPON's priorities stay relevant and effective in promoting balanced territorial development.
Currently, there are eight TAPs, each focusing on a specific theme. For example, one TAP looks at how to achieve climate neutrality by promoting renewable energy and improving spatial planning. Another focuses on building resilience in European territories against environmental, economic, and social disruptions.
Each TAP combines research with the creation of new territorial evidence, highlighting the strengths and weaknesses of various European regions. This helps policymakers design better policies and allows stakeholders to take targeted actions. The ultimate goal of TAPs is to provide the tools needed to build a more balanced, prosperous, and resilient Europe. ESPON TPAs are:

- Climate-Neutral Territories
- Governance of New Geographies
- Living, Working and Travelling Across Borders
- Smart Connectivity
- Places resilient to crises
- Perspective for all people and places
- European Territories in Global Interactions
- Adapting to the Impacts of Climate Change

2.2.2.1.3 Interreg EURO Mediterranean

Interreg Euro-MED [7] is a programme designed to support projects that make the Mediterranean region smarter, greener, and better connected. It funds initiatives focused on innovation, environmental sustainability, and strengthening cooperation among regional leaders. The programme brings together partners from 69 regions across 14 Mediterranean countries, all collaborating to build a climate-friendly, resilient future that benefits local communities and people across the region. Interreg Euro-MED backs projects, initiatives, and policies focused on climate change and the environment, all in line with the European Commission’s priorities for Cohesion policy. To make things more effective, the Programme decided to organize these goals into missions, creating a more all-around approach. They have identified four missions that bring together different themes and initiatives, helping them to achieve bigger goals that individual projects might not be able to reach on their own. Each project needs to contribute to one of these missions, aiming to meet one of the specific objectives chosen by the Programme. These missions are:

- Strengthening an innovative sustainable economy
- Protecting, restoring and valorising the natural environment and heritage

- Promoting green living areas
- Enhancing sustainable tourism

Up to now, five calls have been closed and two more are planned for 2026.

2.2.2.1.4 Interact

Interact [8] is an Interreg programme, part of Strand C Interregional Programmes. It is established under the Interreg regulation (2021/1059), Article 3 (3) (C), with the goal of promoting the exchange of experiences, innovative approaches, and capacity building among cooperation actors.

Interact IV (2021-2027) supports Interreg programmes and other cooperation actors during the 2021-2027 funding period. While the mission of Interact remains similar to what it was in Interact III, there are new focal points to better support Interreg, particularly around the 5 Policy Objectives and 2 Interreg Specific Objectives. Interact has also introduced new methods, like the Academy, which offers certified training programmes with clear learning outcomes. Additionally, the Interreg Knowledge Fair has been launched, which is a major event that brings together over 200 Interreg experts in one place to exchange ideas on key topics.

Interact helps facilitate exchanges between programme bodies in Central and Southeast Europe. This network spans all of Central Europe and the southeastern countries, closely aligning with Interact's efforts to support Interreg IPA programmes. It also works with national authorities in IPA programmes who play a role in supporting the implementation of these programmes. The goal of the network is to offer formats and opportunities for programmes to strengthen their cooperation with Interact and to share experiences on key issues and challenges with one another. This network is aimed at programmes operating in Central and Southeast Europe. Rather than fixed boundaries, networks are largely open for those who perceive their programme is most directly relevant. This network primarily aims to support exchange on the practical challenges facing MAs and JSs in the implementation of their programmes.

2.2.2.1.5 Interreg Europe

Interreg Europe [9] is an interregional cooperation programme that includes 36 countries: the EU27, Albania, Bosnia and Herzegovina, Moldova, Montenegro, North Macedonia, Norway, Serbia, Switzerland, and Ukraine. The programme supports national, regional, and local governments, as well as Managing Authorities, in developing and implementing better regional policies. The European Union strives to reduce disparities in the levels of development, growth and quality of life in and across Europe's regions. The Interreg Europe programme contributes to this objective and runs **from 2021 to 2027** with a budget of MEUR 394 to help local, regional and national governments across Europe to develop and deliver better policy. The topics that are covered include:

- Smarter Europe
- Greener Europe
- More connected Europe
- More social Europe
- Europe closer to citizens
- Best regional governance

Organisations relevant to regional development policies and based in the programme area are eligible for Interreg Europe funding. These include:

- National, regional, or local authorities
- **Institutions governed by public law** (e.g., regional development agencies and **universities**)
- Private non-profit bodies

The programme's direct beneficiaries will be organisations involved in elaborating and implementing regional development policies from all the regions of the programme area. The citizens and groups impacted by these policies (e.g., SMEs) will benefit from more effective public intervention as a result.

2.2.2.1.6 Interreg IPA Adriatic-Ionian

IPA ADRION [10] involves ten countries, both from the EU and non-EU areas, and provides financial support to public authorities (local, regional, and national bodies), **research institutions**, NGOs, and **private companies** willing to collaborate in transnational partnerships. The programme regularly launches Calls for Proposals that cover a broad range of topics based on its thematic priorities. These calls aim to support transnational projects focused on finding joint solutions to shared challenges, through the development of digital tools, strategies, action plans, and pilot tests.

The programme takes a strong sustainable approach, with green policies playing a major role and dedicated resources for future-funded projects, accounting for up to 54% of the total allocated budget. Building on the lessons learned from the previous ADRION Programme (2014-2020), the programme benefits from the experience gained through its 87 funded projects and 11 Thematic Clusters established as part of its capitalisation strategy. IPA ADRION continues to support the implementation of the macro-regional strategy EUSAIR, particularly by integrating EUSAIR flagships and specific strategic projects.

Expected programme impacts are:

- Development of a regional innovation system for the Adriatic-Ionian area
- Enhanced capacity to transnationally tackle environmental vulnerability, fragmentation and the safeguarding of ecosystem services in the Adriatic and Ionian area
- Enhanced capacity for integrated transport and mobility services and multi-modality in the Adriatic-Ionian area
- Enhanced institutional capacity of public administrations and key stakeholders and assist the progress of implementation of joint priorities in the framework of the EUSAIR.

Four thematic Priorities covered by the Programme's funding scheme are:

- **Supporting** a **smarter Adriatic and Ionian region** with specific objectives:
  - Developing and enhancing research and innovation capacities and the uptake of advanced technologies
  - Developing skills for smart specialization, industrial transition and entrepreneurship
- **Supporting a greener and climate resilient Adriatic-Ionian region** with specific objectives:
  - Promoting climate change adaptation and disaster risk prevention, and resilience, taking into account eco-system based approaches
  - Promoting the transition to a circular and resource efficient economy
  - Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution
  - Promoting sustainable multimodal urban mobility, as part of transition to a net zero carbon economy

- **Supporting a carbon neutral and better connected Adriatic and Ionian region** with the specific objective:
    - Developing and enhancing sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility
- **Supporting the Governance of the Adriatic-Ionian region**

2.2.2.1.7 Interreg Slovenia-Croatia

The Interreg Programme VI-A Slovenia – Croatia 2021-2027 [11] aims to create a preserved, resilient, and connected cross-border region where sustainable development is central to achieving economic viability, safety, biodiversity protection, and social well-being for all residents. The programme focuses on mutual learning and joint actions that will drive change across its priorities. Its main goals are to reconnect the border areas, understand current joint needs and threats in a rapidly changing world, and work together to improve resilience and adaptability among people, organizations, and communities. This will help the region become greener, more digital, and better prepared for the future. The Interreg Slovenia – Croatia programme area includes 17 NUTS 3 regions, consisting of nine Slovenian NUTS 3 regions and eight Croatian NUTS 3 regions and FER, IRI and PETROL are part of these regions, meaning these institutions are eligible for preparing project proposals within the programme.

There are three priorities within the programme:

- **A green and adaptive region** with specific objectives:
    - Promoting climate change adaptation and disaster risk prevention and resilience, taking into account ecosystem-based approaches
    - Enhancing protection and preservation of nature, biodiversity, and green infrastructure, including in urban areas, and reducing all forms of pollution
- **Resilient and sustainable region** with the specific objective:
    - Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation
- **An accessible and connected region** with specific objectives:
    - ISO 1 Enhance efficient public administration by promoting legal and administrative cooperation, and cooperation between citizens, civil society actors, and institutions, in particular with a view toward resolving legal and other obstacles in border regions
    - ISO 1 Build up mutual trust, in particular by encouraging people-to-people actions.

