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For more information visit www.h2020-bridge.eu and follow @BRIDGE_H2020 on Twitter!

For more information, please visit horizon2020-story.eu/blog

STORY

STORY

One of the pilot sites in the STORY project features the first community medium-scale battery (170kW, 450 kWh) in Slovenia. It is installed at the MV/LV transformer station with significant PV generation connected to the LV grid, located in in a village Suha, Slovenia. Join the experts of the resident Slovenian DSO, Elektro Gorenjska and University of Ljubljana, taking us through the evolution of the pilot site Suha in a movie that is now available on the STORY website! The findings of this pilot are informing the ongoing analysis of the battery operation in the twin pilot site at the Elektro Gorenjska headquarters.

Compile

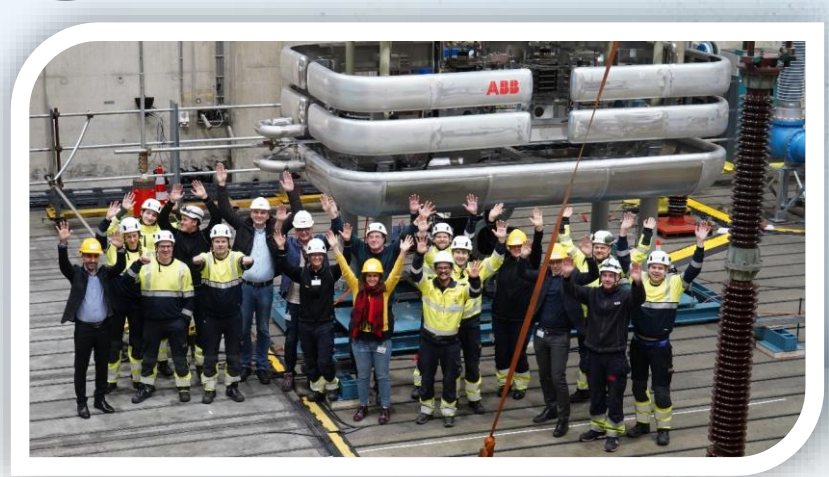
COMPILE

Community battery integrated into the grid in pilot site Luče

With the help of COMPILE partner PETROL, the pilot site Luče in Slovenia is richer for the community battery (150 kW/333 kWh). The delivery and installation happened already in the end of last year, while its integration into the grid was done in mid-February. Since that time, the battery has been operating and managed by Petrol's technical information system Tango, which will be connected to other COMPILE technical tools that are currently in the development. The battery is storing all the excess energy from the community's PVs and use the stored energy at the peak demand overnight. Therefore, the battery is controlled in way that improves the voltage profile and network condition.

This integration of the community battery goes in line with the installation and connection of three household batteries which happened in January. All the mentioned activities are aimed to reach the milestone of pilot site Luče being operational.

PROMOTioN
PROGRESS ON MESHED HVDC OFFSHORE TRANSMISSION NETWORKS



PROMOTioN

A long run of intensive development effort has paid off by the successful completion of a series of experiments on full-scale HVDC switchgear.

On 27th of February 2020 the fully-rated 350 kV hybrid HVDC breaker interrupted a wide range of short-circuit currents from a few amperes up to 20 kA within 3 ms in KEMA Laboratories, Netherlands. It was exposed to a residual system voltage of 400 kV to replicate realistic component stresses.

320 kV HVDC gas insulated switchgear (GIS) is currently also undergoing extensive one-year duration tests. The testing involves innovative measurements techniques, online monitoring and evaluation (Delft University,) and the impact of various SF6 gas alternatives (Supergrid Institute).

Both the Hybrid HVDC breaker and GIS technologies were developed by ABB Power Grids. The tests were performed in the framework of the PROMOTioN project, where many European TSOs and grid developers witnessed the new record of the Hybrid HVDC Breaker.

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CROSSBOW

During January and February 2020 CROSSBOW partners, Security Coordination Centre SCC Ltd Belgrade and Bulgarian Electricity System Operator ESO EAD, executed 6 successful preliminary demonstrations on "Probabilistic approach for Regional Short-term Adequacy Assessment" for 11 TSOs of the SEE region. Work was shared in two parts:

- bottom-up approach (ESO) – probabilistic modelling of generations and demands to determine adequacy indicators;
- top-down approach (SCC) – sensitivity analysis of the regional network on active power flow changes to determine optimal adequacy transactions that solve detected issues.

The final demonstration is planned for the beginning of 2021 using a dedicated software tool.

Check this video out.

