

# Skills Alliance for Industrial Symbiosis - A Cross-sectoral Blueprint for a Sustainable Process Industry (SPIRE-SAIS)



Coralis Webinar – Aluminium Industry, 21 January 2025  
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# Skills Alliance for Industrial Symbiosis (SAIS)

## A Cross-sectoral Blueprint for a Sustainable Process Industry (SPIRE)

### EU Programme: ERASMUS+ “New Skills Agenda”

- Duration: January 2020 - December 2023
- Funding: 4 Mio Euro
- 24 Partners + 13 associated partners
- Already 25 funded sectoral blueprints

### Key components of SPIRE-SAIS:

- Build on existing SPIRE coordination, projects and activities
- **Cross-sectoral approach, covering all the SPIRE energy intensive industry sectors**
- Sector associations as central communication and dissemination intersection



# Industry Driven Long-term Skills Strategy



## Mission

Industry driven proactive adjustment of the future skills demands developed by the industry and for the industry.

## Main objectives

- Proactive skills adjustments.
- New training and curricula requirements.
- Political support measures.
- Successful sectoral upskilling schemes.
- Efficient management of knowledge.
- Improve recruitment and retention.
- (Social) Key Performance Indicators (KPIs).





## PROJECT PARTNERS AND COUNTRIES



**Industry sector associations:** A.SPIRE, ESTEP, IMA Europe, European Aluminium, Water Europe, ECEG

**Companies:** Covestro (Chemicals), Sidenor, Ferriere Nord (Steel), MYTILIENOS (Aluminium), SGSB/AGBAR (Water)

**Education/training providers & RTOs:** Scuola Superiore Sant'Anna, Fundation Circe, ITC, ISQ, International Synergies, H2Opeople

**Research institutions:** TU Dortmund University, CSM/RINA, Visionary Analytics, IMNR, Łukasiewicz-IMN

**Regional institutions:** ART-ER

**Associated partners:** EIT Raw Materials, thyssenkrupp Steel Europe, CEFIC, CEMBUREAU, ITQ (Universitat Politècnica de València), Carbon Market Watch, Circle Economy, University of Deusto, Cerame-Unie, Carbon Market Watch, Skillman, ArcelorMittal Global R&D, Mota Ceramics Solutions MCS, ARGO, IndustriALL