2.2.2.1.8 URBACT

URBACT [12] promotes integrated development to help cities implement both horizontal and vertical policy integration. Positive change is most effectively achieved when local authorities collaborate with various levels of governance, such as regional, national, and EU bodies (vertical integration). Additionally, it is important to address challenges in a holistic way, considering environmental, economic, and social dimensions simultaneously (horizontal integration).

The URBACT programme is primarily focused on cities. It supports cities across Europe in developing sustainable urban policies and addressing common urban challenges. The programme promotes cooperation between cities to exchange experiences, share knowledge, and develop integrated solutions for urban development. While the programme mainly targets urban areas, the solutions and

strategies developed can sometimes have broader regional or national impacts, particularly in terms of improving governance and sustainability.

Research institutions can potentially get involved in the URBACT programme, but they usually do so as part of a partnership that includes cities or local authorities. While the primary focus of URBACT is on cities and urban areas, research institutions, universities, and other knowledge-based organizations can participate in projects as partners, contributing their expertise, data, and research. However, the funding is generally allocated to the lead cities or local authorities, with research institutions benefiting through their collaboration in specific urban development projects.

It is unlikely that SynGRID partners will be eligible for the project funding within the programme. Therefore, the focus of SynGRID partners will not be on this programme.

2.2.2.1.9 Interreg Danube Region

Interreg Danube Region programme [13] supports transnational cooperation across 14 countries in the Danube region, aiming to reduce socio-economic disparities and promote innovation, climate resilience, and efficient public administration. Its key priorities include boosting innovation and technology transfer, enhancing skills for industrial transition, promoting renewable energy, preserving biodiversity, and addressing climate-related risks. The programme also emphasizes social inclusion by improving labor markets, education and training, and fostering social innovation. Additionally, it supports collaboration between EU member states and candidate countries to achieve common goals.

There are four priorities defined:

- **A competitive and smarter Danube Region** with specific objectives:
  - Enhancing innovation and technology transfer
  - Developing skills for smart specialisation, industrial transition and entrepreneurship
- **A greener, low-carbon Danube Region** with specific objectives:
  - Greening the energy and transport sectors in the Danube Region by enhancing the integration of renewable energy sources
  - Promoting climate change adaptation and disaster management on transnational level
  - Sustainable, integrated, transnational water and sediment management in the Danube River Basin
  - Protecting and preserving the biodiversity in ecological corridors and eco-regions of transnational relevance
- **A more social Danube Region** with specific objectives:
  - Accessible, inclusive and effective labour markets
  - Accessible and inclusive quality services in education, training and lifelong learning
  - Socio-economic development through heritage, culture and tourism
- **A better cooperation governance in the Danube Region** with specific objectives:
  - Support for the governance of the EUSDR
  - Support of the EUSDR Priority Area Coordinators (EUSDR PACs) and Danube Strategy Point (DSP)

Currently, there is no open call for proposals for the Interreg Danube Region programme. However, it is expected that the third call will be opened in the second half of 2025. Since some of the priorities of

the programme align with the goals of the SynGrid project, consortium members from Slovenia and Croatia will put effort into preparing a project proposal that is a direct result of the collaboration and work on SynGrid.

2.2.2.2 Open and Forthcoming Project Calls

2.2.2.2.1 Interreg CENTRAL EUROPE – Strategic call for capitalisation

The Interreg CENTRAL EUROPE next and final call [14] aims to reduce border-related barriers to flows and connections between central European regions, enhancing their competitiveness and resilience. With an indicative ERDF budget of €23 million (up to 1 million EUR for a single project), proposals may address any programme priority or specific objective. Selected projects will be designated as "Operations of Strategic Importance," serving as flagship initiatives that advance programme goals and highlight the impact of EU cooperation. The call is expected to be launched on September 29th, 2025, with the call closure on November 27th, 2025. The objective of strategic projects for capitalisation are the clear emphasis on capitalisation of transnational and cross-border outputs and results. At least three partners from three countries, two of which are located in central Europe, need to participate in the project, meaning that even the Greek partners can participate in the project, despite no belonging in the countries applicable for funding in this programme.

Strategic capitalisation projects aim to build on existing Interreg transnational and cross-border results by enhancing, adapting, or expanding them to address current and emerging needs. Rather than duplicating past efforts, these projects should generate added value by drawing on the experience of multiple initiatives, extending impact beyond border regions. They foster synergies, strengthen networks, increase visibility, and attract political support. Emphasis should be placed on quality over quantity, selecting only the most relevant outputs to tackle specific challenges. Capitalisation can follow two complementary approaches, which may be combined within a single project:

- **Upstreaming:** Existing outputs and results are taken up and tailored in a way that policy makers can address border issues through new or improved territorial or thematic policies and strategies. This should happen at the most appropriate level (i.e. European, national, regional or local).
- **Downstreaming:** Existing outputs and results are tailored in a way that they can be further rolled-out at the most appropriate level. Such roll-out could be “territorial” in case the adapted outputs and results are applied in other regions facing similar issues; or “sectoral” when the adapted outputs and results are applied to other sectors than the ones initially addressed.

As a minimum requirement, projects must explicitly take up existing outputs and results from:

- At least two Interreg CENTRAL EUROPE projects [15] funded under the first and second calls of the 2021–2027 programme, and
- At least two Interreg cross-border cooperation projects [16] (funded in the 2021-2027 period or, if relevant, in the 2014-2020 period), addressing internal central European borders.

Additionally, and if relevant to the project’s scope and the overall call objective, the projects may also take up:

- outputs and results of relevant projects funded by other programmes, such as for example: Interreg CENTRAL EUROPE 2014–2020, other Interreg transnational programmes, Interreg cross-border programmes at external borders of central Europe, mainstreaming programmes,

- knowledge and tools developed under the B-Solutions initiative of the European Commission, tackling obstacles caused by internal central European borders.

Strategic capitalisation projects may address any topic listed under the specific objectives in Chapter 2 of the Interreg Programme [17], with no thematic restrictions. However, applicants are especially encouraged to focus on areas that tackle major territorial challenges in central Europe and offer strong potential to build on past Interreg CENTRAL EUROPE and cross-border results. Each programme priority includes examples of such areas, though the list is not exhaustive.

Projects supported under this call will be recognised as "Operations of Strategic Importance", meaning they will serve as flagship initiatives that significantly advance programme goals and visibly demonstrate the benefits of EU cooperation.

- By building on outcomes from Interreg CENTRAL EUROPE and related cross-border projects, these initiatives are expected to:
- Scale up proven solutions to address both current and emerging challenges, enhancing their impact across central Europe

  Create synergies and strengthen cooperation networks

  Deliver clear added value beyond what has already been achieved

As strategic projects, they will gain increased visibility and are expected to actively communicate their results, helping to illustrate the relevance and impact of Cohesion Policy to citizens, decision-makers, and other stakeholders.

2.2.2.2.2 Interreg IPA ADRION Programme 2nd Call for Proposals

The Interreg VI-B IPA Adriatic-Ionian Cooperation Programme 2021-2027 (IPA ADRION) launched the 2nd Call for Proposals on April 15th, 2025, with the submission deadline date on June 30th, 2025 [18]. The IPA ADRION programme's main objective is to address the shared Adriatic-Ionian region challenges as biodiversity safeguard, climatic changes, sustainable transport, through the implementation of innovative models and tools, acting as a pivotal instrument for the identification of common solutions, contributing thus to make the region smarter and greener able to withstand future economic shocks.

All SynGRID partners are eligible for participating in the IPA Adrion Programme, with potentially increasing the consortium with other Croatian, Greek and Slovenian partners, but also with partners from Italy and other IPA participating and third-party countries. Total Interreg funds available for this specific call are 21.869 million euros. Project proposals submitted in the framework of the IPA ADRION Programme 2nd call for proposals shall have an EU budget (INTERREG funds) up to a maximum of EUR 1.200.000,00. Project proposals expected to be granted under this call for proposals shall not exceed the duration of 36 months.