E-LAND

In the webinar "BUSINESS MODEL INNOVATION IN ENERGY - THE CONFLUENCE OF LOCALITY, DIGITIZATION AND SECTOR COUPLING" 90 stakeholders of the E-LAND project have discussed the prospects of ELAND. By focusing on local energy systems E-LAND links the potential of digitalization and the coupling of different energy sectors. The webinar had a specific focus on University as energy island. The potential to develop a carbon neutral campus was illuminated through the E-LAND pilot-site University of Târgoviște, Romania. The meeting further provided insights in community engagement and business model innovation. The video-recording can be assessed here in two parts: Business Model Innovation in Energy - Webinar (Part 1) Business Model Innovation in Energy - Webinar (Part 2)

EU-SYSFLEX

As part of the EU-SysFlex H2020 project, extensive studies encompassing both the technical and financial implications for the European power system with high RES-E penetrations are now completed (D2.4, D2.5). Development of these reports was one of the primary focuses at the General Assembly in Tallinn, Estonia at the end of 2019. Find recordings from these webinars on our website and don't miss the presentation and discussion of further interesting findings in relation to '*Analysis of market design and regulatory options for innovative system services*' at webinars in the following weeks.

The EU-SysFlex project organized an ambitious stakeholder workshop in Brussels, which was attended by key stakeholders and representatives from the European Parliament and European Commission. Further, nomination of one of the EU-SysFlex demonstrations for Global Power & Energy Elites of 2020 has underlined the project's significance. Find out more including EU-SysFlex blogs, public deliverables and general news and project information on the website.

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ETIP SNET

ETIP SNET R&I Implementation Plan 2021-2024 and new "Energy Stories" released!

ETIP SNET has released its new R&I Implementation Plan 2021-2024 detailing the €955 million euros investment needed to help manage Europe's Energy Transition. Additionally, in the latest series of ETIP SNET "Energy Stories" on successful energy transition technologies you can find out how transmission system operators can be facilitated in their energy forecasting (Advance Dispatiching & LoadForcast story), how distribution system operators will rely more and more on "prosumers" to manage energy distribution more efficiently (Integrid story), and how consumers can change their consumption patterns (Energise story) to reduce their energy bills and impact on the climate.

INTEGRID

InteGrid Demonstration Up and Running for its Last Mile

InteGrid demonstration scenarios are being successfully carried out!

In Sweden, target customers are adapting their energy consumption based on project tools drivers, from sustainability to economic or even distribution grid constraints motivations.

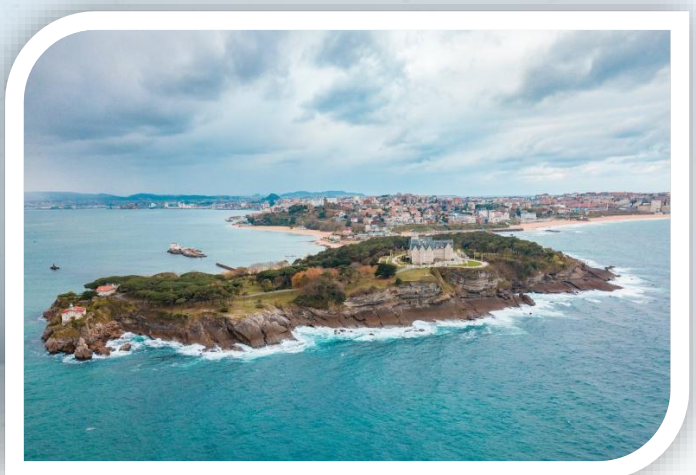
In Slovenia, the virtual power plant concept is demonstrated were flexibility from distribution grid MV customers is used for flexibility provision, for both grid operation or market purposes.
In Portugal, it was demonstrated that flexibility is a powerful resource for grid operation for both MV and LV. Grid-Market Hub is being demonstrated as a key enabler bridging distribution technical needs and customers' active participation.

Find out the Portuguese Demo Customer Experience - https://youtu.be/wWJ3cBbiZDQ

NESOI

The EU Islands Facility NESOI recently asked EU Islands to help in the assessment of their needs regarding Energy Transition. Over 35% of survey respondents claimed to be currently working on projects focused on renewable electricity production. A webinar presenting all survey results will be announced soon on www.nesoi.eu.

With the recent COVID-19 outbreak, islands face many new challenges such as those related to tourism. The NESOI team is committed to providing islands with the technical assistance they need to not only to address energy challenges but now also to support a swift deep repositioning of the islands' tourism offering towards holistically sustainable business models.



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INTERRFACE

Flexibility register & new market designs

Two new deliverables published by INTERRFACE

Setting the stage for a new IT architecture that will connect TSOs, DSOs and prosumers in an interoperable way – this was the purpose of two new deliverables published by project INTERRFACE recently. One of them was identifying the ancillary services expected to be used by the seven demos of the project, while in the other one the experts of the consortium drew up the possible new market designs for these services. In the latter INTERRFACE included a planned design for a **Flexibility Register**, which will be a key component of the core product of the project, the **IEGSA** platform.

