



Consortium



RISERS

A Roadmap for Industrial Symbiosis Standardisation for Efficient Resource Sharing



About industrial symbiosis

Industrial symbiosis (IS) is defined as the use by one company or sector of underutilised resources from another, with the result of keeping resources in productive use for longer.

It allows to build an interconnected industrial landscape based on sharing resources such as waste, by-products, residues, energy, water, logistics, capacity, expertise, equipment and materials.

Despite obvious benefits IS is still not very common. A well guided IS standardisation may leverage IS into a widely adopted practice to build future - proof industries.

Project info

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Duration: 36 months

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Industrial symbiosis (IS) is an effective solution to address the „zero“ ambitions underscored by the EU policies and laws such as net-zero, zero-pollution and zero-waste to achieve the 2050 climate-neutrality and the circularity goals as well as a strong contributor to the EU green and digital agenda. By sharing or exchanging underutilised resources, industries and sectors that traditionally operate separately, can create mutual benefits while reducing the overall adverse environmental, social and economic impacts of their operations.

Our Project

- RISERS is committed to guiding the standardisation of IS to enhance resource efficiency across Europe. Our project, launched under the European Union's Horizon Europe Programme, will offer a solution to fill in standardisation gaps and address the significant barriers hindering the establishment of sectoral and inter-sectoral standards for efficient resource sharing.
- Our mission is to establish clear pathways and actions aimed at developing essential standards conducive to high-impact synergies for Europe's economy. We are committed to facilitating a cohesive strategy for integrating Research and Innovation (R&I) into standardisation processes.
- Through collaborative efforts with stakeholders, we seek to develop a robust standardisation framework that enhances industrial symbiosis, fostering interoperability and compatibility. This streamlined approach optimises resource utilisation, benefiting industry, the environment, and society at large.
- To develop the framework, RISERS capitalises on the IS standardisation effort provided by the CEN Workshop Agreement CWA17354.

The IS standardisation challenge

The key challenge is that for most industry sectors, the majority of IS opportunities lie outside one's own sector. It implies dealing with a heterogeneity of industries, sectors and value chains in order to develop standards which ensure that materials and products are interchangeable and that the systems and processes used are compatible and efficient.

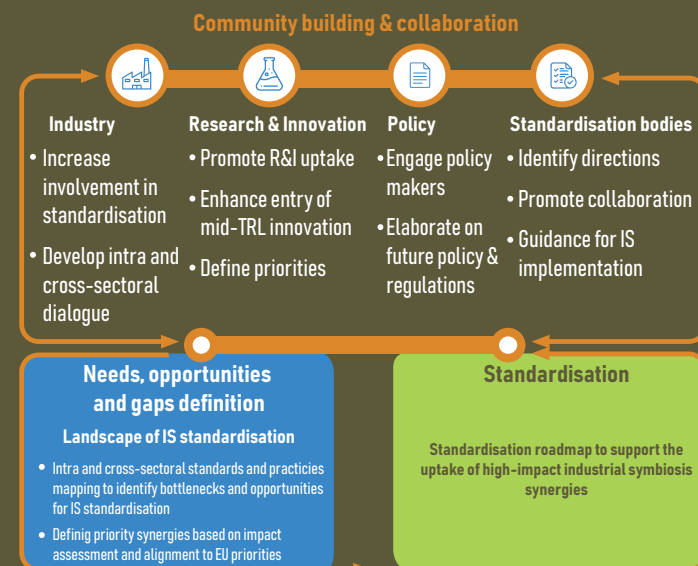
Other IS standardisation challenges result from:

- the need to define priority resources & synergies for standardisation of the most impactful synergies;
- interdisciplinary nature of IS which involves economic as well as environmental & social aspects and ensuring compatibility with them;
- dynamic environment of changing industrial ecosystems due to advancements in technology, change of market and regulatory conditions as well as discovering untapped synergies by R&I;
- regulatory & legal complexity;
- lack of awareness, skills & capacities.

RISERS addresses these challenges when framing the IS standardisation process by capitalising on existing standardisation efforts, analysis of existing knowledge provided by European projects and a collaborative stakeholders approach.

Our Approach

To address the IS standardisation challenges, RISERS uses a methodological approach based on community building and collaboration, definition of needs, opportunities and gaps to develop an IS standardisation framework.



The Roadmap

Our Roadmap for IS standardisation will consider two main directions of action: revision of existing standards especially for well-known synergies and proposing new standards development for new technologies and pilot synergies. It will be built based on 5 core elements:

- 01** Definition of priority synergies and resources.
- 02** Identification of opportunities for synergies within and across sectors.
- 03** A comprehensive mapping of the existing industrial symbiosis standardisation landscape.
- 04** Evidence base provided by R&I.
- 05** Engagement, collective knowledge and experience of experts and practitioners from industry, policy, academia, and standardisation bodies.