PROJECT DELIVERABLE REPORT

Grant Agreement Number: 101058732

Joint Industrial Data Exchange Platform

Type: Document, report

D7.4: Strategic Standardisation Plan

Issuing partner	Adscensus (ADS)
Participating partners	Brunel University London (BUL), Technovative Solutions (TVS), TPI Composites (TPI), ALMAS Partecipazioni Industriali S.P.A. (ADL), Centro Ricerche Fiat Scpa (CRF), Precision Varionic International Limited (PVI), Zorlu Enerji Elektrik Uretim As (ZOREN), Univerzita of Pardubice (UPCE), FHV – Vorarlberg University of Applied Sciences (FHV)
Document name and revision	D7. Strategic Standardization Plan (initial version)
Author(s)	Donatas Gendvilas, Algirdas Pabedinskas (ADS), Nithin Jayasree (BUL)
Deliverable due date	M16
Actual submission date	September 30, 2023

Project Coordinator	Vorarlberg University of Applied Sciences
Tel	+43 (0) 5572 792 7128
E-mail	florian.maurer@fhv.at
Project website address	www.jidep.eu

Dissemination Level		
PU	Public	✓
PP	Restricted to other programme participants (including the Commission services)	
CO	Confidential, only for members of the consortium (including the Commission services)	
SEN	Sensitive, limited under the conditions of the Grant Agreement	

Table of Contents

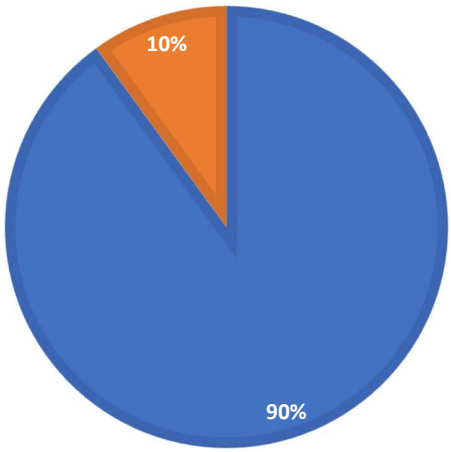
Executive Summary

Discovery of the JIDEP consortium standardisation practice

The aim of the discovery phase, when the standardisation questionnaire was issued to all consortium partners, was to assess practices, methods, frameworks and policies that might govern JIDEP data exchange, reporting and further provision. Accordingly, the local results could then be extrapolated to other industries, thus strategically steering and guiding the JIDEP development, the training of its current and potential end-users, as well as controlled, safe and secure data exchange practice.

1. Data Security and Privacy

Industrial data governance standards emphasise robust security measures to protect sensitive data from unauthorised access, data breaches, and cyber-attacks. These standards often align with established cybersecurity frameworks and may include encryption, access controls, network segmentation, and authentication protocols.

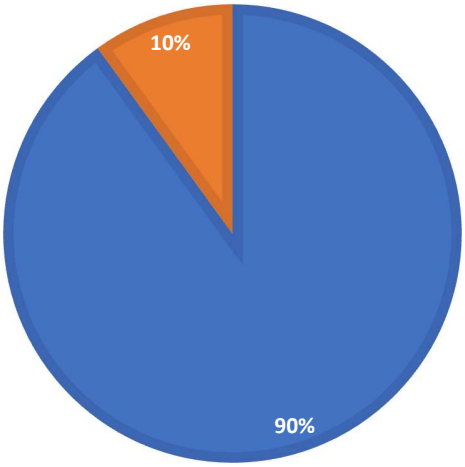


9 partners have data security and privacy practices in place.

1 partner is not actively employing data security and privacy standards.

2. Data Lifecycle Management

Industrial data governance involves managing data throughout its entire lifecycle, from creation and acquisition to processing, storage, and eventual disposal. Proper data management ensures data integrity, availability, and reliability.