The 2nd call for proposals of the IPA ADRION Programme is addressed only to the following Priorities and Specific Objectives:

- **Priority Axis 1: Supporting a Smarter Adriatic and Ionian Region**
  - Specific Objective 1.1: Strengthening innovation capacities in the Adriatic - Ionian region (ref. to SO 1.1 ERDF Regulation)
- **Priority Axis 2: Supporting a Greener and Climate Resilient Adriatic and Ionian Region**
  - Specific Objective 2.1: Enhancing resilience to climate change, natural and man-made disasters in the Adriatic- Ionian region (ref. to SO 2.4 ERDF Regulation)

- Specific Objective 2.3: Supporting environment preservation and protection in the Adriatic Ionian region (ref. to SO 2.7 ERDF Regulation)

- **Priority Axis 3: Supporting a Carbon Neutral and Better Connected Adriatic and Ionian Region**
  - Specific Objective 3.1: Strengthening a carbon neutral smart mobility in the Adriatic-Ionian region (ref. to SO 3.2 ERDF Regulation)

PRIORITY AXIS 1 – SUPPORTING A SMARTER ADRIATIC AND IONIAN REGION

Specific Objective 1.1 - Strengthening innovation capacities in the Adriatic - Ionian region (ref. to SO 1.1 ERDF Regulation)

Only the following indicative actions are eligible under the present call:

- Develop transnational Smart Specialization Strategies in the main areas of specialization of the Adriatic Ionian area (especially in the following main sectors: health and quality of life, agri-food and safe nutrition, sustainable tourism, and creative economy).
- Promote and set-up multi-level governance schemes to facilitate transnational cooperation models to address challenges in common areas of specialization. Uptake, up-scale and test advanced technologies through pilot and joint actions, policies, tools, processes, particularly in, but not limited to, the main fields of interest of S3 and social innovation.
- Promote and encourage the development of transnationally designed innovations (technical and non-technical innovation, including services) through pilot and joint actions contributing to face societal challenges like demographic change.
- Promote the development of transnational partnerships, cluster-to-cluster cooperation, innovative networks, and similar initiatives.
- Support digital divide reduction by addressing sustainable development, resilience to climate change, as well as addressing wellbeing - including health for the youth and elderly, hospital, and home care - and demographic trends.
- Develop and implement e-services such as e-government, e-learning, or e-marketing or digital tools for industrial and creative production.
- Support the development of transnational and macro-regional clusters in the emerging sectors as creative and digital industries; medical devices, as well as sustainable tourism, etc.

PRIORITY AXIS 2 – SUPPORTING A GREENER AND CLIMATE RESILIENT ADRIATIC AND IONIAN REGION

Specific Objective 2.1 - Enhancing resilience to climate change, natural and manmade disasters in the Adriatic- Ionian region (ref. to SO 2.4 ERDF Regulation)

Only the following indicative actions are eligible under the present call:

- Develop, implement, and promote transnational climate change adaptation strategies, plans and test solutions with a focus on people's health, preservation of natural and cultural heritage and urban areas.
- In the framework of Maritime Spatial Planning activities, develop transnational joint plans and pilot actions to boost resilience to climate change in marine ecosystems.
- Design and implement strategies and action plans at local, regional and national level for the safeguard of water resources (rainwater management, river and lake water retention, water

scarcity, drinking water, water availability, agricultural forecasting, breeding, industry and population).

Specific Objective 2.3 – Supporting environment preservation and protection in the Adriatic Ionian region (ref. to SO 2.7 ERDF Regulation)

Only the following indicative actions are eligible under the present call:

- Collect compelling information and use it to develop advocacy material to strengthen synergies and increase preparedness among local/regional/national policy makers and administrators to set in place actions aimed at improving policy frameworks, governance and management schemes of existing or underway marine/natural protected areas.
- Exchange of good practices and testing of solutions for sustainable tourism through participatory approaches and multi-level governance.
- Identify and test joint action to ensure sustainable food and traditional agricultural products (e.g.: old seeds safeguard, traditional animal breeding etc.) to support the zero-km food chain, food safety and quality.
- Contribute to the generation of positive impacts on the Adriatic-Ionian population's health through the identification of good practices and the implementation of pilot actions aimed at reducing air, water and soil pollution.
- Define joint actions to enhance soil and water preservation by ensuring data collection and their public availability (e.g.: feeding EU networks like Data Network - EMODnet, agriculture data space).

PRIORITY AXIS 3 – SUPPORTING A CARBON NEUTRAL AND BETTER CONNECTED ADRIATIC AND IONIAN REGION

Specific Objective 3.1 - Strengthening a carbon neutral smart mobility in the Adriatic-Ionian region (ref. to SO 3.2 ERDF Regulation)

Only the following indicative actions are eligible under the present call:

- Develop and test innovative planning tools/solutions forecasting future demand for public transport in view of the impact caused by current socio-demographic changes and present pandemic situation on intermodal national, regional and local mobility.
- Implement transnational integrated action plans supporting the development of rail-sea transportation intended as intermodal and multimodal transport mode.
- Map infrastructural, technological, legislative gaps and barriers to freight circulation including the legal and administrative variances hampering the efficiency of smooth transnational transport, in order to create a common transnational transport policy framework.
- Improve accessibility within the Adriatic-Ionian region, with a focus on peripheral areas, to the TEN-T network through the implementation of action plans, tackling the bottlenecks hampering the transport sector growth and economic development.

2.2.2.2.3 Interreg Danube Region – 3rd Call for Proposals

The third call for proposals [19] within the Interreg Danube Region Programme will be launched in September 2025, with the call pre-announcement published in June. Other than three specific

objective that will be closed (Enhancing innovation and technology transfer, Protecting and preserving biodiversity in ecological corridors and eco-regions of transnational relevance, Socio-economic development through heritage, culture and tourism) all other specific objectives will be open, however, pre-defined topics will be targeted.

2.3 Programme for the Environment and Climate Action (LIFE)

The LIFE Programme is the European Union's key funding initiative for environmental and climate-related projects. Since its launch in 1992, it has supported more than 6,000 projects across the EU and beyond, helping to turn green ideas into reality. For the 2021–2027 funding period, the European Commission has boosted the programme's budget by nearly 60%, raising it to €5.4 billion and introducing a new sub-programme focused on the clean energy transition. The latest work programme for 2025–2027 allocates €2.3 billion to initiatives addressing the circular economy, zero pollution, nature and biodiversity, climate action, and clean energy. The programme is managed by the European Climate, Infrastructure and Environment Executive Agency (CINEA) [20].

Any legal entity based in the European Union or in countries associated to the LIFE Programme can apply. LIFE is especially interested to support projects which can be replicated and scaled up elsewhere, particularly those demonstrating practical innovation, measurable impact and best practices. LIFE project applications can be submitted by a single organisation or by several entities working in collaboration with other European partners, but not by individuals, i.e., all institutions that are part of the SynGRID consortium are eligible for funding under the LIFE programme [21].

To align with the topic of the SynGRID project, the focus of this deliverable is on identifying relevant calls within the Coordination and Support Action Grants (CSA) for clean energy transition sub-programme. The deadline date for all projects is September 23rd, 2025.

The list of all calls is presented in EU Funding & Tenders portal [1].

2.3.1 Boosting the clean energy transition in cities and regions

This topic supports cities and regions in building the capacity and skills needed to implement effective decarbonisation plans and drive the clean energy transition essential for local industries, businesses, and communities.
Local and regional authorities play a crucial role in achieving the EU Green Deal targets, as emphasised in the 'Fit for 55' package and the Energy Efficiency and Renewable Energy Directives (EED and RED). Many are already advancing ambitious energy goals under initiatives like the EU Covenant of Mayors for Climate and Energy.
Proposed actions should strengthen local capabilities to meet these targets and align with relevant national and EU frameworks, such as the National Energy and Climate Plans, National Building Renovation Plans, and the Horizon Europe Climate-Neutral and Smart Cities Mission. Coordination with other technical assistance and capacity-building efforts is also encouraged.

Proposals must clearly outline the tangible results of the proposed activities and demonstrate how these will contribute to the topic-specific impacts. This should be supported by a solid baseline analysis, justified assumptions, and clear links between activities, outcomes, and long-term impact. Applicants should quantify expected results using the relevant indicators provided for the topic and may also include activity-specific indicators. Results and impacts should be estimated both at project completion and five years after its end. It is not necessary to address all listed indicators, only those relevant to the proposal.

Proposals must focus on one of the two scopes below and clearly indicate the selected scope in the application.

Scope A: Implementing Integrated Decarbonisation Plans

This scope targets the acceleration of sustainable energy measures based on existing strategies. It aims to strengthen the public sector's role especially as outlined in Article 5(6) of the Energy Efficiency Directive by building the capacity of cities and regions to plan, deliver, and scale energy actions effectively. Activities may include:

- Establishing dedicated structures and peer-to-peer networks
- Sharing best practices
- Delivering comprehensive capacity-building programmes
- Enhancing public/private funding access
- Improving regulatory conditions
- Deploying clean energy technologies

  Focus should be place-based and, where relevant, cross-sectoral, with attention to vulnerable groups.