OSMOSE

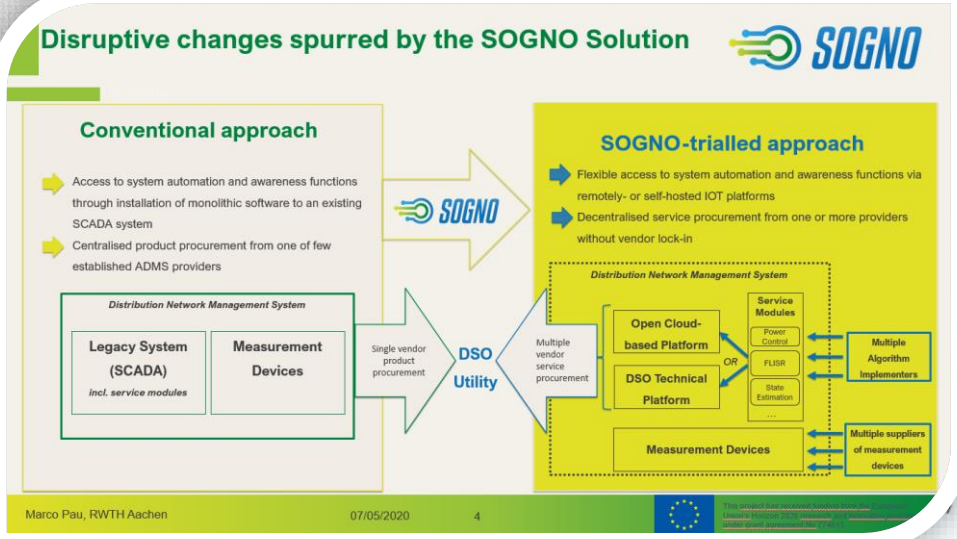
OSMOSE deals with the development of various flexibilities on the power system. The project has reached significant milestones on its demonstrators, among others:

- The demonstration of Grid forming by multi-services storage is now up and running in the EPFL campus on a 720kVA Li-Titan battery
- The high voltage battery developed by SAFT is ready for Factory Acceptance Tests
- Installation of DLR on TERNA's grid and equipment upgrade of industrial consumers are ongoing in South Italy
- The FlexEnergy market platform, to exchange electricity near real-time between Italy and Slovenia, is being tested into ELES' business environment.

Check out our latest Newsletter here for more info!

SOGNO

The second SOGNO Advisory Board meeting was organised as an online voice and video conference on 7th May 2020. In the call, the projects partners presented the SOGNO solutions for grid monitoring and stabilisation developed in the past twenty-eight months as well as exploitation plans and discussed them with the four Advisory Board members. The feedback given was very helpful and will be used to prepare the final review of the project in June as well as to improve exploitation of results after the end of the project.



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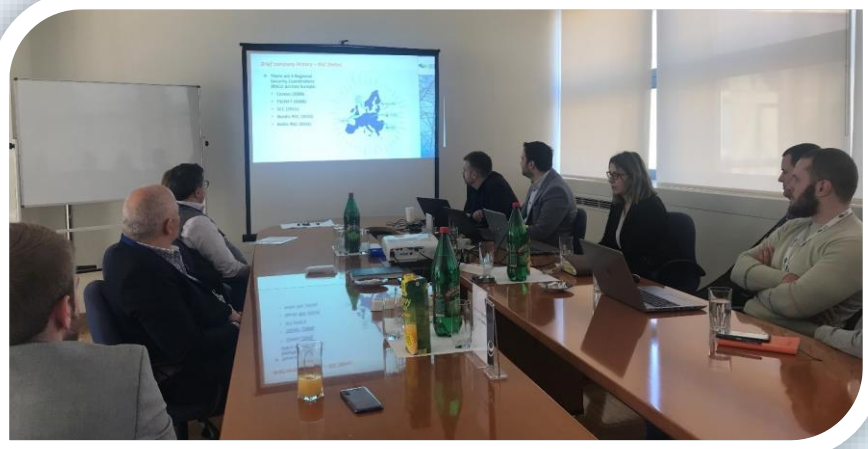


TRINITY

TRINITY

TRINITY project is going forward as expected. COVID-19 cannot stop the consortium in achieving its objectives! So far, the project has analysed the regulatory conditions and the infrastructure of its pilot sites. TRINITY has also defined the use cases to be tested in the demonstration phase. These activities, together with the definition of the whole TRINITY architecture that is currently taking place, will allow the product developers to design their products in the next stage of the project. Besides, TRINITY has launched already its website.