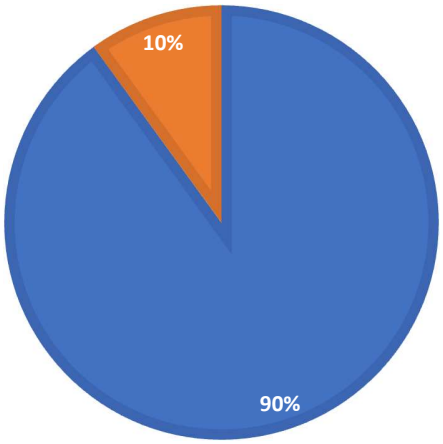


9 partners have Data Lifecycle Management practices in place.

1 partner is not actively employing Data Lifecycle Management standards.

3. Data Quality and Integrity

Industrial processes rely on accurate and reliable data. Data governance standards include practices to maintain data quality and ensure data integrity, minimising errors and inconsistencies that could impact decision-making and operations.

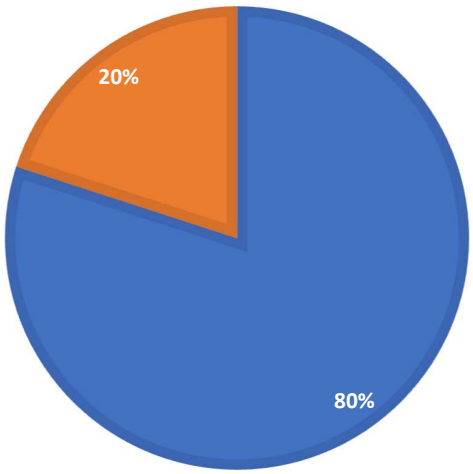


9 partners have Data Quality and Integrity practices in place.

1 partner is not actively employing Data Quality and Integrity standards.

4. Data Sharing and Interoperability

Industrial settings often involve multiple stakeholders, systems, and devices. Data governance standards promote interoperability and data sharing while maintaining data security and privacy. This is crucial for enabling data-driven decision-making and collaboration.

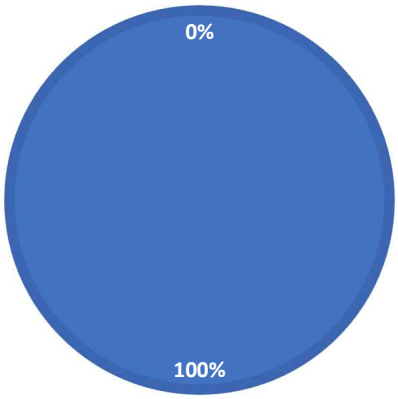


8 partners are already engaged in industrial data-sharing activities.

2 partners are not engaged in industrial data sharing.

5. Compliance and Regulatory Requirements

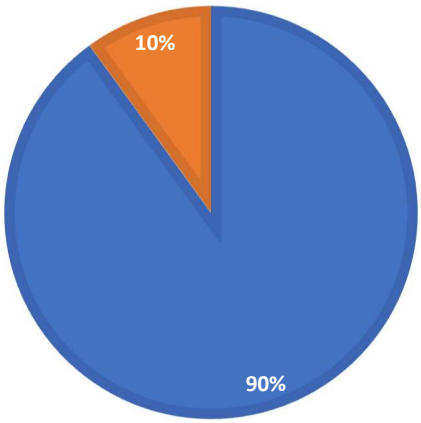
Industrial data governance must adhere to relevant industry-specific regulations and legal requirements, which can vary depending on the sector and geographical location. Examples include compliance with environmental regulations, safety standards, and data protection laws.



All partners are bound by compliance and regulatory requirements.

6. Data Retention and Deletion

Industrial data governance standards include guidelines for data retention periods and procedures for secure data disposal when it is no longer needed, in line with legal and regulatory requirements.

