STEPS - STORAGE OF ENERGY & POWER SYSTEMS IN NWE

"STEPS has been funded by the European Regional Development Fund (ERDF)"
The total budget received from Interreg Nort-West Europe(2020-2023).
3.04 million of ERDF
Total project budget: 5.06 million

In STEPS, business support and knowledge partners from IE, NL, BE, FR and UK will strengthen the competitiveness of NEW innovative storage providers by using a user-centric, demand-driven approach to bring products closer to market through tailored testing.

Specific activities include:

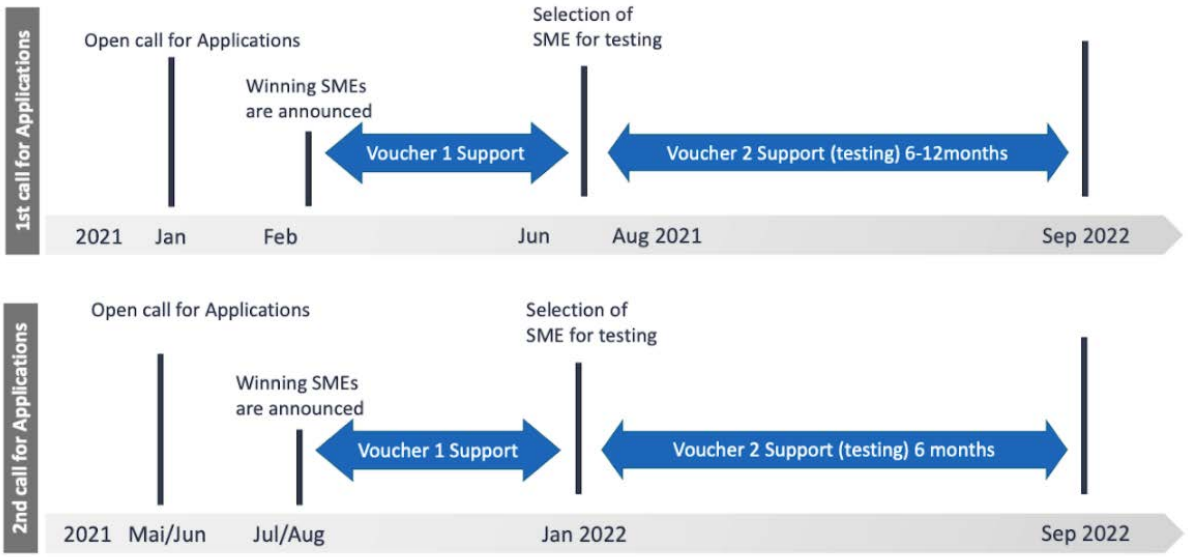
1) Advising >200 e-storage local SMEs on entering new markets in NWE

2) Create market pull effects in NWE for new e-storage solutions by engaging with potential end-users needs and increase awareness of solution providers

3) Implementing a Support Programm that connects end-users with 20 providers of new e storage solutions to increase their technological readiness level (TRL5/6 to 7) through real-life testing.

Innovative NWE storage products are currently stuck at TRL5/6 and face significant barriers, ranging from fragmented regulations & funding sources, limited testing abilities and unawareness of final consumers.

The Business Support Programme in this project includes **two successive vouchers:**



Role of The University of Twente in STEPS

The university of Twente as a leading knowledge provider in the field of electrical energy storage and system integration has a role of Dutch Knowledge partner in this project. The main activities of the university of Twente in STEPS project have been illustrated in the below picture.

Participating PE Members

Prof.dr. J.A. (Braham) Ferreira, full professor, chair | Power Electronics and Electromagnetic Compatibility (PE) (utwente.nl)

Dr. J. (Jelena) Popovic, associate professor | Personal information | Power Electronics and Electromagnetic Compatibility (PE) (utwente.nl)

S. (Seyedreza) Azizighalehsari, M.Sc. | Personal information | Power Electronics and Electromagnetic Compatibility (PE) (utwente.nl)

Project Partner Organizations:

- Flux50
- National University of Ireland Galway
- Provinciale ontwikkelingsmaatschappij Oost-Vlaanderen
- Universiteit Twente
- Universiteit Gent
- House of Energy e.V.
- 3 Counties Energy Agency (3cea)
- Cambridge Cleantech
- The Faraday Institution
- Galway Energy Co-operative

https://youtu.be/-wm4a9m9K1U

STEPS Symposium Design for Safety in Battery Systems hosted on 12-03-2021

The STEPS Design for Safety in Battery Systems Symposium addressed the latest and most important battery safety developments around the world. Hosted by the University of Twente, the event stressed that safety is key, especially in battery design.

With more and more people turning to renewable energy, the urgency to develop batteries is high and there is no time for the technology, "to prove itself and mature," said **Professor Braham Ferreira** during the Symposium. This high pressure to develop has consequences for safety. As **Deepak Pratap Singh** stated, the pressure to develop quickly pushes for scientific breakthroughs that do not align with reality. Hence, as batteries develop at a fast pace, the requirements for design for safety in a battery system must too.

In her presentation, **Rianne 't Hoen** described how every energy storage system contains high energy densities. When this energy is released uncontrolled, it poses a clear risk. It is crucial to research the hazards of different battery systems and be aware of their hazardous elements such as the energy sources, the chemical sources, the materials, and the environment. Fire brigades in particular should be informed on the different hazardous elements within various battery systems so they can react accordingly in an emergency. **Folkert van der Ploeg**, Fire officer Twente Safety Campus, explained: the fires caused by batteries are different to 'normal fires' and mostly unknown to fire fighters. Nearly all speakers highlighted that the development of EU legislation and safety standards is fundamental to designing safe battery systems. As discussed during the Symposium, there is not one key solution to creating safe battery systems. To improve the safety of our battery systems we need to develop the technology, standards, and our knowledge about the systems components and the system as a whole.

The Symposium expanded our guests' knowledge on designing for safety in battery systems, working to make the fast-growing field of energy storage safer. The STEPS programme explores the safety of battery systems together with battery developers, knowledge partners and testbeds to improve our understanding and drive much-needed innovation in energy storage. Stay updated about future events at our website or follow our LinkedIn and Twitter channel.

STEPS is a project within the Interreg North-West Europe (NWE) programme. Interreg NWE falls under the European Cohesion Policy and is financed by the European Regional Development Fund (ERDF).

For symposium video please click STEPS Design for safety in battery systems - University of Twente (UT) - YouTube