

FLEX4FACT Recognized as a Success Story in A.SPIRE's Latest Newsletter

Brussels, February 2025 – The EU-funded FLEX4FACT project has been highlighted as a success story in the latest A.SPIRE newsletter, recognizing its impact in promoting flexibility, sustainability and competitiveness in the European process industry. The selection highlights the project's role in supporting energy-intensive industries on their journey towards climate neutrality, digitalization and energy efficiency.

Success Story No. 8: The FLEX4FACT Project

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Boosting Process Industry's Sustainability and Competitiveness with Flexible Processes



Context

European energy-intensive industries face two major challenges: high energy prices and the need to remain competitive while transitioning to decarbonised production, with the goal of achieving climate neutrality by 2050. To address these challenges, industries aim to increase their use of renewable energy. This has created a growing need for flexibility to manage fluctuations in renewable energy generation. Integrating flexible industrial processes with on-site energy and storage technologies can enhance sustainability and renewable integration but requires new tools and solutions for the energy market and innovative business models.

Addressing Industrial Challenges Through Innovation

Europe's energy-intensive industries face significant challenges, including high energy prices and the urgent need for decarbonization. FLEX4FACT addresses these issues by developing flexible, digitized and automated industrial processes that improve energy integration and optimize resource use. Launched in June 2022, the project brings together 23 consortium partners led by SINTEF, an A.SPIRE member.

Using a modular and multi-level approach, FLEX4FACT will develop the Industrial Cluster Flexibility Platform (ICFP) - a cutting-edge digital tool to improve the integration of renewable energy sources. This innovation promotes greater sustainability, cost optimization and reduced CO₂ emissions.

Real-World Impact and Demonstration Sites

The effectiveness of FLEX4FACT's solutions is being demonstrated in five pilot companies from different industrial sectors. These include Celsa (Barna Steel), where flexible energy management strategies are being implemented to improve efficiency and sustainability. The beta version of the ICFP has already been developed and full-scale demonstrators are expected to be operational within the next 1.5 years.

Ragnhild Eleftheriadis, FLEX4FACT project coordinator at SINTEF, said: “Digitalization and automation will significantly reduce lead times, optimize energy consumption, and lower fossil fuel dependency. Our solutions have the potential to cut industrial production energy usage by up to 35%, leading to major cost savings and CO₂ reductions.”

Alignment with the Future of the European Process Industry

A.SPIRE's Processes4Planet initiative recognizes FLEX4FACT for its alignment with the 2050 Strategic Research and Innovation Agenda, which highlights digitalization as a key driver of industrial sustainability. By fostering cross-disciplinary collaboration in energy, manufacturing and industrial digitalization, FLEX4FACT is actively shaping the future of European industry.

Expected to be completed by November 2025, FLEX4FACT will be a catalyst for digital and energy transformation, making European industry greener, more competitive and more resilient in a rapidly evolving energy landscape.

Proud to be Part of the A.SPIRE Community

As an active member of the A.SPIRE community, FLEX4FACT is honored to be featured as a Success Story. We are proud of our contribution to the common vision of a greener, more competitive European process industry. This recognition confirms our commitment to work hard to achieve the ambitious goals of the project. Our team remains dedicated to developing innovative solutions that will drive industrial transformation and energy flexibility to ensure a sustainable future for European manufacturing.

Further Information

For further information on FLEX4FACT, visit the project website: www.flex4fact.eu.

A dedicated project video also provides insights into how FLEX4FACT is revolutionizing industrial flexibility. It can be watched here: [Flex4Fact Project Video](#)

For the full success story visit the latest version of the A.SPIRE newsletter: [Success Story No. 8: The Flex4Fact Project](#)

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