Welcome to our second newsletter!

As summer unfolds, we'd like to share an update on what we've been working on over the past 18 months. This newsletter provides a clear overview — from key milestones and deliverables to notable events, there's plenty to explore.

You'll also have the opportunity to get to know our project partners a bit better — through our always-enjoyable coffee break interviews, where we share personal insights and lighter conversations from the people behind the project.

We've made significant progress across several areas, and this edition highlights the collaboration, innovation, and achievements that have shaped our journey so far.

Thank you to our project partners and our stakeholders for their continued support!

Best regards,

XL-CONNECT team

Results

Deliverables

The latest project results from XL-CONNECT related to user needs and subcomponent models for advanced charging have recently been submitted and are now available on our website.

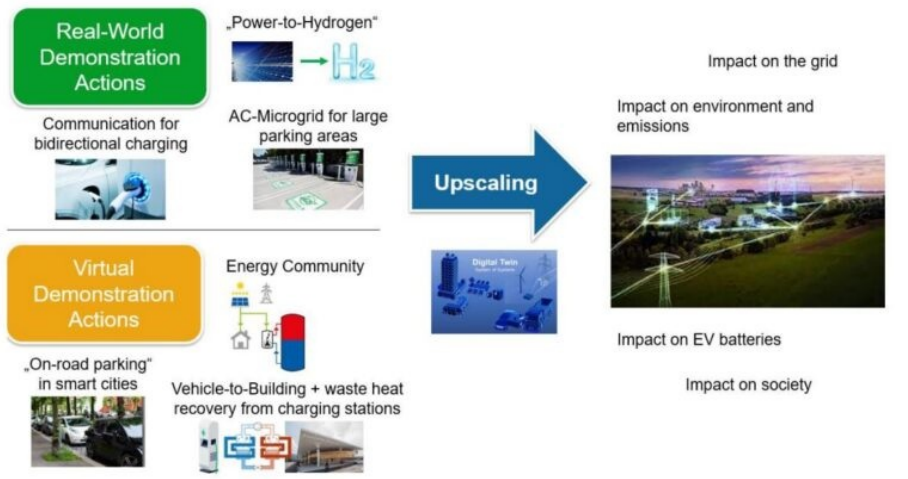
Deliverable D2.4 focuses on developing innovative business models that connect user needs with the opportunities offered by Vehicle-to-Grid (V2G) technology. As electric vehicle adoption continues to grow across Europe, XL-CONNECT addresses a key challenge: combining user-centric mobility services with cost-efficient energy system integration.

Based on surveys, partner interviews, international V2X business model analysis, and user insights, the team co-developed a shared data platform. Created using the Business Model Canvas and in collaboration with industry partners, this platform enables real-time data exchange between car manufacturers and energy providers. By sharing crucial information—such as battery status, charging schedules, and grid conditions—the platform helps overcome V2G barriers, unlocks new revenue streams, and enhances the user experience through features like smart charging and energy price forecasting.

Deliverable D4.2 represents a major step forward in simulating intelligent EV charging scenarios. The report details the development and integration of high-fidelity subcomponent models—covering electric vehicles, batteries, charging infrastructure, user behavior, and grid interaction—within the cloud-based xMOD simulation platform.

These models enable scalable, efficient, and smart charging strategies that support V2X functionalities. Key highlights include battery models incorporating aging and HVAC effects, agent-based user behavior simulations, infrastructure models with PV and battery storage systems, and low-voltage grid simulations to assess the impact of EV and solar integration on grid performance and planning.

Despite challenges such as data privacy concerns and regulatory uncertainty, the developed models provide a solid foundation for future smart charging solutions and energy flexibility use cases across Europe.

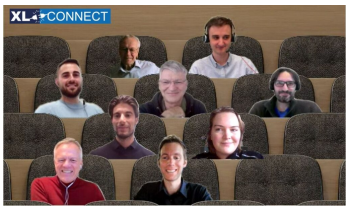


Key results achieved in Work Package 5: Virtual and real demonstrations
In March (2025), three critical deliverables were released as part of the XL-Connect project, marking a major step forward in integrating electric vehicles with modern energy grids. These documents outline strategic planning, simulation efforts, and real-world demonstrations aimed at optimizing the flow of energy between the grid and electric vehicles—both for charging and feeding energy back into the grid.