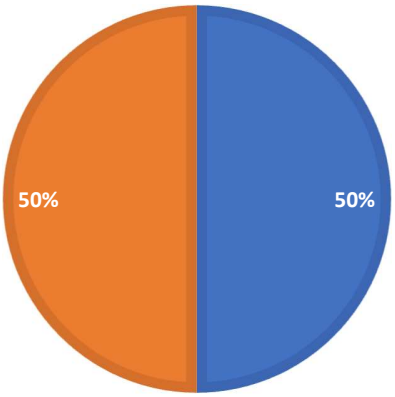


9 partners have implemented data retention and deletion policies.

1 partner is not performing data retention.

7. Data Analytics and AI Ethics

As industrial processes increasingly rely on data analytics and artificial intelligence, data governance standards address ethical considerations, bias mitigation, and transparency in AI algorithms.

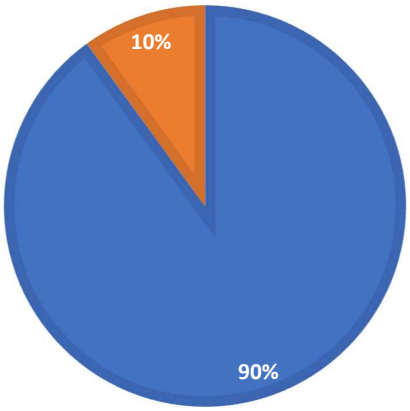


5 partners are already performing AI-based data analytics.

5 partners have no AI-based analytics tools in place.

8. Audit and Accountability

Regular audits and monitoring of data processes are performed to ensure compliance with data governance standards and identify potential issues or risks.

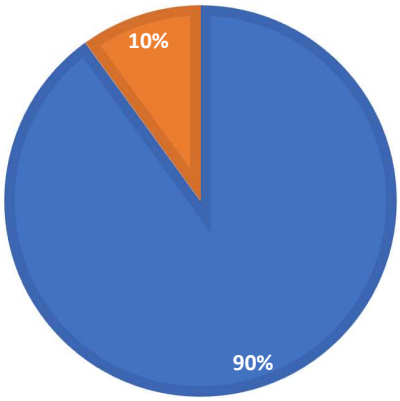


9 partners are regularly performing data audits.

1 partner is not performing data audits.

9. Audit and Accountability

Regular audits and monitoring of data processes are performed to ensure compliance with data governance standards and identify potential issues or risks.

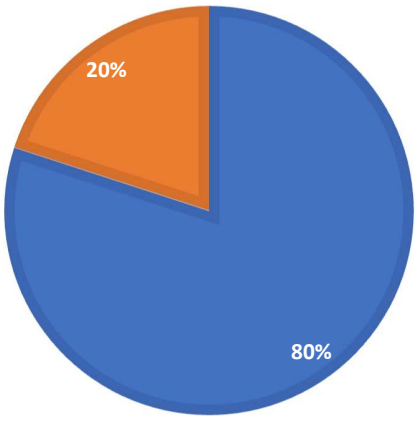


9 partners are regularly performing data audits.

1 partner is not performing data audits.

10. Other Industry-Specific Standards

Facilitate data exchange, integration, and interoperability across various systems and applications.

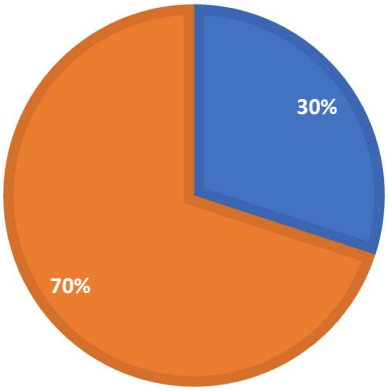


8 partners have implemented other standards that facilitate data exchange, integration and interoperability.

2 partners have no other standards implemented.

11. ISO 14040: Environmental management - Life cycle assessment - Principles and framework

This standard, published by the International Organisation for Standardisation (ISO), outlines the fundamental principles, framework, and requirements for conducting an LCA study. It provides guidelines for defining the goal and scope of the assessment, conducting the life cycle inventory analysis, impact assessment, and interpretation of results.