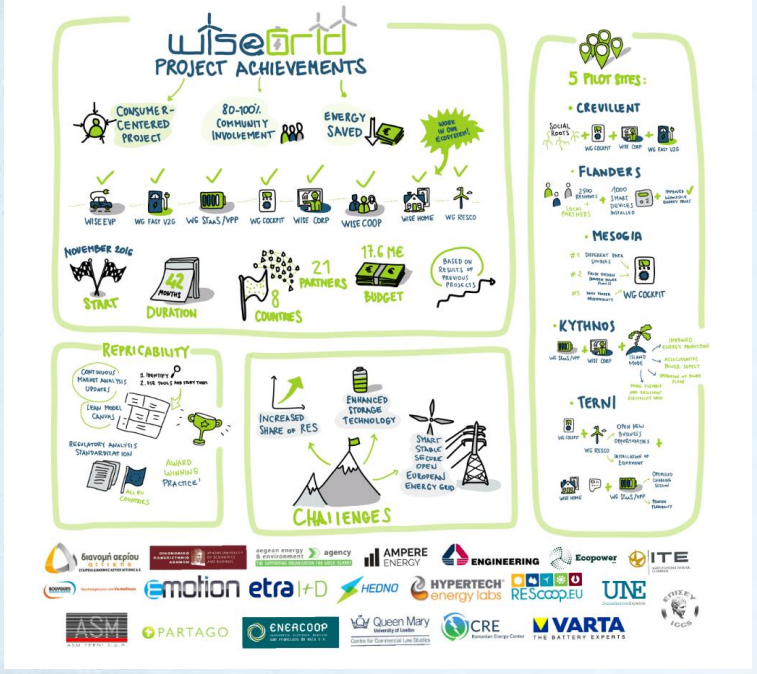
wiseGRID

WiseGRID

The WiseGRID project has finished with its final event in April celebrating its achievements with tool demonstrations, a panel of experts, and a graphic facilitator. Although we all logged on separately there were productive discussions with strong interaction.

The online conference reached 68 participants with many positive feedback messages along with giving us an average rating of 4.62/5.

If you missed the conference, then do not worry! We have the whole recording and all materials used uploaded onto the website. Check out the presentations, pilot site videos and plenty more.



MERLON

MERLON

The new pilot site for MERLON – Alicante, Spain, City of Crevillent

In addition to the Austrian pilot, the MERLON solutions will now be demonstrated in Spain. Two new local partners joined the consortium: **Enercoop Group**, an electric cooperative & **ETRA I+D**, a hi-tech unit within ETRA Group. This pilot will show how a Battery Energy Storage System can be integrated into an energy community under orchestration from a holistic energy management framework and combined with a local flexibility marketplace. Demand Response techniques will be integrated to modulate load curves and optimize distribution network operation during times of high penetration of variable renewable energy.

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ENERGY SHIELD

ENERGY SHELD

First Demonstrator Delivered

Our energy supply is threatened by continuous attacks from different entities that want to harm our society. Successful attacks can have disastrous consequences as perceived in Ukraine 2015. EnergyShield aims to prevent such events in Europe. We have delivered our first demonstrator, a threat modelling and attack simulation tool. The tool allows utilities to model their system environments and based on this they can simulate attacks on the model and identify chokepoints and weak spots that can be improved in order to increase the security of the system.

Follow us on https://energy-shield.eu/, Twitter and LinkedIn!

01 ADAPT available tools to support Electrical Power and Energy System (EPES) in fighting against cyber attacks

INTEGRATE 02 the cybersecurity tools in a solution with assessment, monitoring protection and learning capabilities

03 VALIDATE the practical value of the EnergyShield toolkit with EPES stakeholders

DEPLOY 04 best practices, guidelines, methodologies and encourage the adoption of EnergyShield results

X-FLEX

The progress of X-FLEX project is advancing on schedule. Iterative processes to define the lists of use cases and requirements have just finalised with successful outcomes, which involved the participation of all partners. The definition of the system architecture is currently ongoing, together with the first steps of the work packages that will develop the technical tools. In parallel, details from the 4 demonstration pilot sites (Bulgaria, Slovenia and Greece) are being gathered and analysed to start integrating their systems in the next months.

EUniversal UMEI

EUniversal is ON

The H2020 European project EUniversal, led by EDP Distribuição and with the participation of 18 international partners, kicked off on February 10th. in Lisbon.

With expected duration of 42 months and a global budget of 9.8 million euros, the project will develop and implement the innovative concept of a Universal and Interoperable Interface (UMEI) to articulate the electrical system's operating needs with the offers in the flexibility market, clearing the way for the definition of solutions that can be used throughout Europe.