D5.1: Planning of Virtual and Real-World Demonstration actions
D5.2: Virtual Demonstration Actions
D5.3: Real-World Demonstration Actions

You can find an overview of all our deliverables here.

News



The XL-Connect project hosted its second Stakeholder Meeting with its esteemed Stakeholder Board. The focus of the meeting was on the planned and ongoing demonstrations within the project. Lorenzo Berzi, the leader of Work Package 5 (virtual and real demonstrations) from the University of Florence, presented the current status and upcoming activities related to the project's demonstrations. Topics discussed included:

- The Virtual Demonstration in Aachen, Germany
- Grid stability and Equipment Testing
- Virtual Powerplant and Aggregation
- Testing Infrastructure and Future Vehicle Compatibility

We would like to thank our Stakeholder Board for engaging in the stimulating discussion and providing valuable feedback!

Upcoming event

Humanist Virtual Centre of Excellence Conference 2025
We are pleased to announce that the coordinator **Virtual Vehicle Research GmbH**, will be

attending and presenting **XL-Connect** at the upcoming *Humanist Virtual Centre of Excellence Conference 2025*, which will take place from **August 27–29, 2025**, in **Chemnitz, Germany**. This event brings together experts in human-computer interaction, digital innovation, and energy systems to discuss cutting-edge advancements in the field.

Virtual Vehicle will be presenting **"Charged for Change? What Does It Take to Make Bidirectional Charging Attractive?"** The presentation will explore the potential of bidirectional electric vehicle (EV) charging technology and delve into the necessary conditions to make it an appealing and viable option for consumers, industry stakeholders, and policymakers.
The event promises to be a valuable platform for networking and knowledge exchange, and we look forward to sharing insights with fellow researchers and industry leaders.

For more details on the conference and to register, please visit the official event page: Humanist VCE Conference 2025 – Chemnitz.

You can also attend the event. Register here.

Interviews with XL-CONNECT partners

Interview with Marc Barrera from Circontrol

Marc Barrera is an electrical engineer who has been working in the R&D department for more than five years —two years in automotive electronics development and currently, three years in the development of electric charging stations.

What was your original motivation to become a researcher?
"From my point of view, working in a research project is a great environment to apply my engineering skills and also this kind of projects always involves new technical challenges that requires a lot of creativity to find the best solution."

You can find the full interview here.

Interview with Joan Carles Artigau from IDIADA

Joan Carles Artigau's background is in Electronic Engineering at the University of Tarragona in Spain. He is the Innovation and Heavy-Duty Project Manager within the EV Charging department at IDIADA Automotive Technology. He has more than 5 years of experience in the automotive field, focusing his expertise on interoperability, conformance, and certification of light and heavy-duty charging solutions.

What was your original motivation to become a researcher/project manager?
"Being researcher of innovation projects and specially when your efforts contribute to the evolution of your company is a good opportunity to be motivated and be part of a bigger challenge by developing the current and future charging technologies."

You can find the full interview here.

Interview with Alexandra Ciuriuc from EURECAT

Alexandra Ciuriuc is the technical responsible for the XL-Connect project in EURECAT and the Work Package 6 leader – "Evaluation of Operational, Social and Economic Impacts". She is a researcher in the Waste, Energy and Environmental Impact Unit from Sustainability area of Eurecat – Technology Centre of Catalonia. She received her PhD degree in Electrical Engineering from University Politechnica of Bucharest.

What was your original motivation to become a researcher/project manager?
"I always knew I wanted to become a researcher, since I was a child. I liked the idea of always

learning new things."

You can find the full interview here.

Interview with Eleonora Innocenti from UNIFI

Eleonora Innocenti is a PhD candidate at the University of Florence (UNIFI) and a member of the MOVING (Mobility and Vehicle Innovation Group) research group. She holds both a bachelor's and a master's degree in mechanical engineering from the University of Florence. Currently, she is undertaking a research period abroad at EURECAT, a partner organization in the XL-Connect project.

What was your original motivation to become a researcher?
"My motivation to become a researcher was driven by the opportunity to actively contribute to a European project. Collaborating on international research allows me to take on innovative challenges and participate in advancements in sustainable mobility."

You can find the full interview here.

Partners

LinkedIn Website

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