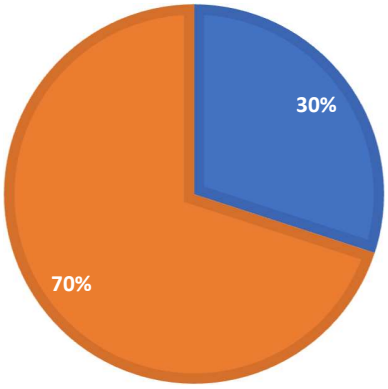


3 partners have ISO 14040 implemented.

7 partners do not have ISO 14040 implemented.

12. ISO 14044: Environmental management - Life cycle assessment - Requirements and guidelines

Another ISO standard, ISO 14044, complements ISO 14040 by providing more detailed requirements and guidelines for conducting specific LCA phases, including data quality assessment, sensitivity analysis, and reporting of results.

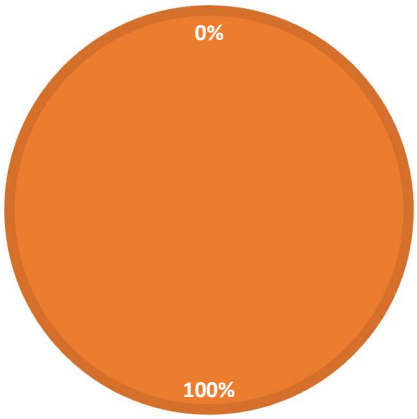


3 partners have ISO 14044 implemented.

7 partners do not have ISO 14044 implemented.

13. EN 15804: Sustainability of Construction Works - Environmental Product Declarations - Core Rules for the Product Category of Construction Products

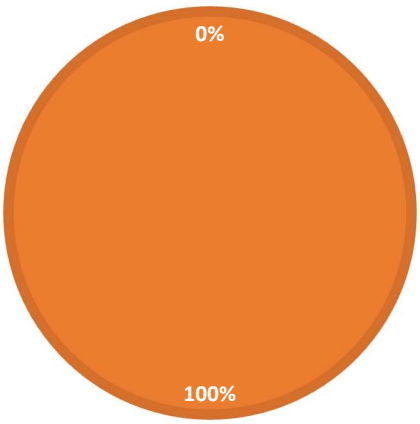
This European standard provides specific requirements for conducting life cycle assessments of construction products and issuing Environmental Product Declarations (EPDs).



No partners are practicing EN 15804.

14. GHG Protocol Product Standard

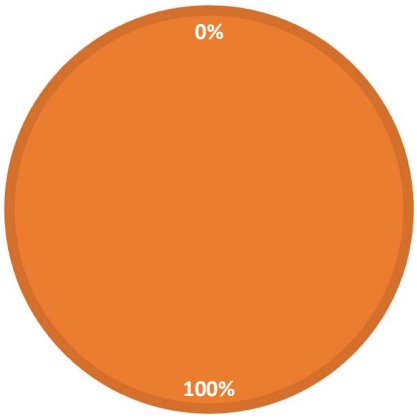
Developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), this standard provides guidance on assessing and reporting greenhouse gas (GHG) emissions associated with products throughout their life cycle.



No partners are practicing GHG Protocol Product Standard.

15. The UNEP/SETAC Life Cycle Initiative

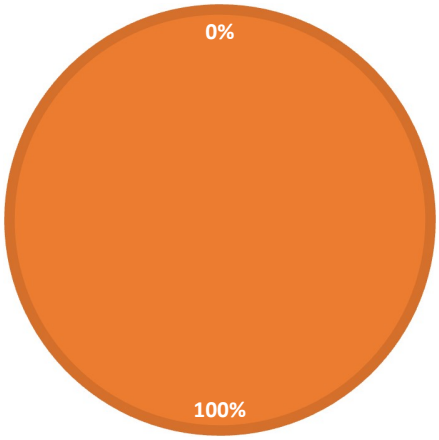
The United Nations Environment Programme (UNEP) and the Society of Environmental Toxicology and Chemistry (SETAC) have established an initiative that promotes the use of LCA and provides guidance, databases, and tools for LCA practitioners.