Scope B: Developing Local Heating and Cooling Plans

This scope supports cities and regions in preparing heating and cooling plans, especially in line with Article 25(6) of the EED, which requires such plans for municipalities over 45,000 residents. Key activities may involve:

- Skill-building and data integration
- Assessing local energy demand and supply
- Planning fossil gas phase-out
- Engaging market actors and DSOs in network decommissioning
- Streamlining administrative procedures
- Coordinating efforts across municipalities and governance levels

Both scopes aim to empower local authorities to deliver effective and inclusive energy transitions tailored to their specific contexts.

Depending on the scope, the indicators for this topic include, as relevant:

- Number of clean energy transition measures implemented (or initiated) by the end of the action.
- Financial resources dedicated or earmarked within the local/regional authority's budget for the implementation of CET plans/strategies and specific CET measures.
- Number of heating and cooling methodologies, templates, blueprints and fossil-free strategies established through the action.
- Number of policy makers/public officers with improved capacity/skills.
- Number of public and private stakeholders engaged.
- Average number of training hours per participant in capacity building programmes.
- Number of organisational structures created/reinforced.
- Number of institutionalised dialogues/cooperations within and beyond public authorities, including peers, private stakeholders and/or civil society.
- Number of Memorandum of Understandings or similar agreements demonstrating political commitment from Local and Regional Authorities.

Proposals should also quantify their impacts related to the following common indicators for the LIFE Clean Energy Transition sub-programme:

- Primary energy savings triggered by the project in GWh/year.
- Final energy savings triggered by the project in GWh/year.
- Renewable energy generation triggered by the project (in GWh/year).
- Reduction of greenhouse gas emissions (in t CO2-eq/year).
- Investments in sustainable energy (energy efficiency and renewable energy) triggered by the project (cumulative, in million Euro).

Proposals must clearly identify the target cities or regions and demonstrate their active involvement and political commitment, e.g., through tailored letters of support. Actions and methods proposed should be practical, scalable, and easy for local authorities to adopt, helping policymakers prioritise and implement clean energy measures. Applicants must outline the financial resources needed for implementing decarbonisation plans, ensuring that by the end of the project, the necessary funding is foreseen in public budgets, along with potential financing solutions. Proposals should also promote structured dialogue across governance levels and engage key public and private stakeholders, including citizens, communities, industry, and energy operators, to ensure a fair and inclusive transition. Proposals must include at least three applicants from three different eligible countries. While the EU contribution is typically up to €1.75 million, other funding levels may be proposed.

2.3.2 Support services for energy communities

This topic aims to establish or expand support services that help launch and grow energy communities. Energy communities play a vital role in achieving the EU's 2030 and 2050 climate and energy goals by enabling citizen and local authority investment in renewables and energy efficiency. They also generate broader community benefits such as lower energy costs, local job creation, and greater social cohesion. However, developing energy community projects remains challenging due to regulatory barriers, administrative complexity, limited access to finance, lack of knowledge, and difficulties in citizen engagement and governance. In response, many local and regional authorities are creating dedicated support services, while networks of community stakeholders are also emerging. These groups offer technical assistance, share services, expand access to financing, and advocate for enabling policy frameworks, helping projects overcome common obstacles and scale more effectively. This topic supports the development of such services to unlock the full potential of energy communities across Europe.

Proposals must clearly present the expected impacts of the planned activities, quantifying them where relevant. This includes topic-specific impacts, LIFE Clean Energy Transition (CET) common indicators, and any relevant project-specific indicators. Impacts should be estimated both at project completion and five years post-completion. All figures must be credible, context-based, and clearly linked to the proposed activities.

The indicators for this topic include:

- Number of energy community services fully implemented, operational and tested before the end of the action. Their testing must trigger the first energy community project investments.
- Number of energy communities benefitting from the support (including new and existing entities).

- Amount of in-person support made available to energy community project developers (full-time equivalent person months).
- Number of energy communities established thanks to the services (detailing if they are RECs or CECs).
- Number of members (citizens or organisations) who have joined the energy communities because of the support provided.
- Number and type of stakeholders with increased skills.
- Number of local and regional authorities committed to replicate best practice experiences.
- (Where relevant) Number of groupings of energy communities mutualizing services.

Proposals should also quantify their impacts related to the following common indicators for the LIFE CET sub-programme:

- Primary energy savings triggered by the project in GWh/year
- Final energy savings triggered by the project in GWh/year
- Renewable energy generation triggered by the project (in GWh/year), specifying the type of renewable energy triggered
- Reduction of greenhouse gas emissions (in tCO2-eq/year)
- Investments in sustainable energy (energy efficiency and renewable energy) triggered by the project (cumulative, in million Euro).

Proposals should establish or expand support services that help create and grow energy communities. The responsible entity (e.g., local/regional governments, energy agencies, or umbrella organisations) must be clearly identified. Collaboration or shared services among community groups is encouraged. Support should focus on renewable energy communities (RECs) under the Renewable Energy Directive (EU 2018/2001) and/or citizen energy communities (CECs) under the Electricity Market Directive (EU 2019/944). Proposals must specify the target community type. Services must provide personalised technical support throughout project development, covering finance, business models, legal advice, energy sales, and operations. Peer-to-peer and twinning programmes for scaling up are encouraged.
Proposals should detail the type and delivery of support, including staffing and communication. Continuous physical presence is not required; support can be via temporary offices or meetings. Generic information or mainly online tools with little direct interaction do not qualify. Service design should address local challenges, including cooperation with Distribution System Operators or broader issues like rural depopulation and energy vulnerability.

Furthermore, all proposals should:

- Demonstrate the support of the stakeholders who are necessary to ensure the success of the action through direct participation in the Consortium or a convincing strategy for their involvement (in particular, for local or regional authorities).
- Provide a credible approach regarding the way in which the service will reach and engage energy community project developers. This approach should be adapted to the specificities of the territories targeted and consider how to include diverse types of members.
- Foresee adequate training and capacity building for the staff delivering the services or actors needed for project implementation including (where relevant) local and regional authority

staff, community members and installers. The objectives and content of training activities should be outlined in the proposal.

- Outline a compelling plan to ensure the continuity of the support beyond the lifetime of the project.

Proposals should describe the current development level of energy communities in the targeted areas, prioritising regions where communities are less established or where experience is limited (e.g., community heating, citizen-led renovation, flexibility). They must align with existing national frameworks and local support, leveraging relevant resources and networks like the European Energy Communities Facility and the Citizen Energy Advisory Hub. New tools, databases, or platforms should only be developed if they offer clear added value and potential for scaling beyond the project.
The Commission suggests a funding request up to €1.75 million to meet objectives but allows other amounts. Proposals must be submitted by at least three independent applicants from three different eligible countries.

2.3.3 Supporting district heating and cooling networks

To reduce fossil fuel use for heating and cooling and advance EU energy independence, modern and efficient district heating systems are essential. These systems can integrate renewable and waste heat sources, improving energy supply and demand across carriers. EU policies like REPowerEU, the revised EED, and RED aim to boost renewable energy and waste heat use in district heating. Operators must upgrade systems to meet “efficient district heating and cooling” standards, requiring integration of renewables and waste heat. While guidance and support exist, many systems still depend heavily on fossil fuels. In emerging markets, development is hindered by limited technical, financial, and human capacity. Targeted support and strong enabling frameworks are needed to drive modernisation and expansion.

Proposals should clearly demonstrate how their activities will support the transition to “efficient district heating and cooling” by providing investment plans and guidance that enable the integration of renewable energy and waste heat. This includes a solid analysis of the starting point, credible assumptions, and clear links between planned results and expected impacts. Projects must show how they will equip operators, local authorities, and other stakeholders with endorsed, implementation-ready investment plans, along with the internal capacity, guidance, and tools needed to upgrade or develop systems in line with EED criteria. This includes encouraging waste heat producers to supply district heating networks. Proposals should quantify their expected results and impacts, both at project completion and five years later, using relevant topic indicators and any additional, activity-specific indicators.

The indicators for this topic include:

- Number of endorsed investment plans for existing or new district heating and/or cooling systems, allowing them to fulfil the criteria for “efficient district heating and cooling” defined in the Energy Efficiency Directive.
- Number of follower cases (DH companies) for which transfer of knowledge will be effectively provided.
- Number of local and regional authorities integrating the outcomes of the project in their energy planning.