Follow us on social media and don't miss out project updates https://linktr.ee/EUniversal

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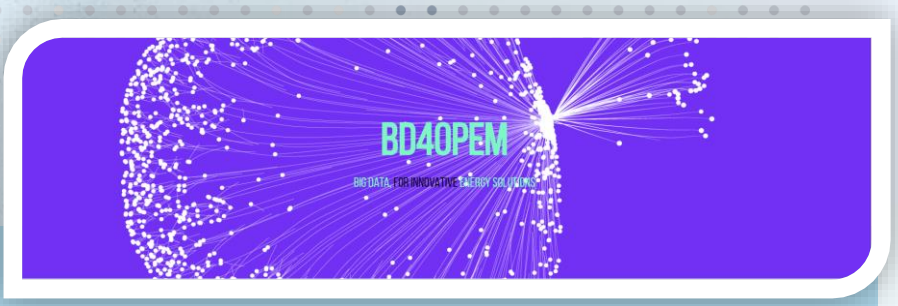
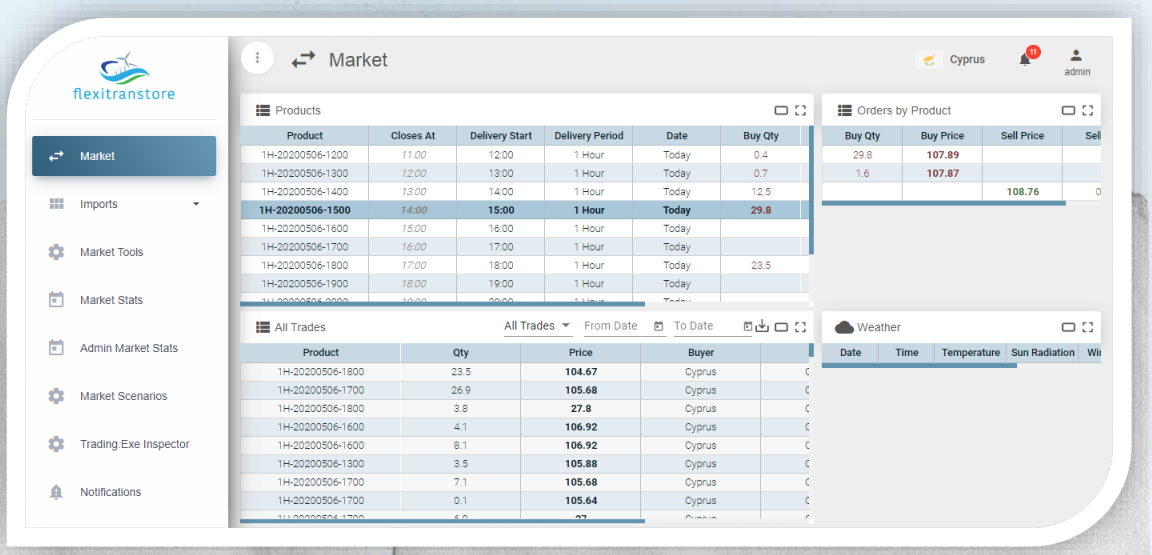


BD4OPEM

BD4OPEM

Big Data for OPen innovation Energy Marketplace

Large amounts of data are being generated in the different power systems stages and they are often underused. The application of artificial intelligence (AI) techniques can extract value from this data and support the decision-making process for operating electrical grids. Their transformation into smart grids is being promoted by the integration of renewable generation, the use of electric vehicles and energy storage systems, which are enabling the decarbonisation of the power the system, but also imply a more complex operation. AI can help to deal with this challenge. BD4OPEM is developing an Analytic toolbox that connects data providers and service providers that offer solutions based on AI for distribution systems monitoring, operation, maintenance and planning.



flexitranstore

FLEXITRANSTORE

FLEXITRANSTORE – the first Flexibility trading platform for Southeast Europe was presented to over 70 participants at the end of April. As a Bridge project you are invited to participate in our wholesale market demonstration, any period between **May 2020 and March 2021**. The demonstration runs a fictive intraday market in Bulgaria and Cyprus. RES producers can test how the cooperation of day-ahead and intraday markets better utilizes weather forecast data. Traders and aggregators decrease balancing energy needs using quarter-hourly products. Market operators can see how new order types improve liquidity and how they affect social welfare. To join, please drop an email to **thong.vuvan@emaxgroup.eu** or **hartmann.balint@vet.bme.hu.**

IElectrix German demonstration involves key stakeholders in its project

IElectrix

Friedland, Germany. GECO-Global and E.dis conducted focus groups to collect insights into the local perspective of the green energy transition. Prosumers, municipality executives, RES entrepreneurs, technology providers and scientific institutions took part in the exchanges thereby providing a wide range of viewpoints.