No partners are practicing UNEP/SETAC Life Cycle Initiative.

16. Product Category Rules (PCR)

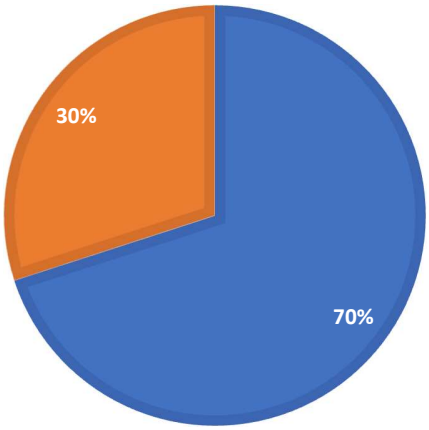
PCRs are specific rules and requirements for conducting LCA within a particular product category. They are essential for ensuring the consistency and comparability of LCA results for similar products. PCRs are often used to develop Environmental Product Declarations (EPDs).



No partners are practicing PCR.

17. Circular Economy Principles

Circular economy principles advocate for designing products with durability, reparability, and recyclability in mind. These principles emphasize keeping products and materials in use for as long as possible, promoting circular loops of production, consumption, and recycling.

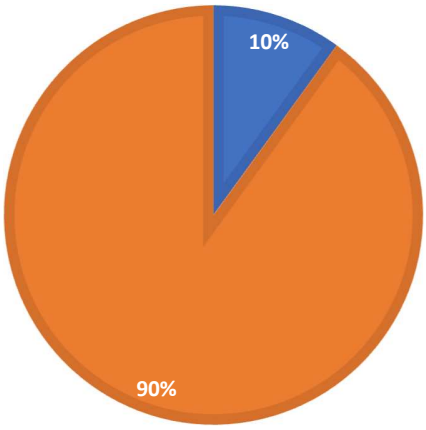


7 partners are following circular economy principles.

3 partners are not engaged in circular economy-based product design.

18. ISO 14021/24: Environmental Labels and Declarations - Self-declared Environmental Claims (Type I and Type II environmental labelling)

This ISO standard provides guidelines for environmental claims, including recyclability claims, made by manufacturers or companies on their products or packaging.

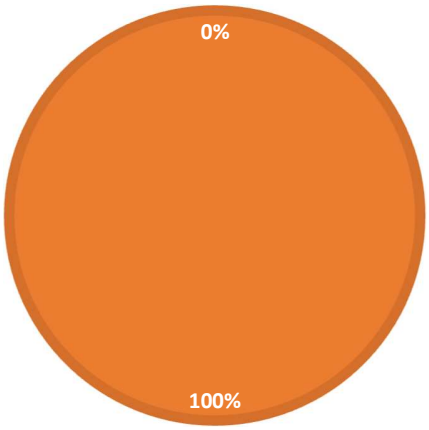


1 partner is using circularity labels on its products.

9 partners are not engaged in the circular label initiative.

19. EU Ecolabel (flower label)

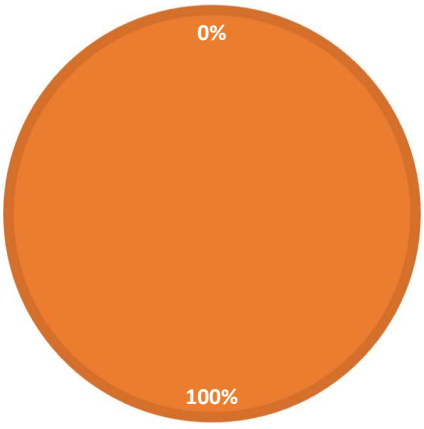
The EU Ecolabel is a voluntary certification scheme awarded to products and services that meet strict environmental criteria throughout their life cycle. It encourages the use of environmentally friendly products and promotes resource efficiency and recycling.