- Investments in energy efficiency and renewable energy sources triggered by the implementation of the investment plans developed thanks to the project (cumulative, in million Euro).

Proposals should also quantify their impacts related to the following common indicators for the LIFE Clean Energy Transition sub-programme:

- Primary energy savings triggered by the project in GWh/year.
- Final energy savings triggered by the project in GWh/year.
- Renewable energy generation triggered by the project (in GWh/year).
- Reduction of greenhouse gas emissions (in t CO_2-eq/year).

Proposals should address one of the following aspects and are expected to work either:

- with operators/owners of existing district heating systems to provide them with the required technical support for the preparation of investment plans for the fuel switch of existing district heating systems to fulfil the criteria for "efficient district heating and cooling" as defined in the Energy Efficiency Directive. This can include the extension of existing district heating and cooling networks provided that they are fully based on renewable energy or waste heat and the achievement of efficient district and cooling networks criterion is assured; or
- with municipalities and the relevant key stakeholders in the development of investment plans for new district heating and/or cooling networks, provided that they are fully based on renewable energy or waste heat, and with particular attention to existing buildings.

For both aspects, the emphasis should be on identifying practical solutions for integrating renewable energy or waste heat, evaluating the necessary investments, and ensuring affordability and economic accessibility for residents and businesses. The investment plans should outline technical specifications and concepts, provide a detailed breakdown of required investments and pre-feasibility studies, define timelines, identify internal and external resource needs, and specify public and private funding sources, particularly for the initial investment phases. Where relevant, proposals should also explore alternative financing models and sources. The proposal should clearly describe the methodology and planned activities regarding:

- the identification of local energy resources, the required infrastructure and potential investment costs.
- the assessment of the compatibility with the existing building stocks.
- the involvement of local stakeholders, as relevant, in particular potential waste heat suppliers and potential customers.
- the preparation of a business plan that includes projected revenues, operating costs, capital expenditures, and return on investment.
- the identification of funding sources (grants, loans, private investments …), and a strategy to secure the capital for the project.
- the official endorsement process for the investment plans by relevant stakeholders, e.g. Management board of the district heating company or local authorities; this should be reflected in the deliverables.

- the compliance with local, regional, and national laws and regulations related to energy production, distribution and consumption.

Investment plans should enable targeted district heating systems to meet the "efficient district heating and cooling" criteria of the revised Energy Efficiency Directive within 10 years. Plans may also assess opportunities to participate in electricity markets through flexibility services such as balancing and storage. Proposals should support the development of a significant number of investment plans across at least three eligible countries, with clear strategies for knowledge transfer to follower cases during the project. They must show strong commitment from district heating operators/owners and detail the scope and delivery of on-the-ground support. Proposals should include a risk assessment, identify barriers, offer recommendations for regulators and local authorities, and promote replication by other operators. Equipment costs and new tool development are not eligible; existing commercial tools should be used where needed. Proposals must include at least three applicants from three different eligible countries. The EU contribution is expected to be up to €2 million, though other amounts may be considered.

2.3.4 Alleviating household energy poverty in Europe

In recent years, European households have spent an increasing share of their income on energy, driving up rates of energy poverty and negatively impacting living conditions, health, and well-being. An estimated 10.6% of Europeans are unable to keep their homes adequately warm, with rising energy prices, low incomes, and inefficient buildings and appliances being key causes. Heatwaves further increase vulnerability and household cooling needs, making energy poverty a complex issue that intersects with health, housing, and social policy, and requires coordinated, multi-level governance and cross-sector collaboration. The European Green Deal and the Fit for 55 package, especially the recast Energy Efficiency Directive (EED), call for a fair energy transition, prioritising efficiency improvements for energy-poor and low-income households, including social housing. The EED also urges action to overcome structural barriers such as the split incentive dilemma in multi-owner properties. In this context, accelerating building renovation, particularly in residential multi-apartment buildings, can significantly reduce energy bills, improve comfort, and enhance well-being. Proposals should focus on addressing the challenges of coordinated renovation in such buildings, supporting both occupants and public authorities, and developing long-term strategies and financing schemes specifically targeting energy-poor households to help alleviate energy poverty across the EU.

Actions should directly contribute to alleviating energy poverty by building on existing tools, indicators, and resources such as those from the Energy Poverty Advisory Hub and the Covenant of Mayors. Proposals are especially encouraged to target summer energy poverty or regions with limited existing support measures. Each proposal should focus on only one of the two defined scopes, Scope A or Scope B, with Scope A allowing for one or both of its sub-scopes to be addressed, and the chosen scope clearly stated in the proposal introduction.

Scope A: Policy and coordination support to public authorities and stakeholders

- Actions should support national, regional and/or local authorities and societal intermediaries in setting up long-term, cross-sectoral coordination structures to tackle energy poverty. The coordination structures should foster cross-departmental and vertical collaboration across national, regional, and local government structures and social intermediaries, and could include setting up long-term national energy poverty observatories[9]. Where national coordination structures or observatories already exist, the proposal should clearly demonstrate the need for, and added value of, any new coordination structures. To facilitate

the set-up of such structures and build the necessary organisational expertise, the proposed action should also include the delivery of capacity-building activities for the national, regional and/or local authorities and societal intermediaries involved in the coordination structures. The actors involved are expected to represent all relevant sectors (e.g. energy, social, health and housing) to ensure a holistic participatory approach to the alleviation of energy poverty in the long term and to improve social cohesion.

- Deliver tailored policy support to national authorities on the implementation of relevant provisions of the EED (recast) to allow authorities to design and take concrete policy level actions to empower and protect energy poor households. The proposed action should provide public authorities with support and advice on e.g. regulatory, funding and technical aspects to help analyse their national policy mix, and to combine, contextualise and pull the different energy poverty-related provisions together to allow for the effective and coherent planning, design and improvement of energy poverty alleviation strategies and measures at the national level. In doing so, the action should ensure the involvement and mobilisation of national authorities across different sectors and support these authorities to map out and evaluate the impact of different implementation options, taking into account the specific national needs and context on energy poverty.

It is expected that the relevant national/regional/local authorities and stakeholders such as consumer or social organisations, the housing sector, or healthcare providers are either directly involved or their concrete support and involvement is demonstrated in the proposal.

Scope B: Support for residential multi-apartment building renovation

Actions under Scope B should support the energy renovation of residential multi-apartment buildings with energy poor inhabitants, with a particular focus on reinforcing and adapting the governance and decision-making structures of building management and homeowners or tenants associations, tackling related regulatory framework barriers (e.g. property and/or rental laws), split incentives, and setting up and coordinating relevant support services. The renovation actions supported should take into account the ability of residents to remain in their homes after works, thereby avoiding so-called renovictions, and may also include renewable energy solutions.

It is expected that the homeowners or tenant associations and housing organisations, in particular, are either directly involved in the consortium or their concrete support and involvement is clearly demonstrated in the proposal.

Proposals should clearly outline the concrete results of their activities and how these will contribute to the expected topic-specific impacts, supported by a detailed starting point analysis and well-founded assumptions. They must show how their actions will reduce energy poverty for targeted households (Scope B) or enable effective implementation of the regulatory framework and coordination structures (Scope A), ensuring replicability across regions or Member States. Where applicable, prebound and rebound effects should be considered and reported.

Depending on the scope and as relevant, proposals should demonstrate how they will contribute to:

- Improved collaboration and knowledge exchange between different levels of public authorities and of social intermediaries involved in the coordination structures.
- Increased understanding and expertise in the public authorities in charge of implementing relevant EED (recast) provisions.

- More effective and coherent implementation of provisions, including better planning, design and evaluation of energy poverty related policy measures.

Proposals should quantify their results and impacts using the indicators provided for the topic, when they are relevant for the proposed activities. They should also propose indicators which are specific to the proposed activities. Proposals are not expected to address all the listed impacts and indicators. The results and impacts should be quantified for the end of the project and for 5 years after the end of the project.

The indicators for this topic include:

- Number of energy poor households with reduced energy costs.
- Number of residential multi-apartment buildings renovated.
- Number of governance and decision-making structures adapted for residential multi-apartment buildings to facilitate energy renovation investments.
- Number of agreements concluded between homeowners and tenant associations demonstrating commitment to energy renovation investments.
- Number of energy poverty observatories and coordination structures established.
- Quantified multiple benefits, where relevant, for energy poor households, such as improved physical and mental health, comfort and indoor environment, better indoor air quality, improved social inclusion, reduced public health expenditure.
- Number of energy poor consumers benefitting from the activities.
- Number of legislative or implementing acts, policies or strategies created/adapted on energy poverty.
- Other environmental impacts such as reduction of the production of harmful substances.