As a result of this work, a multi-layered engagement strategy has been detailed, including a working plan with the municipality on a "Green Friedland" narrative, a task force to develop optional regulatory reforms supportive of local RES, and a communication campaign to inform the local community about the iElectrix initiatives.

Read more: https://ielectrix-h2020.eu/

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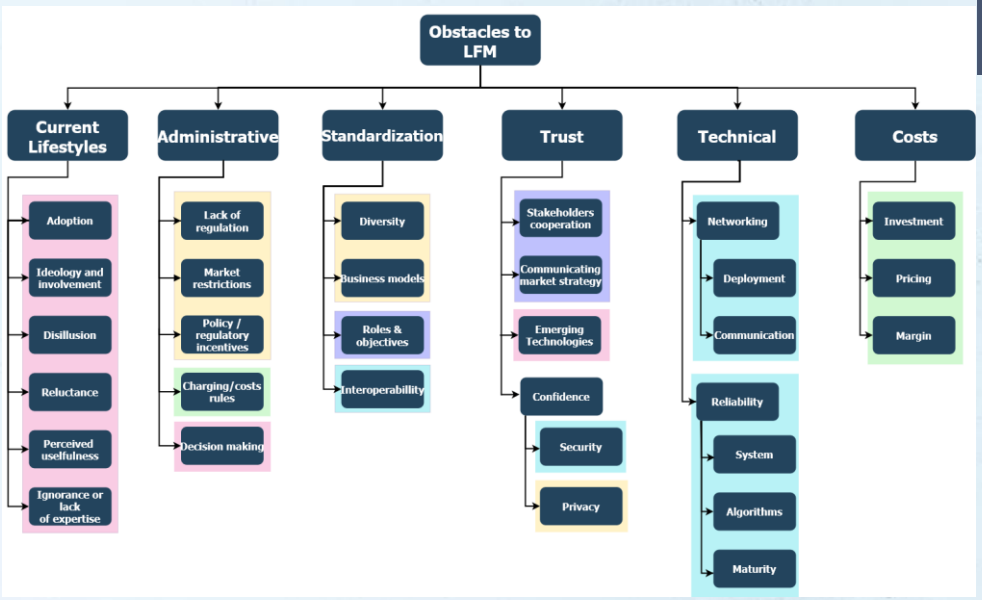
FARCROSS

FARCROSS

FARCROSS aims to demonstrate **integrated hardware** and **software solutions** that will promote the **cross-border electricity flows and cooperation**. The project officially started on 1st October 2019 and the physical kick-off meeting was held in Athens on 23rd and 24th October 2019. APG hosted the WP5 meeting in Vienna on January 20th 2020, reviewing the objectives and preliminary action points for the sensor-based grid monitoring demonstrations in Central Europe. The second plenary meeting was completed successfully on March 26th 2020 through teleconference (due to COVID-19 restrictions), where all FARCROSS partners presented progress on the preparatory steps required for the demonstrations.



PARITY

PARITY

PARITY will go beyond the traditional "top-down" grid management practices by delivering a Local Flexibility Market (LFM) platform of heterogeneous DER through IoT and blockchain. However, there are barriers that hinder the proliferation of such markets. After surveying the body of knowledge, interviewing experts and consulting end-users, we identified barriers classified into the following categories: (1) fit to current lifestyles, (2) administrative, (3) standardization, (4) trust, (5) technical, and (6) costs, where each category has sub-categories. To link and prioritize the barriers against actors of new energy markets, a Delphi method was conducted. More information is available in the corresponding report.

PHOENIX

PHOENIX

Following a successful kick off meeting in September 2019, the PHOENIX consortium organized technical meetings and a plenary meeting at Athens to progress on threat modelling, incidents mitigation, federated/ privacy preserving ML and architecture specification. PHOENIX was presented at multiple noteworthy EU events (European Utility Week 2019, Mediterranean Security Event 2019, Secure Societies "Project to Policy" Kick-Off Seminar) and covered in several press releases. A virtual conference in synergy with relevant EU-funded projects was organized successfully with more than 120 participants. The consortium currently works towards the development of a secure and persistent communications layer and Situation Awareness and Incidents Mitigation co-simulator, as well as pilots preparation.