No partners are using the flower label.

20. Cradle to Cradle (C2C) Certification

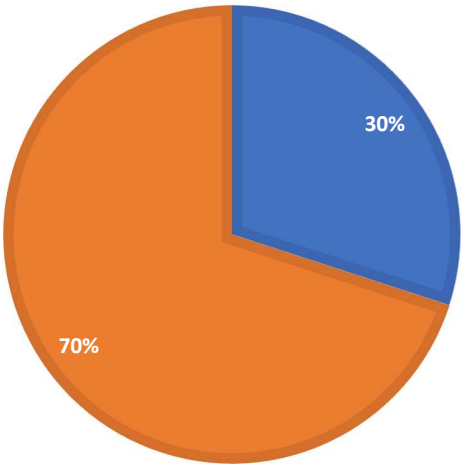
The Cradle to Cradle Certified™ program evaluates products and materials based on their sustainability and circularity attributes. It considers factors such as material health, recyclability, renewable energy use, water stewardship, and social fairness.



No partners are using the C2C certification.

21. Recycled Content Standards

Various industries and organisations have established standards for the minimum percentage of recycled content that products should contain. For example, some packaging standards may require a specific amount of recycled materials in product packaging.

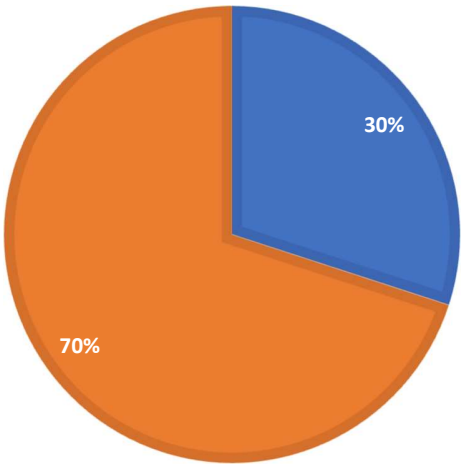


3 partners are mandated to account for the recycled content in their products.

7 partners are not obliged to report on the recycled contents.

22. EU Waste Framework Directive (2008/98/EC)

The EU Waste Framework Directive sets out the legal framework for waste management in the European Union and promotes recycling and the recovery of waste materials.

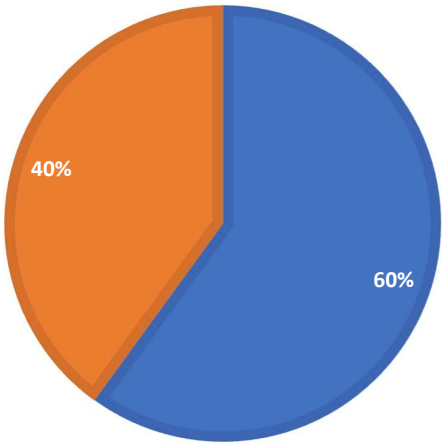


3 partners are practicing 2008/98/EC directive.

7 partners are not performing waste management.

23. RoHS (Restriction of Hazardous Substances Directive)

RoHS restricts the use of hazardous substances in electrical and electronic equipment, contributing to better recycling and safer disposal of such products.

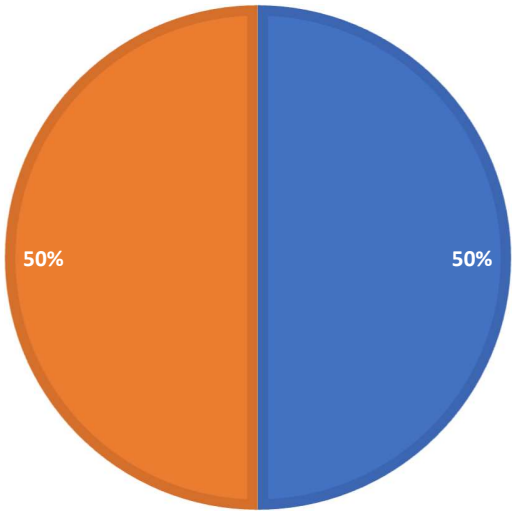


6 partners are bound by RoHS directive.