Proposals should also quantify their impacts related to the following common indicators for the LIFE Clean Energy Transition sub-programme:

- Primary energy savings triggered by the project in GWh/year.
- Final energy savings triggered by the project in GWh/year.
- Renewable energy generation triggered by the project (in GWh/year).
- Reduction of greenhouse gas emissions (in tCO_2-eq/year).
- Investments in sustainable energy (energy efficiency and renewable energy) triggered by the project (cumulative, in million Euro).

Proposals should consider the multiple benefits of energy efficiency and renewable energy measures for energy-poor groups, including improved health, comfort, air quality, and social inclusion, with special attention to vulnerable populations and gender aspects where relevant. Developing new IT tools or platforms is not expected unless clearly justified and scalable beyond the project. Submissions must involve at least three applicants from three different eligible countries. The Commission suggests an EU contribution of up to €1.75 million, though proposals requesting different amounts are also welcome.

2.4 Other European Funding Programmes

Besides Horizon Europe, ERDF and LIFE programmes, there are other programmes funded by the EU that align with the goals of the SynGRID project. In this deliverable, we identify some of them.

2.4.1 Erasmus+

Erasmus+ [22] is the EU's flagship programme for education, training, youth, and sport, with a budget of €26.2 billion, nearly double that of the 2014–2020 period. Running from 2021 to 2027, it prioritises social inclusion, the green and digital transitions, and youth engagement in democratic life. Erasmus+ supports key EU initiatives such as the European Education Area, Digital Education Action Plan, European Skills Agenda, the European Pillar of Social Rights, the EU Youth Strategy (2019–2027), and fosters the European dimension in sport.

Erasmus+ 2021-2027 factsheet [23] defines key aspects of the programme. Erasmus+ places key priorities on inclusion and accessibility by reaching people with disabilities, migrant backgrounds, and those in rural areas, while making the programme more accessible to smaller organisations and promoting equal participation at all levels. The digital transition is supported through digital learning, upskilling, blended formats, and digital tools like the European Student Card and the Erasmus+ app. In line with the European Green Deal, the programme encourages low-carbon travel, funds sustainability projects, and helps participants develop climate-related skills. Youth participation and democratic engagement are enhanced by funding youth-led initiatives and offering cultural travel opportunities such as DiscoverEU for 18-year-olds. The programme also promotes European and global cooperation through initiatives like European Universities, Centres of Vocational Excellence, and increased mobility beyond the EU.

About 70% of the Erasmus+ budget supports learner and staff mobility across sectors including education, vocational training, youth, and sport. The remaining 30% funds cooperation projects that foster innovation and partnerships. Additionally, Erasmus+ contributes to policy support by aiding education and youth policy reform, peer learning, and international dialogue, including expanded support for Jean Monnet actions in schools.

Flagship initiatives of Erasmus+ include European Universities, Vocational Centres of Excellence, Erasmus Mundus Joint Masters, DiscoverEU, and Forward-Looking Partnerships that drive innovation in education.

2.4.1.1 Erasmus Charter for Higher Education

This Call aims to accredit recognised Higher Education Institutions (HEIs) in eligible countries that have the capacity to participate in Erasmus+ activities, including learning mobility and cooperation for innovation and good practices. There is only one topic, with no light procedure, so all parts of Application Form Part B must be completed.

To be eligible, applicants must be HEIs (public or private) established in Erasmus+ Programme Countries. These include EU Member States (and their overseas territories), listed EEA countries, associated non-EU countries or those negotiating association agreements expected to be in force before grant signature, and Western Balkans countries not associated with Erasmus+ (Albania, Bosnia and Herzegovina, Kosovo, and Montenegro).

The next application deadline is 27 January 2026, with one additional deadline expected afterwards. Selection results are published in July following each deadline. Applications will be evaluated by a committee based on admissibility, eligibility, and award criteria.

SynGRID aims to improve university curricula, particularly in the field of energy transition, which aligns well with Erasmus+ goals of innovation, sustainability, and cooperation. By combining SynGRID's focus with Erasmus+ activities, institutions can enhance curriculum development, promote student and staff mobility in cutting-edge energy topics, and foster international partnerships that support green skills and knowledge exchange. This synergy offers a valuable opportunity to integrate sustainable energy education into broader European cooperation and mobility programmes.

2.4.2 Alliances for innovation

The Erasmus+ Key Action 2: Alliances for Innovation programme [24] supports strategic cooperation between higher education institutions, vocational education and training (VET) providers, businesses, and other stakeholders to strengthen Europe's innovation capacity and address current and future skills needs. It promotes the development of new curricula, innovative learning methods, and stronger links between the education and business sectors. This initiative plays a crucial role in supporting the EU's priorities, including the green and digital transitions, sustainable growth, and social inclusion.

The action is divided into two strands. **Lot 1: Alliances for Education and Enterprises** focuses on fostering innovation through cross-sectoral cooperation. Projects under this strand aim to enhance the exchange of knowledge and best practices between education providers and enterprises, foster entrepreneurial mindsets, and support the development of skills for innovation. Consortia applying under Lot 1 must include at least eight full partners from a minimum of four different EU Member States or Erasmus+ associated countries. The partnership must comprise at least three labour market actors (such as companies, chambers of commerce, or employer associations) and three education and training providers, including at least one higher education institution and one VET provider.

Lot 2: Alliances for Sectoral Cooperation on Skills (Blueprint) is more ambitious in scale and targets the development of long-term sector-specific strategies to address skills shortages and transformation challenges. Projects focus on designing European core curricula, establishing training programmes, and creating sectoral roadmaps to support workforce upskilling and reskilling. Lot 2 requires at least twelve full partners from a minimum of eight different countries. The consortium must include at least five labour market actors and five education and training providers, with at least one higher education institution and one VET provider among them.

Eligible applicants for both strands include public or private organisations established in EU Member States or in countries associated with the Erasmus+ programme. While organisations from non-associated third countries may be involved as associated partners, they cannot act as coordinators or receive direct funding. Higher education institutions from eligible countries must hold a valid Erasmus Charter for Higher Education (ECHE). Project durations are set at 24 or 36 months for Lot 1 and 48 months for Lot 2.

By supporting the development of innovation ecosystems and skills alliances across sectors, Erasmus+ Alliances for Innovation represent a strategic funding opportunity for initiatives like SynGRID to expand their impact through international collaboration, capacity building, and joint innovation-driven projects.

2.4.3 Digital Europe Programme (DIGITAL)

The Digital Europe Programme (DIGITAL) is an EU funding initiative focused on advancing digital technology for businesses, citizens, and public administrations. Digital technology plays a vital role in communication, work, scientific progress, and addressing environmental challenges. The COVID-19

pandemic and Russia's war against Ukraine have highlighted Europe's dependence on external digital systems and exposed vulnerabilities in digital supply chains, underscoring the need to invest in cybersecurity and strengthen EU digital capacities.

DIGITAL provides strategic funding in key areas such as supercomputing, artificial intelligence, cybersecurity, advanced digital skills, and promoting widespread use of digital technologies across society and the economy. It supports industry, SMEs, and public administrations through a reinforced network of European Digital Innovation Hubs (EDIH).

In September 2023, DIGITAL expanded to include semiconductors, mobilising funds under the Chips Act to address shortages via the Chips for Europe Initiative.

With a budget exceeding €8.1 billion, DIGITAL aims to drive Europe's digital transformation aligned with the 2030 Digital Compass and the Multiannual Financial Framework 2021-2027. It works alongside other EU programmes like Horizon Europe, Connecting Europe Facility, and the Recovery and Resilience Facility. DIGITAL is also part of the Strategic Technologies for Europe Platform (STEP), which boosts industrial competitiveness and European sovereignty. Projects funded by DIGITAL often receive the STEP Seal, easing access to further EU funding.

The project aligns closely with SynGRID's goal of digitalizing distribution networks and increasing their observability, a key prerequisite for an efficient energy transition.

Currently open and upcoming project calls within the programme do not directly align with the specific focus of SynGRID. However, we will continue to monitor future funding opportunities closely to identify any potential calls that may support SynGRID's objectives.

3 International Funding Programmes

In this section we focus on non-EU fundings, either through other European funding agencies such as European Space Agency or programmes funded by non-European countries. Direct financing of European research projects is rare and is mostly oriented to bilateral agreements. However, there are certain calls that are funded by the EU but are co-funded by third countries. Such examples will be given in this section.