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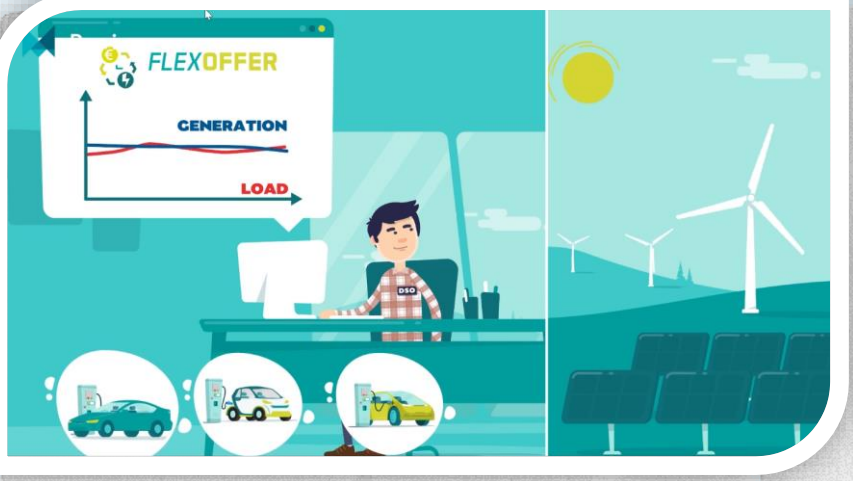
FEVER

FEVER

Orchestrating flexibilities to enable the energy transition is the challenge of the recently started project FEVER. The 17 project partners aim at implementing and demonstrating solutions that leverage the potential of flexibility in generation, consumption and storage of electricity for optimal management of distribution grids. Deploying artificial intelligence and ledger technologies, peer-to-peer trading of flexible energies and a toolbox for advanced grid monitoring and control, FEVER empowers distribution system operators to better manage their grids. Visit www.fever-h2020.eu and subscribe to the mailing list to get connected!



FlexOffer bridges H2020 projects and energy domains

FlexOffer is a universal format to describe and trade energy flexibilities. It has been deployed in three trial sites by the GOFLEX project. Projects FEVER, EdgeFLEX and GIFT will further develop and use FlexOffer in cooperation of Distribution System Operators, Citizen and Renewable Energy Communities and Business Responsible Parties. The goal is to standardize management and trading of flexibilities in a multi-level electricity market. Harmonising the energy system is a determined goal of the BRIDGE initiative and an enabler for the Green Deal.

More information including edutainment videos can be found at www.flexoffer-community.eu.

edgeFLEX

The vision of the recently started project edgeFLEX is to further develop the concept of Virtual Power Plants (VPPs) to manage a wider range of generation and storage assets in a new way. By offering a set of fast and dynamic service-to-grid operations, the emergence of a new market for ancillary services will be enabled. The ten project partners propose a new architecture of VPPs with communications, supported by 5G, corresponding to multiple layers of dynamics, paving the way for a fully renewable energy system. With the expansion of the VPP concept to the idea of local energy communities, technical solutions are linked to societal expectations. Visit www.edgeflex-h2020.eu to stay tuned!

edgeFLEX

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Renaissance

RENAISSANCE

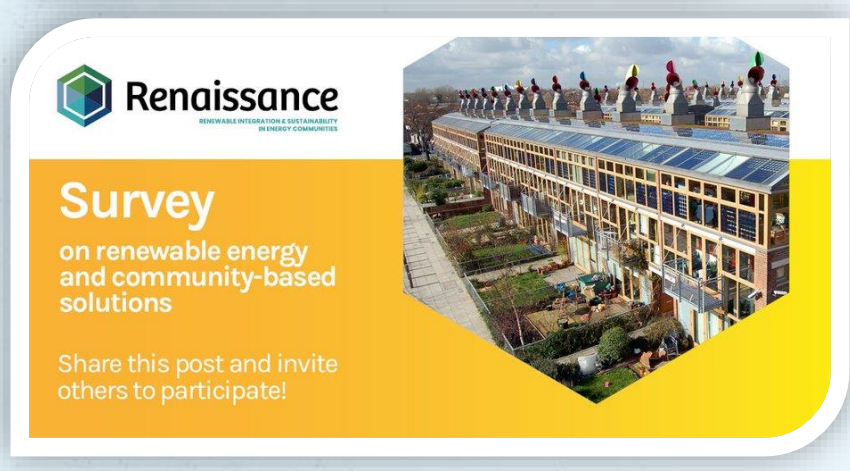
First insights about European citizens' acceptance of community-based solutions for renewable energy production

The RENAISSANCE project survey on renewable energy and community-based solutions with the goal of identifying the factors that influence the acceptance of local renewable energy production technologies was launched in April 2020. To date the survey has been distributed in six different languages throughout Europe and the most represented countries were Italy (30%) and Spain (30%), followed by sparse number of respondents from eight other European countries and the UK. From the initial dataset preliminary insights were derived and recently published on the RENAISSANCE project official website at: https://www.renaissance-h2020.eu.

