A novel transparent & interoperable decentralised traceability platform for circular economy

The DigInTraCE project is at the forefront of advancing the development of a transparent and interoperable Decentralized Traceability platform. By leveraging cutting-edge tracking, sensing, and sorting techniques, this platform facilitates seamless data exchange and coordination among stakeholders. An essential focus of the project is the implementation of dynamically updated Digital Product Passport (DPP) schemes, enabling the certification and validation of product quality.

To optimize overall process efficiency and lifecycle management, DigInTraCE integrates AI-based decision-making mechanisms. These mechanisms enable intelligent data analysis, empowering stakeholders to make informed decisions and optimize their operations.

Central to the project is the exploration and implementation of up-cycling, reuse, and upgrade technologies. These technologies are designed to enhance the utilization of secondary raw materials, contributing to sustainable resource management practices.

Recognizing the significance of standardization, DigInTraCE is committed to providing open and easily accessible data. This facilitates collaboration, knowledge sharing, and compatibility among different systems and stakeholders, driving synergy within the industry.

Moreover, the project aims to create new business models that leverage the developed technologies. These models generate economic opportunities, offer learning resources for employees, and address regional social needs. By aligning with the broader goal of sustainable and inclusive development, DigInTraCE contributes to a more resilient and prosperous society.

Demonstrations of the solutions developed under DigInTraCE will be conducted in two key sectors: Pulp & Paper and Chemicals. Within the Pulp & Paper sector, specific cases such as composite wood and furniture, as well as wood and Pulp & Paper, will be the focus. In the Chemicals sector, the project will target applications including plastic parts from ICT equipment and the automotive market, as well as polymers and textiles.

By the culmination of the project, DigInTraCE aspires to achieve a Technological Readiness Level (TRL) of 6, signifying the successful development and demonstration of the solutions in near-real-world environments.

The project is structured into four main modules: the Decentralized Traceability platform, the Dynamically Updated Digital Product Passport, novel sensing and sorting mechanisms, and data-driven process optimization. These innovations will be applied within relevant industrial fields, with particular emphasis on the wood-based industry, associated pulp & paper sector, and chemicals sector, with a focus on plastic recycling and bio-based resin development.

Project Facts

@digintrace

Digintrace EU Project

https://www.digintrace.eu/

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Consortium

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