RISERS Insights Brief #1

February 2026

Welcome to the first RISERS Insights Brief—our way of sharing project progress, key milestones, and emerging insights to advance industrial symbiosis through standardisation. In this issue, we showcase progress on the IS Standardisation Roadmap, share key insights from mapping the R&D landscape for industrial symbiosis standardisation, present mid-project policy recommendations, and introduce our Advisory Board. Through Voices of RISERS, our experts offer first-hand perspectives on the project and on advancing industrial symbiosis standardisation.

From Practice to Standards: Developing the RISERS Industrial Symbiosis Standardisation Roadmap

The Industrial Symbiosis (IS) standardisation roadmap developed within RISERS is designed as a practical orientation tool for policy, research and standardisation communities. Rather than prescribing solutions, it clarifies where standardisation can effectively support industrial symbiosis, how existing standards and processes can be better used, and where targeted action is needed.

How the roadmap was developed

The roadmap is grounded in structured foundations gathered throughout the project. Its development combines three main inputs:

- **Practitioner insights**, collected through a Europe-wide survey involving experts active in industrial symbiosis implementation, research and standardisation.
- **Targeted Working Group discussions**, covering cross-cutting and sector-specific areas such as end-of-waste, digitalisation and data, batteries, packaging, textiles, waste heat and biomass.
- **System-level analysis of industrial symbiosis**, examining how current mechanisms address cross-sector standardisation and interface topics relevant to industrial symbiosis.

This approach ensures the roadmap reflects real-world challenges faced by practitioners and standardisers, rather than abstract assumptions about industrial symbiosis.

What the roadmap does – and does not – do

The RISERS roadmap does not propose the immediate drafting of new standards, the creation of new Technical Committees, or changes to existing mandates. Instead, it identifies priority areas for action and outlines pathways through which standardisation can better support industrial symbiosis over time.

Specifically, the roadmap:

- Highlights **where standards are difficult to apply, fragmented or under-used** in industrial symbiosis contexts.
- Identifies **coordination challenges across sectors**, particularly where material flows, data exchange and responsibilities intersect.
- Emphasises **outcome- and coordination-oriented actions**, while recognising that more formal standardisation may only be appropriate once practices mature.

The result is a structured basis for prioritisation that supports both standardisation planning and policy decision-making.

Why this matters

Industrial symbiosis is increasingly referenced in EU circular economy, industrial and climate policy, such as the Draghi report (The Draghi report on EU competitiveness). However, without clearer standardisation pathways, many solutions remain difficult to replicate or scale. The RISERS roadmap addresses this gap by translating practitioner experience into actionable orientations for standardisation and policy communities.

- For **standardisation actors**, it provides clarity on where industrial symbiosis issues are likely to arise and how they can be handled consistently.
- For **research and innovation stakeholders**, it shows how R&I results can feed into standardisation at the right moment.
- For **policymakers**, it offers an evidence-based reference to support initiatives such as the Circular Economy Act.

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Call for engagement

The roadmap is published as a draft to invite feedback. RISERS encourages input from Technical Committees, National Standards Bodies, industry, researchers and policymakers to validate priorities and refine recommendations.

☞ Draft roadmap: [PDF file]

☞ Stakeholders are invited to contribute to the next iteration and help reduce barriers to scaling industrial symbiosis through standardisation.

The mapping of IS landscape in R&D projects – what, why, the findings

The mapping of current R&I activities within the IS landscape provides a comprehensive overview of projects contributing to the advancement of IS standardisation in Europe. This work addresses a critical systemic barrier, namely the lack of harmonised standards for industrial symbiosis, which constrains cross-sectoral resource-sharing practices and slows the transition towards a circular economy.

The outcomes of the mapping confirm that standardisation constitutes a key enabling factor for accelerating the transition towards an operational and scalable circular economy. The inherent complexity of IS, driven by its multi-actor and cross-sectoral characteristics, generates significant technical, organisational, and regulatory challenges that can be effectively addressed through appropriate standardisation instruments.

