DECODE – Distributed Ecosystem for Circularity through Open Digital Enablers and the Digital Product Passport

Workshop at the 21st International Conference on
Network and Service Management (CNSM 2025) on Monday, 27th October
AI and Sustainability in the Future of Network and Service Management

Bologna, Italy // 27 – 31 October 2025

Organizing Chairs:

Martin Benedikt
Virtual Vehicle
Research GmbH

Pal Varga
Budapest University
of Technology and
Economics

Markus Tauber
Research Studios
Austria FG

Important Dates:

Submission Deadline:
~~August 11, 2025,~~
August 25, 2025 *extended*

Author notification:
September 8, 2025

Camera ready submission:
September 14, 2025

Manuscripts should use
IEEE 2-column conference
style. The limit is 6 pages
or 4 pages for position
papers (including
references).

**Website&
Submission Link:**

https://decode.icb.at

https://edas.info/N34168

Organizer:

cnit consorzio nazionale
interuniversitario
per le telecomunicazioni

Technical Co-Sponsors:

acm sigcomm

ifip

acm In-Cooperation

PACE-DPP
Digital Product Passport

Description

As the transition to a circular economy accelerates, the creation of ecosystems for circularity depends increasingly on the development of robust digital foundations that promote transparency, collaboration, and sustainability. Open digital enablers—including distributed data services, interoperable platforms, and secure exchange mechanisms—are essential for realizing this vision. Central among these innovations is the Digital Product Passport (DPP), a dynamic instrument for capturing and sharing critical product lifecycle data to support sustainable production, use, and recovery.

This call for papers invites submissions that explore cutting-edge developments and practical implementations across the digital landscape underpinning **circular ecosystems**.
Relevant topics include but are not limited to: **Digital Product Passport data services and distributed architectures**, **federated data governance**, **data space technologies** and **interoperability, service ecosystems supporting circular business models**, **smart and digital supply chains**, and **decentralized governance frameworks.**
We also welcome contributions on **technical enablers of traceability and lifecycle tracking**, **secure data exchange with self-sovereign identities**, **identity management for DPPs**, the **role of data intermediaries**, and supporting technologies such as **microcontrollers**, **mobile applications**, and **data provision devices**. The workshop also serves as a venue for researchers to present and discuss novel ideas, prototypes, and findings, by welcoming short position papers and long regular papers related to the following topics, in line with the main track:

- Distributed and secure IoT Architectures
- Federated data governance and interoperability
- Service ecosystems supporting circular business models
- Digital Twins and their management
- Digital Product Passport Data Services and Ecosystems, Technical enablers of traceability, transparency, and lifecycle tracking
- Smart and Digital Supply chains
- Interoperability of Data Space Technologies
- Distributed data architectures for DPPs
- Decentralised Governance
- Secure data exchange with self-sovereign identities
- Identity management for DPPs

- Data intermediaries
- DPP supporting technologies such as data provision devices and applications
- Multi-Access Edge Computing
- Operations and Business Support Systems
- Federated data governance and interoperability
- Service ecosystems supporting circular business models
- Interoperability of Data Space Technologies
- Secure data exchange with self-sovereign identities
- Data intermediaries
- Data Space Architectures
- Multi-Access Edge Computing
- Operations and Business Support Systems