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TRINEFLEX: The Toolkit To Transform the Future of Energy-Intensive Industries

TRINEFLEX is an ample and ambitious Processes4Planet project implemented by 29 partners under the coordination of A.SPIRE member, the Spanish technology centre AIMEN. The project kicked off on 1 September 2022.

Project Aims and Expected Impact

There is a one-to-one correspondence between the aims of the TRINEFLEX project and the P4Planet 2050 Strategic Research and Innovation Agenda. TRINEFLEX aims to redefine and optimise industrial processes in accordance with the European Commission's goal of net zero emissions by 2050. The TRINEFLEX methodology will be demonstrated in five demo cases and four sectors of Energy-Intensive Industries (the end-users).

Through the development of disruptive innovations and the subsequent development of new skills and job profiles (the toolkit), TRINEFLEX is expected to achieve relevant CO2 emissions reduction. The proposed solutions will be implemented by integrating cutting-edge energy efficiency, clean energy, sustainable fuels, CCUS (Carbon Capture Use and Storage) and digital technologies.

Energy Flexibility for a Sustainable Future of EIs

Asked about one sentence encapsulating the potential impact of TRINEFLEX, the project coordinator, AIMEN, answered: "*Driving Energy-Intensive Industries towards energy flexibility for a sustainable future.*" Although young, the ongoing project already indicates that this is an accurate assessment. The initial phase of the project involves the development of digital twins by one of the project partners. Through this, "*Industrial processes are being revolutionised by a new era of digitalisation.*"

The solutions developed by TRINEFLEX will be highly replicable in other process industry sectors.

On Societal Level

The technologies and methodology are designed with an intrinsic Social Sciences and Humanities (SSH) dimension. The TRINEFLEX project will develop a Gender Equality Plan to enable women by increasing their interest, access, and involvement in the project activities. By rethinking the work environment, TRINEFLEX aspires to foster a professional culture of equality and inclusivity in European society.

A.SPIRE considers the TRINEFLEX project a success story in the making and a potential key catalyst for the green transition of EUs, showing the capacity to make palpable societal and environmental differences in the industrial landscape.

Dive into this document to learn more about the April success story.

If you want to know more about A.SPIRE and Processes4Planet, contact the team.