3.1 European Space Agency (ESA)

ESA Space Solutions [25] supports businesses across Europe in using space technologies to create practical solutions that improve life on Earth. By collaborating closely with industry, we help develop space-enabled innovations that drive business growth and deliver meaningful socio-economic impact. Our work is aligned with the green transition and the global move toward a more digital and sustainable future.

ESA Space Solutions focuses on fostering commercially viable, space-enabled applications in non-space sectors. It provides funding, technical expertise, and access to networks and partners, supporting the development of services that leverage satellite communications, Earth observation, navigation, and other space assets. Activities are aimed at addressing real-world challenges, stimulating innovation, and contributing to environmental sustainability and economic growth across Europe.

ESA is focusing on various thematic areas, with Energy, Education & Training, and Infrastructure & Smart Cities identified as relevant to SynGRID partners.

The European Space Agency (ESA) is actively supporting the global shift toward sustainable energy by integrating space-based technologies into the energy sector. Through its Business Applications and Space Solutions programme, ESA promotes the use of satellite communications, Earth observation, and navigation systems to improve energy management, infrastructure, and environmental monitoring. These technologies enable better distribution and monitoring of renewable energy, support efficient infrastructure planning, and help assess environmental impacts. ESA's efforts contribute to smarter, more resilient energy systems and accelerate the transition to clean energy sources. Beyond technical innovation, ESA's initiatives have generated socio-economic benefits, such as job creation and market growth. The agency works closely with industry and public stakeholders to tackle evolving challenges in the energy landscape.

Currently, there are two open calls that align with some of the SynGRID goals [26]:

- Green Hydrogen As a Sustainable Energy Source
- Space For Sustainable, Connected and Liveable Cities

However, not all SynGRID partners are eligible for funding, therefore joint proposals are not possible. For that reason, these project calls will not be presented in detail.

3.2 Southeast Asia-Europe Joint Funding Scheme

The Southeast Asia-Europe Joint Funding Scheme for Research and Innovation (JFS) [27] supports bi-regional, multilateral research and innovation projects through funding provided by national, regional, or local agencies in Southeast Asia and Europe. Each participating country finances its own researchers based on national funding rules, with no transnational funding transfer.

Since its launch in 2017, with the first call focusing on health and environment/climate change, JFS has regularly issued annual calls across various thematic areas. These have included health, environment, and broader interdisciplinary fields. Projects typically run for three years and may cover costs such as personnel, small equipment, consumables, travel, and workshops, depending on the rules of the individual funders.

In addition to funding calls, JFS fosters scientific collaboration through events like matchmaking sessions and lab tours, and offers an online partnering tool to help researchers connect across regions.

Following a 1.5-year pause, JFS resumed its activities with an 8th call launched in 2023. This was followed by a 9th call in 2024, and a 10th call is anticipated in 2025. Interested researchers are encouraged to monitor updates and forthcoming opportunities via the JFS newsletter.

The scheme is centrally managed by the European Commission's Service Facility in Support of the Strategic Development of International Cooperation in Research and Innovation.

4 National Funding Programmes

4.1 Croatian Science Foundation "Research Projects" Programme – Croatia and Slovenia bilateral project

In early 2025, Croatian Science Foundation opened the calls for the "Research Projects" Programme under which Croatian scientific institutions could submit the project proposal with Slovenian partners.

The "Research Projects" Programme aims to foster scientific excellence and stimulate competition by funding both basic research, which generates or enhances knowledge in a specific field, and applied research with clear technological, economic, or social goals. The proposed topics should be internationally acknowledged and/or nationally significant, and projects must be led by experienced research teams headed by Principal Investigators with strong international and national reputations and impressive track records. The Programme encourages the consolidation of research efforts to maximize the impact of findings and improve success rates in European and other international competitive funding opportunities.

It promotes open science, research integrity, and a positive research culture, while also encouraging the effective dissemination and open access publication of research results. Researchers are encouraged to deposit their publications in repositories and publish in journals that prioritize quality. Additionally, they are expected to manage their research data responsibly, adhering to open access, FAIR principles, and sustainable practices for the reuse and sharing of data. The Programme has international prominence as part of the Weave network, facilitating the submission of joint bilateral or trilateral scientific project proposals. Researchers can submit collaborative proposals with partners from Slovenia, Switzerland, and Czechia under this Call.

Even though the call was closed in March 2025, is expected that another similar call will be opened before the end of the SynGRID project, creating the opportunity for Croatian and Slovenian partners to prepare a proposal as a result of the SynGRID collaboration. Furthermore, the initial activities of the SynGRID project led to the project proposal between the **Croatian partner FERIT** and the project coordinator from **Slovenia IRI UL**. The project named "Coordination of battery systems and electric vehicles to increase the integration of photovoltaic systems in low-voltage distribution networks" (**COBEVnet**) is focused on optimizing the integration of photovoltaic systems with battery storage, electric vehicles, and controllable loads to improve the efficiency and stability of low-voltage distribution networks. Furthermore, the project aims to develop advanced optimization models and management algorithms, contributing to smarter, more resilient power grids and supporting the transition to renewable energy sources.

4.2 DIGIT project

The Digital, Innovation, and Green Technology Project (DIGIT Project) [28] is financed through a €106 million loan agreement signed in June 2023 between the Government of Croatia and the International Bank for Reconstruction and Development (IBRD), part of the World Bank. The project aims to support a structural transformation of Croatia's research and innovation sector by fostering digitalisation, green technologies, and institutional capacity building.

DIGIT focuses on accelerating the digital and green transitions through sub-grant schemes that finance applied research and experimental development, while also enhancing infrastructure, research management, and connections between academia and industry. It seeks to increase productivity,

reduce dependence on physical proximity, and support Croatia's shift to a more resilient, climate-neutral, and knowledge-based economy.

The project complements and reinforces Croatia's strategic frameworks, including the National Recovery and Resilience Plan 2021–2026, the Smart Specialisation Strategy 2021–2029, and the Competitiveness and Cohesion Programme 2021–2027. Additionally, DIGIT supports Croatia's efforts to align with OECD standards by strengthening policy delivery mechanisms in research and innovation.

4.2.1 Routes to Synergies

The "Routes to Synergies" Call for Proposals [29] is a funding initiative under the broader DIGIT Project, which supports the digital and green transformation of Croatia's research and innovation ecosystem. With a total allocation of €3 million, this call aims to strengthen the capacity of Croatian public research organisations and higher education institutions to engage in competitive research at the European level, particularly by building on existing investments made under the ERDF and the Recovery and Resilience Facility (RRF).

The call supports activities that enable institutions to prepare for future participation in EU and international research programmes, improve the visibility and accessibility of national research infrastructure, and foster collaboration among Croatian research entities. Eligible activities include proposal development, preliminary research and feasibility studies, capacity building in research management and knowledge transfer, visibility and dissemination of existing research achievements, and optimisation of research infrastructure usage.

One of the key objectives is to increase the impact and value of prior RDI investments by ensuring they are strategically linked to future initiatives. The call encourages applicants to build on completed or ongoing research infrastructure projects funded through ERDF or RRF and to demonstrate how new activities will leverage these assets to improve institutional performance and competitiveness. By promoting better utilisation of existing capacities and know-how, the programme aims to reduce fragmentation, foster research excellence, and generate long-term socioeconomic benefits.

Expected outcomes include stronger institutional capabilities for project development and management, greater national and international visibility of Croatian research institutions, and improved alignment with EU strategic objectives in science, innovation, and sustainability. The programme also anticipates greater inter-institutional collaboration within Croatia, contributing to a more integrated and resilient national research landscape.

Grants range from €20,000 to €100,000 per project, with implementation periods of up to 12 months. All projects must be concluded by October 31, 2028. **Applicants may apply individually or in partnership with one Croatian research or higher education institution.** Each applicant may submit a maximum of two proposals and may act as a partner in up to five. The call opens on May 15, 2025, and remains open until December 31, 2026, or until funds are fully allocated.

Through targeted support and strategic alignment with national and EU policies, the "Routes to Synergies" Call aims to foster a culture of forward-looking, impact-driven research that supports Croatia's transition to a more competitive, sustainable, and innovation-oriented economy.

