

PRODUCT ENVIRONMENTAL FOOTPRINT INFORMATION SYSTEM FOR STEEL MANUFACTURING

Content

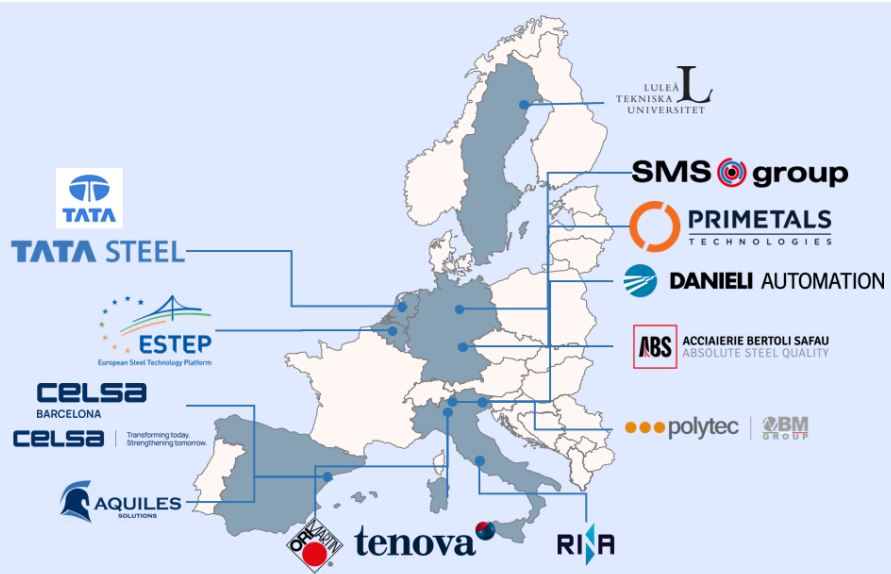
Universal Environmental Data Model (UEDM) and PRISMA

Understanding the UEDM |
DPP

The PRISMA project aims to transform environmental data management in the steel sector through open, standardized, and scalable digital technologies. Our ambition is to offer the **Unified Environmental Data Model (UEDM)** and **Digital Infrastructure (DI)** as **open-source enablers**, laying the groundwork for future-ready, site-specific environmental reporting. This ambition is pivotal in creating an open-source IT infrastructure tailored for managing environmental data and conducting footprint assessments.

Updates & Events

Meetings | Latest project
activities



START DATE : 01-April-2025

PROJECT DURATION : 48 month

CALL : RFCS-BT 2024
(Clean Steel Partnership)

COORDINATOR: LTU

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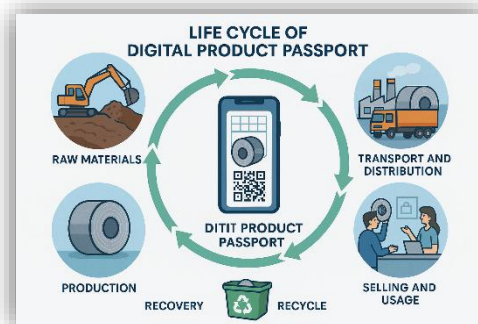
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Universal Environmental Data Model (UEDM) and PRISMA

Reporting requirements across Europe are increasing rapidly, driven by initiatives such as the Digital Product Passport (DPP) and broader sustainability regulation. Compliance requires organizations to collect, structure, and report substantial volumes of data originating from heterogeneous and often legacy systems, while simultaneously adapting to evolving regulatory and technological requirements. In the absence of a structured approach, these obligations can become a significant operational and financial challenge.

Within PRISMA, the Unified Environmental Data Model (UEDM) is being explored as a common structuring layer for industrial and environmental data. Rather than replacing existing systems, the UEDM standardizes how data is described, organized, and connected, enabling organizations to reuse existing information more effectively while improving interoperability across tools and services.

By leveraging modern digital infrastructures, PRISMA facilitates the development of advanced sustainability applications, including dynamic Life Cycle Assessments (LCAs) and DPPs. A DPP is a digital record that provides essential product information throughout its entire life cycle, improving transparency, traceability, and sustainability. Promoted under the European Green Deal and the Ecodesign for Sustainable Products Regulation (ESPR), the DPP is positioned to become a central enabler of Europe's transition toward a more circular and sustainable economy.