Standards extend beyond purely technical specifications and function as strategic mechanisms to establish trust, transparency, and legal certainty among IS stakeholders. Moreover, they ensure interoperability across sectors, facilitate regulatory compliance, and enable the integration of innovative technologies and operational practices into existing industrial and regulatory frameworks.

The main findings of the mapping activity can be summarised as follows:

- A critical need for harmonised life cycle assessment (LCA) methodologies and standardised data documentation frameworks to support consistent and reliable cross-sectoral collaboration.
- Digital transformation technologies, including artificial intelligence (AI), the Internet of Things (IoT), and cloud-based platforms, require dedicated standards for data sharing, system interoperability, and the implementation of digital product passports (DPPs).
- The adaptation of existing standards and/or the development of new standards is required for sustainable products derived from secondary raw materials and waste streams (e.g. low-carbon cement, bio-based polymers).
- Clear definitions and harmonised criteria for End-of-Waste (EoW) and by-product status are essential to enable large-scale resource reuse and valorisation.

Enabling Industrial Symbiosis at Scale: RISERS Mid-Project Findings

The mid-project summary of RISERS policy recommendations offers a clear snapshot of where policy reform can unlock real-world symbiosis at speed and scale. The recommendations are grounded in ongoing stakeholder engagement including two rounds of targeted interviews and a just released web-based survey to identify policy gaps and needs.

A key strength of the RISERS approach is its sector focus. Based on earlier analysis of common source-sink patterns of resources , RISERS prioritises chemicals, steel, food, and cement and bio-based industries. This matters because industrial symbiosis is not "one size fits all": what blocks the reuse of slag in construction is different from what blocks residues in bioenergy value chains, and policy solutions must reflect these realities.

So, what is RISERS recommending—right now? The message from stakeholders is consistent: Europe needs greater harmonisation, clearer definitions, and faster standardisation pathways to reduce uncertainty and administrative friction which currently hamper IS. A central recommendation is to harmonise definitions of waste, by-products, and "resources," and to specify End-of-Waste (EoW) criteria EU-wide, enabling legal certainty and smoother cross-border flows.

But this is not all what stakeholders indicate as relevant. Read a summary of the RISERS mid-term policy recommendations to learn more details.

What happens next?

The recommendations will be sharpened through the RISERS survey, followed by evaluation interviews to validate results and build support across sectors.

If your organisation works with by-products, secondary materials, or cross-sector resource flows, this is a timely moment to follow RISERS' outputs as well as provide own contributions by taking part in RISERS on-line survey.

RISERS Advisory Board

The RISERS Advisory Board ensures the project's excellence, policy relevance and long-term impact. Bringing together leading experts from European institutions, standardisation bodies, industry networks and sustainability initiatives, the Board provides independent strategic guidance throughout the project lifecycle. Its members help align RISERS outcomes with European priorities on industrial symbiosis, resource efficiency and circular economy standardisation.

European policy and research perspectives are represented by Francesco Dolci and Matthias Bruchhausen (Joint Research Centre – JRC), supporting coherence with EU research agendas and facilitating policy and standardisation uptake. Strategic

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insight into industrial symbiosis policy and programme evaluation is provided by Klaus Sommer (KHSommer Consulting), drawing on extensive experience reviewing European Commission-funded initiatives.

Links to international and European standardisation are strengthened through Catherine Chevauche, Chair of ISO/TC 323 on Circular Economy, and Håkon Sandven Jentoft, Senior Advisor at Standards Norway, ensuring that RISERS results can be translated into practical standards and guidance.

Applied, real-world expertise is contributed by Slavko Dvorsak (Projekt Ambient d.o.o.), while sustainability and systems thinking are reinforced by Natalia Alandete Lara, who brings over a decade of experience delivering climate, ESG and multi-stakeholder programmes internationally. Technical depth in life cycle assessment and critical raw materials recycling is provided by Rita Schulze, with experience across research, certification and EU raw materials projects.