The SynGRID project, which focuses on the digitalisation and increased observability of electricity distribution networks, is closely aligned with the aims of this call. In addition to supporting the green energy transition, SynGRID promotes the development of new Horizon Europe proposals, capacity building in the energy and digital sectors, and strengthened collaboration between research

institutions. Given these shared objectives, SynGRID partners FER and FERIT are both eligible applicants and can jointly apply under this call. Their participation would reinforce the strategic goals of the DIGIT Project by leveraging existing infrastructure, enhancing institutional readiness, and positioning Croatian research at the forefront of digital and green innovation.

4.2.2 Call for proposals under the Challenge program

The DIGIT Challenge Call for Proposals [30] is part of the broader Digital, Innovation, and Green Technology Project (DIGIT Project), financed with €106 million through a loan agreement between the Government of Croatia and the International Bank for Reconstruction and Development (IBRD). Implemented by the Ministry of Science, Education and Youth (MSEY), with support from the Croatian Science Foundation (CSF), this call is designed to fund large-scale, mission-oriented research and innovation projects that address strategic challenges related to digitalisation, sustainability, and competitiveness.

With a total allocation of €15 million, the call supports projects valued between €2 million and €4 million. Funding is provided at up to 100% grant intensity for eligible research institutions, and projects may last up to 36 months, with all activities and payments to be completed no later than October 31, 2028.

Eligible applicants include **Croatian public research organisations and higher education institutions whose statutes include research activities**. **Each application must be submitted by a consortium of three to six partners, and must include at least one Croatian research or higher education institution and at least one enterprise established in Croatia. Additional partners may include foreign research institutions, enabling the formation of international consortia in line with the project's goal of enhancing cross-border cooperation and innovation impact.**

The call is structured around two major themes: the Digital Future Innovation Challenge and the Green Horizons Innovation Challenge. Each consortium must define a clear, strategic mission with measurable outcomes aligned with **Croatia's Smart Specialisation Strategy 2021–2029 and the National Development Strategy 2030**. Projects must follow a Theory of Change approach and demonstrate how the proposed activities contribute to wider societal, technological, and economic transformation.

Eligible activities include applied research and experimental development, infrastructure upgrades, equipment procurement, training, knowledge and technology transfer, intellectual property management, innovation promotion, and robust project coordination. Proposals will be evaluated through a two-phase process: a Concept Note (Stage 1) outlining the mission, rationale, consortium, and indicative budget, followed by a Full Application (Stage 2) with detailed plans, methodology, impact projections, and compliance documentation.

This call is particularly relevant for projects like SynGRID, which is focused on digitalising electricity distribution networks and increasing observability as a foundation for a green and efficient energy transition. SynGRID also prioritises Horizoeen project development, capacity building, and interdisciplinary collaboration, all core aims of the DIGIT Challenge. As international consortia are permitted, all SynGRID partners are eligible to participate, provided that FER and/or FERIT (Croatian academic institutions) are included in the consortium, ensuring compliance with national eligibility requirements.

5 Conclusions

This deliverable provides an overview of funding opportunities available to SynGRID partners from various sources and programmes. The primary focus is on EU, international, and national funding schemes. The aim was to identify relevant project calls that align with the SynGRID project's thematic areas. This deliverable serves as a foundation for subsequent activities, such **as the preparation of joint project proposals in WP3** (Task 3.3 – Valorisation of collaboration: new project proposals).

EU funding programmes offer the greatest opportunities for SynGRID partners, given the large number of open and upcoming calls. The first programme analysed in this deliverable is **Horizon Europe**. **Nine relevant calls were examined in detail**, all of which relate to RES, e-mobility, and the digital transformation of distribution networks, key areas that align closely with the SynGRID project. Moreover, **all SynGRID partners are eligible to participate** in each of the identified calls. Therefore, it is expected that the majority of joint project proposals will target the Horizon Europe programme.

The **ERDF** supports several programmes, among which the I3 Instrument and Interreg programmes have been identified as the most relevant for SynGRID. Unlike some other programmes, **the I3 Instrument does not define specific calls**; instead, proposals must align with one of the core topics: **green transition, digital transition, or smart manufacturing**. Strand 1 and Strand 2a are currently open, while Strand 2b is expected to open later this year. In addition, proposals must be **connected to the smart specialisation strategies of the participating countries**. The thematic areas of this funding programme **align closely with those of SynGRID**, which is also actively investigating smart specialisation strategies in Slovenia, Croatia, and Greece. Therefore, this **programme is of high interest to the consortium**.

The Interreg programme focuses on strengthening cross-border collaboration and developing innovative solutions to address challenges faced across Europe. **Nine Interreg programmes have been identified** in which all or some SynGRID partners are eligible to participate. These nine programmes were the focus of this deliverable, and each has been described in detail. Currently, three project calls are open or announced: **Interreg CENTRAL EUROPE**, **Interreg IPA ADRION**, and **Interreg Danube Region**. Some of their priority areas, such as green and digital transitions, climate change, and related topics, closely align with the objectives of the SynGRID project. It is expected that **additional calls will be launched during the SynGRID project's duration, and the consortium will continue to assess these opportunities** to determine whether all or some partners are eligible to submit joint proposals.

The **LIFE programme** is also considered **highly relevant for the SynGRID consortium**, as it supports projects focused on environmental and climate-related challenges. **Four calls have been identified** as particularly pertinent to the project, addressing key socio-technical issues such as the electrification of district heating, energy poverty, and support for energy communities, all of which are topics explored within SynGRID. Importantly, **all SynGRID partners are eligible to participate** in these LIFE calls, which strengthens the consortium's ability to achieve its defined project goals.

Other funding programmes, such as **Erasmus+** and **DIGITAL**, are also of interest to the SynGRID consortium. Erasmus+ focuses on enhancing the curricula of higher education institutions, an area that aligns with one of SynGRID's key activities. Meanwhile, the DIGITAL programme aims to support digital solutions that contribute to the development of Europe's industrial and R&D sectors. Although current opportunities are limited due to a lack of open calls, the consortium will continue to monitor forthcoming calls to identify those that may be relevant for SynGRID's objectives.

While there are funding sources that promote collaboration between the EU and third countries, such as the **USA** or **ASEAN** nations, these projects are **still primarily funded by the EU**. One example is the **Southeast Asia-Europe Joint Funding Scheme**, which allows participation from **non-EU countries**; however, these countries must finance their own involvement. Additionally, there are calls funded by European agencies that are not part of the EU. For instance, the **ESA** supports projects in various fields, including Energy, Infrastructure, and Smart Cities. Although there are currently open ESA calls, none of the SynGRID partners are eligible to participate at this time. Nevertheless, the consortium will continue to monitor future opportunities as they arise.

Finally, we analysed **national funding programmes**, where national agencies or governments support projects in which multiple SynGRID partners can participate. One example is the **Croatian Science Foundation, which funds bilateral projects between Croatian and Slovenian research institutions**. A strong example of such collaboration is the **COBEVnet project**, jointly proposed by **FERIT and IRI**. New calls are expected within the next two years, providing opportunities for additional project proposals stemming directly from the SynGRID initiative. The Croatian government also supports projects under the DIGIT programme. Currently, two calls are open. The first, Routes to Synergies, aims to strengthen collaboration and increase the visibility of research and innovation institutions. Although this call is **open only to Croatian institutions, a joint proposal between FER and FERIT is possible**. The second call falls under the Challenge programme, which is structured around two themes: the Digital Future Innovation Challenge and the Green Horizons Innovation Challenge. Projects must include at least one Croatian partner, but IRI UL, Petrol, and ICCS are also eligible to participate in the consortium.

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6.2 Acronyms

Acronyms list	
AI	Artificial Intelligence
CINEA	Climate, Infrastructure and Environment Executive Agency
CSA	Coordination and Support Action
DIGIT	Digital, Innovation, and Green Technology
DSO	Distribution System Operator
EED	Energy Efficiency Directive
EMSP	E-Mobility Service Providers
ERA	European Research Area
ERDF	European Reginal Development Fund
ESA	European Space Agency
EU	European Union
EVSE	Electric Vehicle Supply Equipment
FSTP	Financial Support to Third Parties
HE	Horizon Europe
HEI	Higher Education Institutions
I3	Interregional Innovation Investments

JS	Joint Secretariat
LDES	Long-Duration Energy Storage
MA	Managing Authority
PED	Positive Energy District
PV	Photovoltaic
RED	Renewable Energy Directive
RES	Renewable Energy Sources
RRF	Recovery and Resilience Facility
SME	Small and medium-sized enterprises
SSH	Social sciences and humanities
TAP	Thematic Action Plans
TRL	Technology Readiness Level
TSO	Transmission System Operator