4 partners are not bound by RoHS directive.

24. WEEE (Waste Electrical and Electronic Equipment Directive)

WEEE aims to reduce the environmental impact of electrical and electronic equipment by encouraging its recycling and proper disposal.

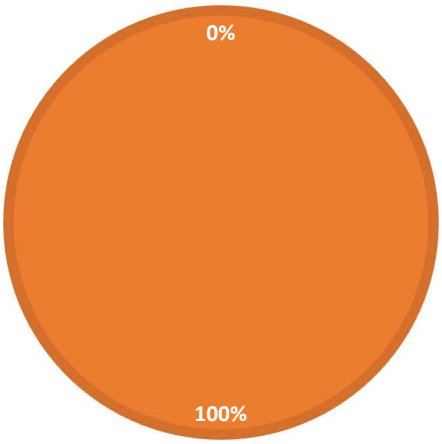


5 partners are bound by WEEE directive.

5 partners are not bound by WEEE directive.

25. Global Recycling Standards (e.g., RIOS, R2, e-Stewards)

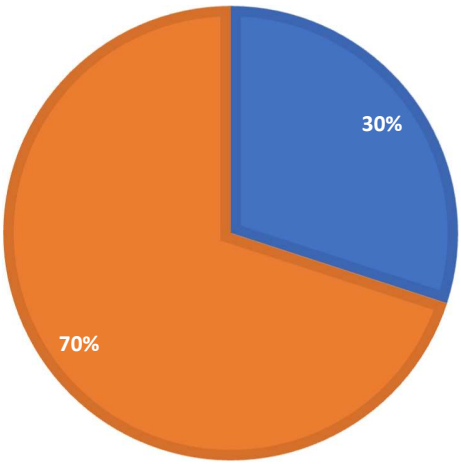
These are industry-specific standards and certifications for responsible recycling and management of waste materials, especially in the electronics recycling industry.



No partners have implemented RIOS, R2 or other recycling standards.

26. Other standards

Other standards that play a crucial role in driving sustainable practices, encouraging companies to adopt circular business models, and promoting responsible recycling and waste management.



3 partners have implemented other, less known circularity and sustainability-aimed standards.

7 partners have not enrolled into any other circularity or sustainability-aimed standards.

Compliance KPIs adopted by the renewables Partners

1 partner	**Maximize the circular material use rate of wind turbine components to 50% by 2030, and 60% by 2050. This involves design for repair, refurbishment, remanufacture and recycling.**
1 partner	By 2030, achieve at least a 10-fold increase in the generation capacity of refurbished / remanufactured wind turbines compared to 2020.
1 partner	New large wind turbines installed from 2024 should be designed for recyclability of rotor blades, generators and towers of at least 85% by weight.
1 partner	The use of recycled carbon fiber in rotor blades should increase to 30% of total fiber-reinforced polymers by 2030.
1 partner	Wind turbine manufacturers need to take back decommissioned rotor blades by 2025 for proper treatment and recycling.
2 partners	Stricter documentation and traceability requirements for materials and chemicals used in wind turbines will support higher levels of recycling.
1 partner	Eliminate the landfilling of decommissioned wind turbines by 2050.
1 partner	Other (please describe)

Compliance KPIs adopted by the automotive partners

0 partners	**By 2030, at least 85% (by weight) of end-of-life vehicles must be reused or recovered, and at least 95% recycled.**
0 partners	By 2025, the use of recycled plastics in new vehicles should be increased to 10% of total plastic content. By 2030, this target rises to 30%.
1 partner	New passenger cars and light commercial vehicles put on the market from 2030 onwards should be designed so that at least 95% (by weight) can be reused or recycled.
0 partners	By 2035, the use of critical raw materials should be reduced by substituting or eliminating them in new vehicle designs.
1 partner	The EU aims to double the remanufacturing activity of automotive components by 2030 compared to 2015 levels.

