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Steel giants join forces for a greener future

Leading industry giants and steel producers from across Europe join forces in a unique project for a greener future. In a partnership with Luleå University of Technology the goal is to tackle one of EU's biggest challenges: sustainability through digitalization together. Under the PRISMA project, the aim of this historic collaboration is to create a transparent and standardized system for measuring and sharing environmental data, ensuring compliance following EU regulations.

The steel industry is one of the largest sources of carbon emissions within the industrial sector in Europe. According to data from the World Steel Association, the industry accounts for between 7 and 9 percent of global CO_2 emissions.

The PRISMA project supports the EU's new digital product passport legislation, requiring companies to track and disclose greenhouse gas emissions, carbon footprints, and sustainability metrics. By establishing a shared digital language for environmental performance, PRISMA ensures that stakeholders – from producers to regulators – can access and exchange reliable sustainability data, fostering transparency and traceability across borders and value chains.

- *The goal of the project is to demonstrate best practice solutions for environmental reporting. Any reporting should require minimal effort and that is why digitalization play an integral part in the project. With PRISMA we hope to the show best-practice solutions in real world industrial pilots and set the standard for the rest of the world, Pär-Erik Martinsson, Project Coordinator, says.*

The PRISMA project brings together partners from across Europe: four of the largest steel industries ABS, Celsa, Ori Martin and Tata Steel, with the plant builders and system suppliers Danieli, Primetals, SMS and Tenova, together with ESTEP – a key platform fostering collaboration among the stakeholders.

- *We want to avoid that each stakeholder develops its own internal standards based on its own interpretation of EU regulations. This could lead to inconsistency and confusion. Therefore, we are covering different aspects of the environmental reporting and rely on different IT and OT environments, such results will be widely transferable to the whole EU steel sector. At the end of the day, it's about future-proofing the industry by enabling us all to move forward together, Pär-Erik Martinsson says.*

With 16 partners, a €10 million budget, and a four-year timeline, PRISMA is coordinated by Luleå University of Technology (LTU) in Sweden, which leads the technical development and research behind the new data model. Luleå University of Technology has been specially invited to the project to create a bridge between the already existing technology within CHIPS-JU to digital infrastructure and advanced data models. In the first year, the aim is to define the Unified Environmental Data Model (UEDM) and set the basis for the technology to be developed within the project.

- *At Luleå University of Technology, we have been designing industrial digital systems based on the latest technologies for a long time. We see a lot of synergies between the challenges identified by the PRISMA partners with other industrial applications. We are very proud that the consortium behind PRISMA have identified us, not only as a competent coordinator, but also as natural bridge between two worlds, the traditional steel manufacturing world and the fast moving cyber world. We are confident that at the end of the project, we have demonstrated a powerful concept that will drive environmental sustainability, competitiveness, and a greener economy, Pär-Erik Martinsson says.*

ESTEP has also endorsed PRISMA and will lead the project's communication and exploitation phase, ensuring the developed solutions drive real industry-wide impact via excellent communication channels.

- *The PRISMA project is a lighthouse project for ESTEP with a view to strong EU collaboration towards standardisation in the important research area of digitisation. The intended application in the area of environmental data complements another top priority of today's steel research needs. The project raises high expectations to manifest the leading position of EU steel producers, Klaus Peters, the Secretary General of ESTEP says.*

The project will demonstrate its impact through pilot programs at leading steel manufacturers Celsa, Tata Steel, Ori Martin and ABS. PRISMA officially launches on April 1, 2025. By aligning digital innovation with climate goals, PRISMA sets a global benchmark for how industrial collaboration and regulation can go hand in hand to drive systemic change.

More details and updates can be found on the project website (www.prisma-project.eu) and the LinkedIn page *PRISMA EU Project*.

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