Building Common Understanding Together

The PRISMA 4th and 5th in-person plenary meetings were held on January 28-29, and June 15, respectively this year, at ESTEP office in Brussels, Belgium. The participants engaged in focused discussions, strategic planning, and knowledge exchange.

The meeting brought together project partners for updates across all work packages, strategic planning, and knowledge exchange. During the meeting in June a special workshop was organised to build a common understanding for the UEDM data model and required data. All the plant builders together with LTU made a significant steps to plan for improvement to initial model for more universal performance. These productive sessions laid a strong foundation for the next phase of the project with shared insights expected to be translated into impactful actions and continued sustained progress.

These productive sessions have further strengthened the foundation for collaboration, helping us align our efforts and accelerate progress toward more sustainable steelmaking and improved product traceability.



January 28-29, 2026 (4th Plenary Meeting)



June 15, 2026 (5th Plenary Meeting)

Contribution at Conferences

• AISTech 2026, Pittsburgh, USA (04– 06 May 2026)

PRISMA was introduced during the presentation by Dr Klaus Peters, Secretary General of ESTEP, at AISTech 2026, held in Pittsburgh, USA, on 4-6 May 2026. The presentation, titled “EU Steel at the 2026 Crossroads: Insights from the Clean Steel Partnership and ESTEP”, offered an overview of European initiatives supporting the transition towards cleaner, more circular and more competitive steel production. The PRISMA at AISTech 2026 provided valuable international visibility for the project and its contribution to the transformation of the European steel sector towards Digital Product Passport (DPP).



Klaus Peters (SG, ESTEP), Ron Ashburn Executive Director, Association for Iron & Steel Technology and Akhilesh Swarnakar (ESTEP)

• Industrial Semantic Interoperability Summit 2026, Oslo, Norway (09 – 11 June 2026)

At the Industrial Semantic Interoperability Summit 2026 organised by DNV, our consortium partner Giulio Planu from Danieli Automation DIGI&MET presented “Enabling Efficient Information Integration, DPP and LCA Generation in the Steel Industry” during the session “Why Industries Should Care About Semantic Interoperability.” The presentation highlighted how the PRISMA Project is helping transform fragmented industrial data into actionable insights through semantic interoperability, enabling more efficient Digital Product Passport (DPP) and Life Cycle Assessment (LCA) generation while supporting sustainability, quality, and competitiveness. On Day 3 of the workshop, PRISMA was showcased at the Demonstration Marketplace, gaining strong visibility and interest from the semantic interoperability community. One of the main key takeaways from the workshop is that the semantic interoperability is rapidly becoming a key enabler of a connected, intelligent, and transparent industrial future.



Contribution at Conferences

- **“The Future of EU Steel Research – How to Foster EU Steel Leadership”
Mönchengladbach, Germany (26 November, 2025)**

The event showcased how RFCS-funded projects are driving the transformation of Europe's steel industry through decarbonisation, circularity, and industrial symbiosis. Participants explored the latest advances in energy efficiency, electrification, hydrogen-based steelmaking, and innovative scrap recycling technologies. The programme also provided a valuable platform for dialogue between project experts, researchers, industry representatives, and policymakers on the role of EU-funded research in accelerating industrial transformation.

A key highlight of the event was the presentation by Frenk van den Berg (Tata Steel) during the Industrial Symbiosis & Smart Digitalization session, where he introduced the PRISMA project. Supported by RFCS Big Ticket funding, PRISMA brings together Europe's leading steel producers and industrial partners to develop a standardized framework for environmental data, fully aligned with emerging EU regulatory requirements. By enabling consistent, reliable, and interoperable sustainability data across the steel value chain, PRISMA is helping lay the foundation for a more transparent and competitive low-carbon steel industry.



- **ESTEP Annual Event, Udine Italy (28-30 October 2025)**

Dr. Eric Chiquito Garcia from Luleå tekniska universitet presented the PRISMA project at the ESTEP Annual Event 2025, held in Udine, Italy, on 28–30 October. He talked about the “Digitalization: The Universal Environmental Data Model – The PRISMA Project”. Eric introduced the consortium's work on a Unified Environmental Data Model (UEDM) - a key step toward data-driven decarbonization and sustainability in the European steel industry.



- **PRISMA in Steel Times International**

The article in Steel Times International's **“Driving a Sustainable Future.”** highlighted PRISMA EU Project as one of the flagship project in January/February 2026 edition. The article highlighted PRISMA and its objectives, contributing to wider awareness of the project and its role in supporting sustainability and digital transformation in the steel industry.