The RISERS Advisory Board plays an active, hands-on role in shaping the project's direction and outputs. Through critical engagement in plenary meetings, including the November 2025 session in Brussels, the Board challenges assumptions, sharpens key messages and helps make complex technical content clearer and more usable for industry and policymakers. Members provide targeted guidance on RISERS' policy contributions, most notably the proposal linked to the upcoming Circular Economy Act, ensuring recommendations are ambitious, evidence-based and aligned with European priorities. The Board also contributes directly to the development of the Industrial Symbiosis standardisation roadmap, helping steer it towards practical, credible and future-ready outcomes that can be effectively taken up by policy and standardisation communities.

Together, the RISERS Advisory Board combines policy insight, technical excellence, standardisation leadership and practical experience to ensure project outputs are robust, relevant and designed for lasting impact.

Further detail on how the Advisory Board supports RISERS in practice is available in a dedicated article on the RISERS website: https://risers-project.eu/driving-quality-and-impact-our-project-advisory-board-at-work/

Learn more about the RISERS project

RISERS is a Horizon Europe project aimed at developing an Industrial Symbiosis Standardisation Roadmap supporting the uptake of high impact synergies and resources considering:

- identification of the needs, gaps and opportunities,
- revision of current standards and standardisation efforts relevant for CE and the priority synergies and resources,
- initiating the process of new standards development (especially for newer technologies and pilot-scale synergies).

The RISERS project was launched in January 2024 with a duration of 3 years.

Consortium: Enspire Science Ltd.; CEN and CENELEC; DIN; EIT RawMaterials; University of Ghent; Fraunhofer Institute for Systems and Innovation Research ISI; International Synergies Ltd.; Institute for Ecology of Industrial Areas; Instituto de Soldadura e Qualidade

For more information visit: https://risers-project.eu

Voices of RISERS: Expert Interviews on Standardising Circularity

Discover the expert perspectives driving the RISERS project through our exclusive interview series. These conversations highlight how the project is transforming Industrial Symbiosis (IS) from a collection of local success stories into a coherent, standardised European system.

The Vision Behind RISERS - *Why standardisation is the essential driver for scaling circularity and building a new culture of cross-sectoral cooperation*

Featuring: **Andrea Motola** (Project Coordinator, Enspire Sciences) Understand the core mission of RISERS: to bridge the gap in a Europe that is "rich in innovation, but poor in integration". This interview explores how the project creates a common language of trust for circular cooperation, allowing industries to safely convert under-utilised resources into valuable inputs.

From Roadmap to Action - *The vital importance of early industry involvement—because "those who set the standard set the markets"*

Featuring: **Andreea Gulacsi** (Director Policy and External Affairs, CEN and CENELEC) The RISERS Roadmap is more than a document; it is a "compass for the future". Learn how CEN and CENELEC are taking these strategic insights and challenging Technical Committees to develop concrete European Standards that align with the upcoming Circular Economy Act.

Evidence-Based Circularity: 600+ Cases - *How mapping source-sink relationships reveals the socio-economic and environmental patterns needed to replicate success across the continent*

Featuring: **Lieven Demolder** (Researcher, Ghent University) Go behind the data of the RISERS synergies database, which analysed over 600 industrial symbiosis cases across Europe. Discover how the LESTS methodology identified seven high-potential synergies in sectors like chemicals, minerals, and food to serve as the foundation for new standardisation work.

Industrial Symbiosis in Practice - *How IS is evolving from isolated sustainability projects into a structured business ecosystem.*

Featuring: **James Woodcock** (Senior Project Manager, International Synergies Limited) Explore the reality of the factory floor, where "sustainability meets profitability". This interview addresses the practical barriers businesses face—such as fragmented "End-of-Waste" criteria—and how harmonised standards can provide the certainty of quality and supply needed to transition from virgin to secondary resources.

Bridging Research and Standardisation - *Why embedding standardisation into the early stages of research ensures that scientific advances reach the market as recognised industrial results*

Featuring: **João Santos** (Researcher, ISQ) Innovation and standardisation often move at different speeds. This conversation explores the need for "standards-thinking" early in the research cycle. Learn how RISERS connects R&I results to practical metrics for circular performance and material data formats.

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