(2) Full Circle Around the Sun: A Year of Making an Impact

WeForming 494 followers

As we celebrate the first year of the WeForming project, we are proud to highlight the transformative potential of Intelligent Grid-Forming Buildings (iGFBs) and our progress in implementing them to enhance energy efficiency and pave the way for smarter, more sustainable buildings!

💶 **Business Models:**

Development of potential business models for broader adoption of intelligent, efficient and grid-interactive buildings in relevant sectors, namely One Stop Shop, Product as a Service, Innovative Financial Schemes, and New revenue models. These efforts emphasize the WeForming project's role in enabling the development of smart cities where buildings and building users play a pivotal role.

💡 **Buildings and Energy Data Space:**

WeForming has developed a prototype for Energy and Building Data Space, providing a dedicated Data Space Connector that facilitates seamless, secured, and trusted data sharing in a user-friendly manner. A Service Catalogue is being developed by the project to support data and service interoperability.

📜 **Technological Enablers:**

A prototype of WeForming software and hardware technological enablers, namely AI/ML services to aid decision-making of versatile stakeholders and Digital Twin Services, as well as a prototype of the Real-Time Controller and the Power Processing Hub are being developed.

🗺️ **Demos Updates:**

🇱🇺 **Luxembourg**: Notable progress with the integration of W-IBRA (WeForming Interoperable Buildings Reference Architecture) Data Space strategies, advancements in forecasting, and the development of Digital Twin tools.

🇵🇹 **Portugal**: A decade's worth of siloed energy data is being unleashed to fuel cutting-edge AI-driven energy management tools with the goal of transforming Palácio do Gelo shopping mall into an Intelligent Grid-Forming Building.

🇭🇷 **Croatia**: A lighthouse group of early adopters is actively testing WeForming's initial developments for improved self-sufficiency.

🇧🇪 **Belgium**: Carnot battery coupled with seasonal thermal energy storage is in progress. Surplus summer heat and electricity will be stored underground for grid reliability and sustainability.

🇪🇸 **Spain**: Solar photovoltaic installations are complete, officially launching the energy community. Local workshops are in progress, and by 2025, the first energy bills will be fully powered by green energy sources.

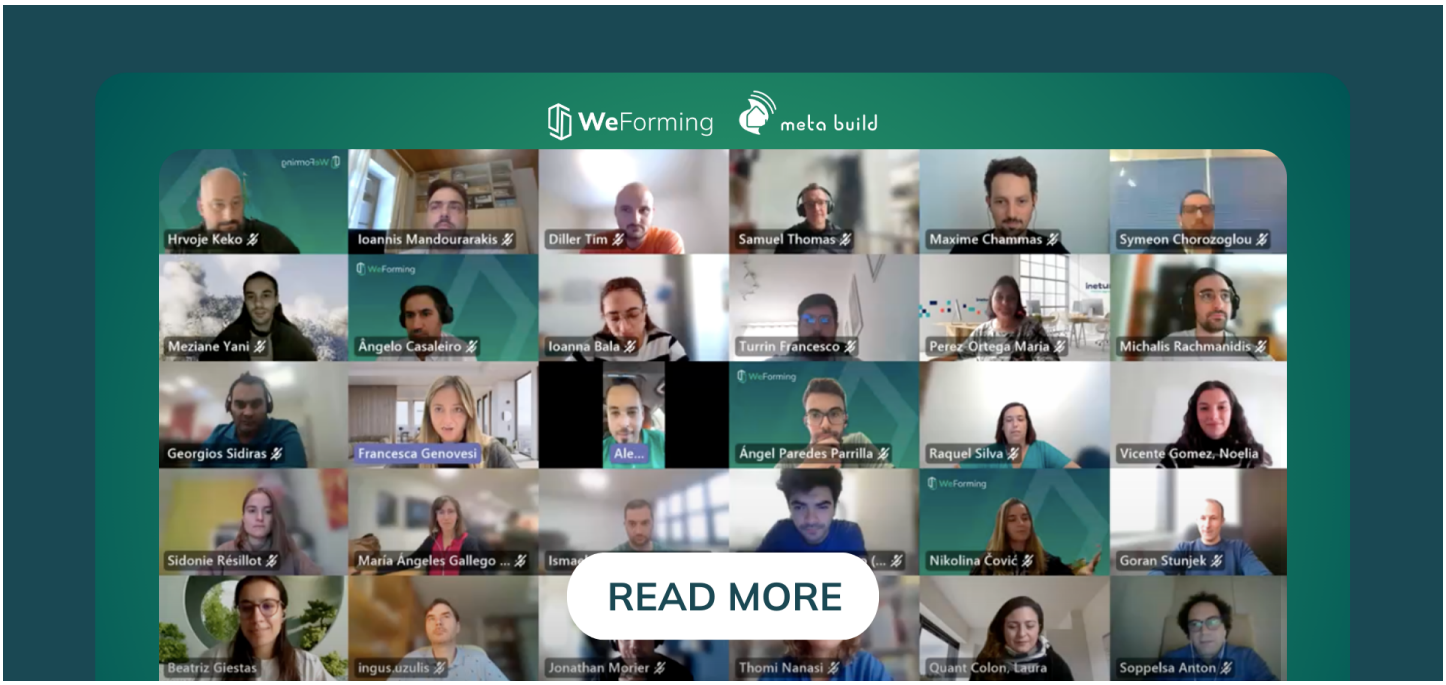
🇩🇪 **Germany**: Achieved bidirectional charging for electric vehicles (EVs), enabling two-way energy flow. EVs can