1 partners	Producers will be required to provide spare parts for up to 10 years after production of a particular model stops. This aims to extend product lifetimes.
1 partner	Stricter rules on reporting recycled content in new vehicles are being introduced to improve transparency and monitoring.

Compliance KPIs adopted by the industrial electronics partners

0 partners	**By 2030, the preparing for reuse and recycling target for e-waste is set at 85% by weight.**
0 partners	Stricter eco-design measures introduced to improve the durability, reusability, upgradability and reparability of electronic products.
1 partner	Producers are required to assess the lifespan and reliability of new products and provide minimum warranty periods.
0 partners	Improved labeling and access to spare parts are mandated to extend first use phase and enable repair.
0 partners	New right-to-repair rules enabling consumers to choose independent repairers.
0 partners	Restrictions on destruction or landfilling of unsold consumer electronics.
0 partners	Increased recycled content targets, e.g. minimum of 30% recycled plastics by 2030.
1 partner	New mandatory requirements for tell-back systems where producers organize and finance take-back and recycling.
0 partners	Producers are required to provide a minimum of 5 years of spare part availability after the end of production.
0 partners	Stricter reporting obligations on recycled content and recovery operations.

Conclusions and Strategic Standardisation Planning

Conclusion-1: Data Security and Privacy, Data Lifecycle Management

Nearly all the partners are engaged in proactive data security and privacy maintenance. However, extra training and guidelines are needed to introduce SMEs to the risks of poor data governance. Data processing, storage and disposal techniques are well known to the industrial actors, but for SMEs this is still an issue. Hence, training and guidelines are needed to ensure proper data lifecycle provision.

Priority: High

Recommendation: Rely on external cloud-based services and introduce end-users to the corresponding 3rd-party documentation

Conclusion-2: Data Quality and Integrity

The majority of industrial actors use time-proven industrial systems that enable proper data governance out of the box. For SMEs, however, this software is often not affordable. Henceforth, JIDEPs integration only with industrial-scale systems, via JIDEP API, is anticipated.

Priority: Low

Recommendation: Ensure API access to JIDEP datasets by employing time-proved data exchange protocols and standards

Conclusion-3: Data Sharing and Interoperability

The industry is already exchanging data proactively. Hence, only SMEs have not yet begun this practice. Since the JIDEP itself will directly implement secure and standardized data sharing, no further actions are necessary to be undertaken, apart from the end-user training on how to use JIDEP most effectively.

Priority: Medium

Recommendation: Organize end-user training sessions to introduce them to the JIDEP software

Conclusion-4: Data Retention and Deletion, Auditing and Accountability

All partners are well aware and proactively perform data diligence by retaining and deleting their data as required by internal or external regulations. However, JIDEP must ensure it aligns with these regulations.

Priority: High

Recommendation: Implement data retention and deletion functionality, as well as data Auditing capability within JIDEP

Conclusion-5: Regulation-driven data analysis and KPI tracking

All organizations follow certain EU and ISO standards and practices, with a diverse range of supporting frameworks, which are industry-specific. Evidently, novel standards, such as EPDs, GHG reporting, LCA, and PCR are yet to be adopted, hence the primary aim of JIDEP should be to facilitate end-users with the capability to track a diverse number of KPIs.

Priority: Low

Recommendation: Ensure EU regulation-driven KPI tracking by leveraging JIDEP datasets, by tailoring the KPIs for appropriate industries

ANNEXES

1. Strategic Standardization Questionnaire Template
   - D7.4 - JIDEP - Strategic Standardization Plan Questionaire.docx
2. Strategic Standardization Questionnaire Results
   - https://forms.office.com/e/2yLbXkHB7m
   - D7.4 - JIDEP - Strategic Standardization Plan questionnaire-Results.xlsx