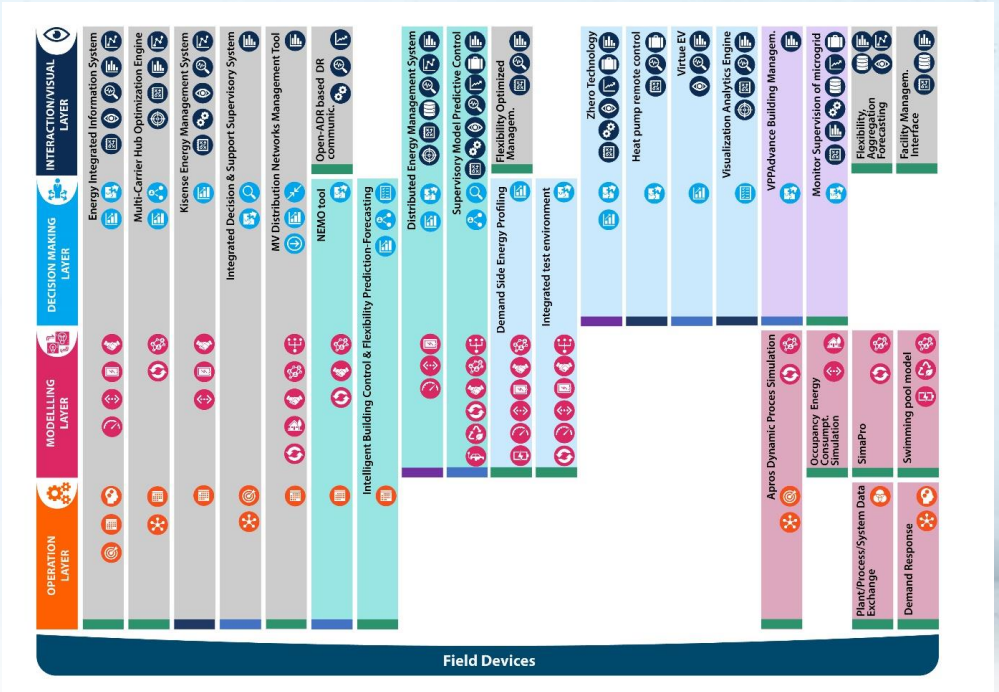
A more comprehensive analysis of the results will be included in a final report that will be available on the official RENAISSANCE project website by August 2020.

Read more about the first results and participate to the survey, open until mid-June 2020.

Follow us also on: LINKEDIN & TWITTER



inteGRIDy



inteGRIDy

inteGRIDy framework

inteGRIDy aims at integrating cutting-edge technologies, solutions and mechanisms in a scalable cross-functional platform while connecting existing energy networks with diverse stakeholders with enhanced observability of both generation and consumption profiles. To achieve this goal, inteGRIDy framework offers twenty-seven (27) interoperable tools working at different layers (field, model, operation, decision and visualization) and addressing a specific subset of macro-functionalities per layer in at least one of ten inteGRIDy demo sites. On the top, testing mechanisms ensure the seamless alignment of the tools with the inteGRIDy framework and the proper deployment in the pilots.

www.integridy.eu Twitter LinkedIn

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Platone

PLATONE

Platone was assigned the lead of the new BRIDGE Regulation Action on Harmonised Electricity Market Role Model (HERM). Started in May, the goal of this action is to share a common understanding of an electricity market model according to the new provisions of the Clean energy for all Europeans package between all related EU projects, the BRIDGE initiative, the system operator's associations, citizen energy communities and the EU institutional bodies. The Platone consortium feels honoured to contribute to the harmonisation of the European energy sector. All BRIDGE projects will be called for contribution with the help of the support team of the BRIDGE Working Group on Regulation.

interconnect

INTERCONNECT

Humanizing Digital Technologies through design thinking

The InterConnect project is developing solutions for smart homes, smart building and smart grids based on Internet of Things architectures which will ensure the interoperability between equipment and systems while preserving the privacy and cybersecurity of data of different users.

The project is now in its final phase of defining the energy and non-energy services for the seven pilots that will be installed across Europe – in Belgium, France, Germany, Greece, Italy, Portugal, and The Netherlands. More than 50 people have participated in the Factories organised by the project, during the months of March, April, and May, to allow the partners to think and structure service ideas to be developed, following a design thinking approach to foster creativity and innovation in the project. By the end of June, the project will be able to present several results in human-centric services and business models definition.

The InterConnect project, with a 36-million-euro budget, gathers 50 partner institutions from 11 European countries.

GIFT interconnect OSMOSE ETIP SNET Renaissance Compile
MUSE GRIDS PHOENIX sm;e edgeFLEX EU-SysFlex Platone crossbow
E-LAND ENERGY SHIELD FARCROSS X-FLEX
INTERRFACE TRINITY coordiNET BD4OPEM NESOI insulae
IElectrix
wiseGRID STORY REACT SOGNO flexitranstore PARITY inteGRIDy
SDN-µSense MERLON integrid FEVER EUniversal UMEI CRYOHUB PROMOTioN