now act as mobile energy storage units, enhancing grid flexibility and resilience.

PROJECT NEWS

Joint workshop with METABUILD

In October, WeForming & META BUILD organized an interactive co-creation workshop, with the aim of advancing the EU Green Deal's vision for energy-efficient, decarbonized buildings. This dynamic session brought together both consortiums to share best practices on engaging stakeholders and optimizing building energy efficiency with cutting-edge approaches.



2nd Plenary Meeting in Málaga

One year into the project, the WeForming consortium gathered in Málaga for its second plenary meeting. The agenda featured updates on demo site achievements, co-creation workshops, and strategies to transform buildings into active energy hubs, optimizing energy use and advancing grid flexibility through innovative business models and interoperability standards. Catch a glimpse of the main highlights in our recap video.

WeForming publications

Our partner FER - Faculty of Electrical Engineering and Computing, University of Zagreb research within the WeForming project has led to the publication of two scientific papers in renowned journals in the energy field.

Advancing Power System Resilience

"Impact of phase selection on accuracy and scalability in calculating distributed energy resources hosting capacity" published in Electric Power Systems Research. Co-authored by Nikolina Čović and Hrvoje Pandžić from FER, and Jochen L. Cremer from TU Delft, this research highlights how smart energy

solutions can optimize grid flexibility and resilience, driving Europe's energy transition. 👉 Read the full paper!

📰 **Exploring the Future of Energy Grids**

"Learning a reward function for user-preferred appliance scheduling" published in Sustainable Energy, Grids, and Networks. Co-authored by Tomislav Antić and Tomislav Capuder from FER, and Andrew Keane from University College Dublin, the work delves into innovative strategies for grid integration and offers key insights to advance smart energy solutions. 👉 Read the full paper!





ON THE ROAD

📍🇮🇹 **ENLIT | 22-24 October**

WeForming joined forces with some synergy projects - i-STENTORE, HEDGE-IoT, AGISTIN, EVELIXIA, META BUILD, and ENERGATE - to exhibit at ENLIT, sparking meaningful conversations about scalable, energy-smart solutions. WeForming's coordinator, Konstantinos Kotsalos from EUROPEAN DYNAMICS, was there and participated in a panel discussion on how smart energy infrastructure can optimize energy management, cut costs, boost comfort, and reduce environmental impact.





📍🇧🇬 **WEBIT | 22-23 October**

WeForming joined WEBIT 2024, sharing a booth with other EU-funded sustainability and technology projects from our partner F6S Innovation. The team showcased how we are revolutionizing energy management with iGFBs for a smarter and more sustainable energy future, in line with the event's focus on sustainability and AI-driven innovation.

📍🇧🇪 **Built4People Clustering Meeting | 19 November**

Our colleague Ângelo Casaleiro from R&D Nester represented WeForming at the Built4People Clustering Meeting, joining like-minded projects shaping the future of sustainable buildings. The event highlighted collaboration and innovation in driving EU Green Deal goals, focusing on energy-efficient, occupant-centric designs.

💬 POWER STORIES

🔰 **Project insights**

Duncan Gibb, Senior Advisor at RAP, explores how outdated regulations are stalling Europe's journey to net-zero buildings. From EU directives to national policies, he highlights key roadblocks and solutions for aligning the energy sector with sustainability goals. Dive into his full analysis 🔽



Mojtaba Kamarlouei, CTO at Builtrix, reveals how digitalizing building energy data can revolutionize energy efficiency. By enhancing data interoperability, WeForming's iGFBs are cutting costs, improving grid stability, and

paving the way for smarter energy management. Discover the power of digital transformation 🔁



🔰 **Partners interviews**

Konstantinos Kotsalos from EUROPEAN DYNAMICS unveils WeForming's holistic approach, focusing on building operations, interoperability, new business models, and smart city integration. Learn more about the project and how it is supporting the EU's Green Deal agenda and shaping the future of intelligent energy systems ⏯

Johannes Galenzowski from KIT breaks down the implementation roadmap and technologies driving our demos and explains how his team supports local demo leaders. Uncover the behind-the-scenes of our real-life demonstrators across Europe ⏯

Mateo Kirinčić from Smart Island Krk shares how WeForming empowers local communities, like Krk island, to achieve energy independence. From engaging early adopters to implementing innovative solutions, discover the story of the Croatian demo ⏯

MESSAGE BOARD

🎯 **Sustainable Energy Hub**

The Sustainable Energy Hub, powered by our partner F6S Innovation, is a vibrant space for co-creation and knowledge sharing aimed at driving Europe's energy transition through collaboration. WeForming is an active member and proud ambassador, alongside other EU-funded projects such as i-STENTORE, TWAIN, EXIGENCE, HEDGE-IoT, DigiWind, SNUG, and INFERNO. **Join us to accelerate innovation across the energy ecosystem!** 🤝





SYNERGY SPOTLIGHT

Smart Energy Cluster

WeForming has recently joined the Smart Energy Cluster, a network that brings together over 20 LIFE Programme and Horizon Europe projects to collectively amplify their outcomes, with the goal of making the smart energy transition a reality. The Smart Energy Cluster drives innovation in energy by fostering collaboration, sharing knowledge, and coordinating efforts to maximize impact and visibility. Find out more about the cluster and all its member projects.



ENERGATE

ENERGATE's recently launched Energy Efficiency Marketplace is an all-in-one marketplace designed to revolutionize energy efficiency in buildings.

Whether you are a Building Owner, Implementor, Financier, or Public Body, this platform connects you with the right partners and simplifies your path to sustainable upgrades. Streamline your projects with standardized processes, smart analytics, and data-driven insights - explore the ENERGATE Energy Efficiency Marketplace and achieve your energy goals with ease.



EXIGENCE

The Smart Networks and Services Joint Undertaking EXIGENCE project focuses on reducing energy consumption and carbon emissions in ICT through an end-to-end strategy spanning cloud providers, networks, and end-user devices.

By developing metrics and data-sharing methods, it enables energy- and carbon-aware management, offering precise insights for users and service providers across the entire network. These advancements will not only optimize ICT service delivery but also establish a foundation for integrating sustainable practices into next-generation mobile systems like 6G.



The REEFLEX project

REEFLEX is an EU Horizon project designed to create opportunities for innovative energy services from SMEs and start-ups, while empowering energy consumers to actively participate in demand-side flexibility markets.

By integrating AI, automation, and distributed ledger technologies, REEFLEX aims to enhance transparency, reduce market entry barriers, and foster trust in energy transactions. This approach will enable consumers to benefit from personalized, data-driven services, opening new revenue streams and supporting smart, human-centric energy management.



InEExS

The core concept of the LIFE project InEExS is the deployment of integrated energy services across sectors and carriers, and the tokenization of energy saving data in a public blockchain to facilitate cooperation among market segments and actors.

InEExS recently launched a Capacity Building video series to highlight its five innovative business models and recruit replicators to drive the adoption of sustainable technologies. Designed for entrepreneurs, small business owners, and industry professionals, this series offers tools and insights to embrace smart solutions.



SAVE THE DATE

🗓️ 5-7 March 2025: **Smart Sustainable Cities** 🌍 Online

🗓️ 4-7 March 2025: **World Sustainable Energy Days** 🇦🇹 Wels

🗓️ 12-13 March 2025: **European Industrial Energy Days** 🇳🇱 Amsterdam

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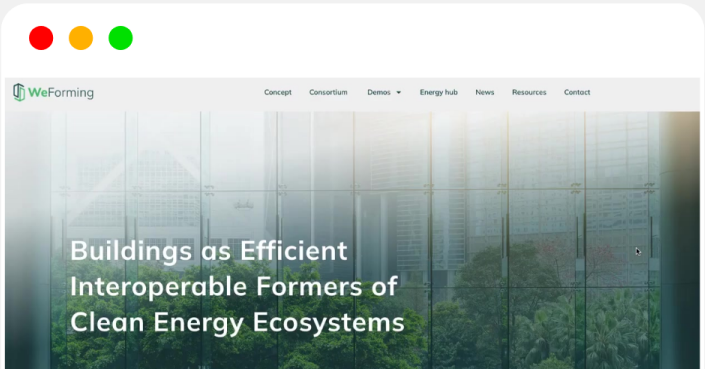
🗓️ 3-4 June 2025: **Lisbon Energy Summit** 🇵🇹 Lisbon

🗓️ 10-12 June 2025: **European Sustainable Energy Week** 🇧🇪 Brussels & 🌍 Online

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Visit our website at

weforming.eu



💻 Check out our website and learn more about WeForming ⤴