Cement



Ceramics



Chemicals



Engineering



Non-ferrous metals



Minerals



Pulp & paper



Refining



Steel



Water

### Central Objective:

- Proactive skills adjustment with the industry for the industry

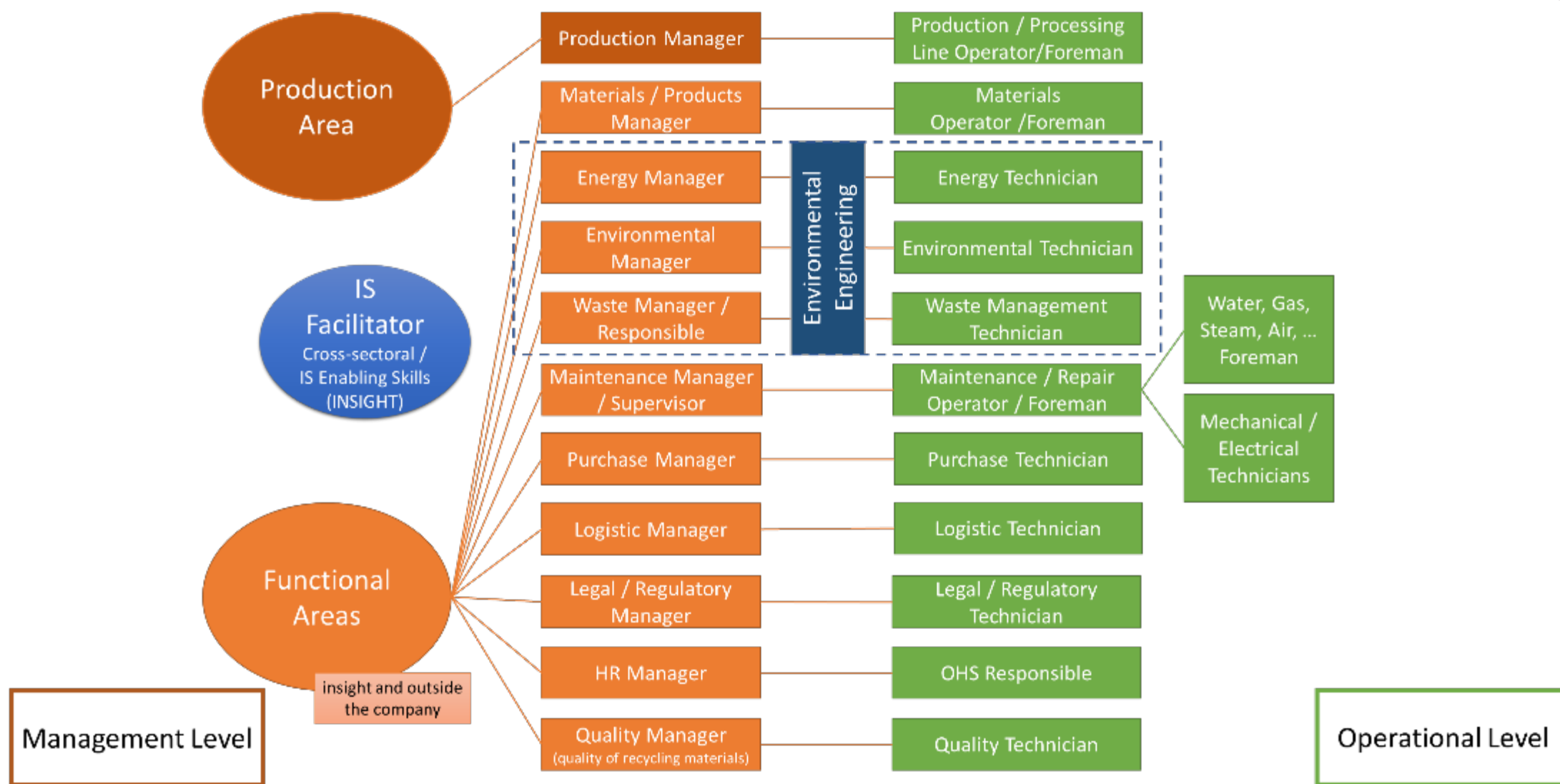
# Industry Driven Consortium



- 24 partners
- 13 associated partners
- 12 countries
- 10 industry sectors



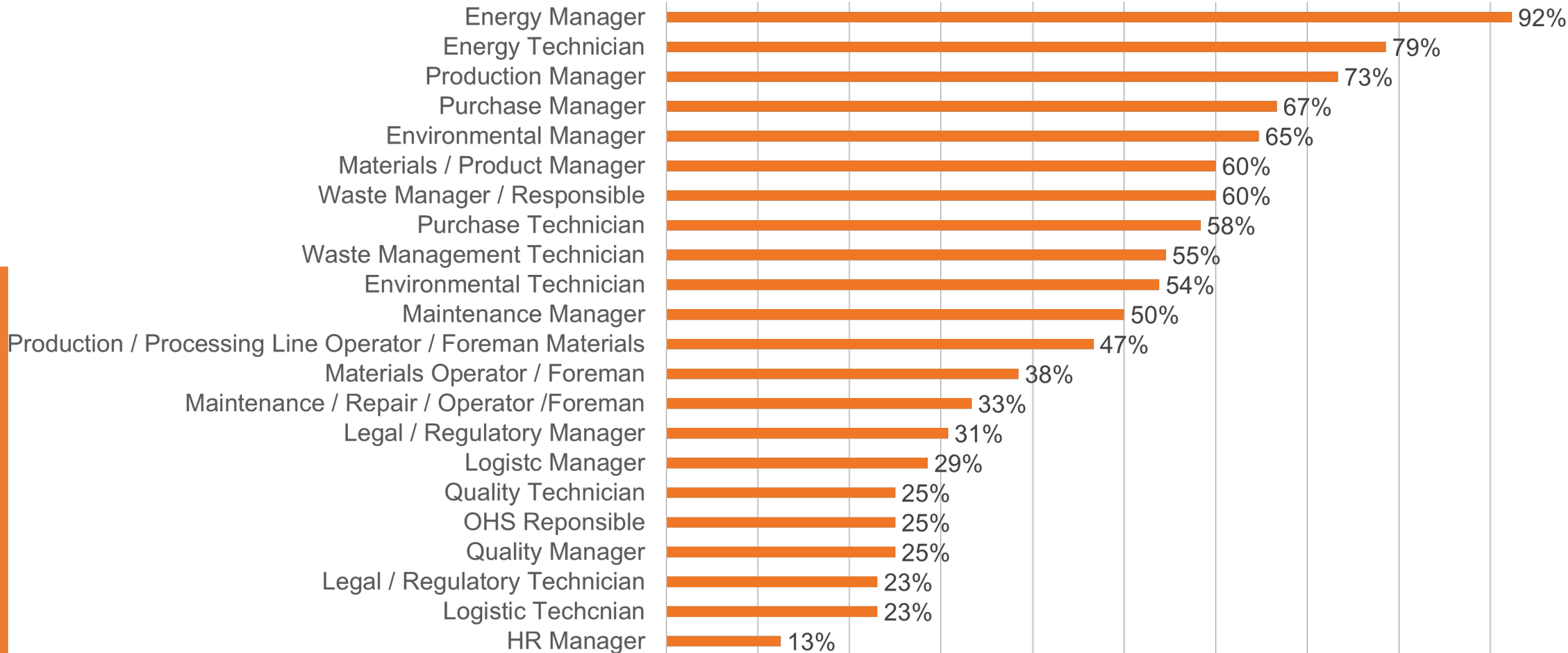
## Cross-sectoral Generic Job Profiles



# Job Profiles for Energy Efficiency (Survey 2024)



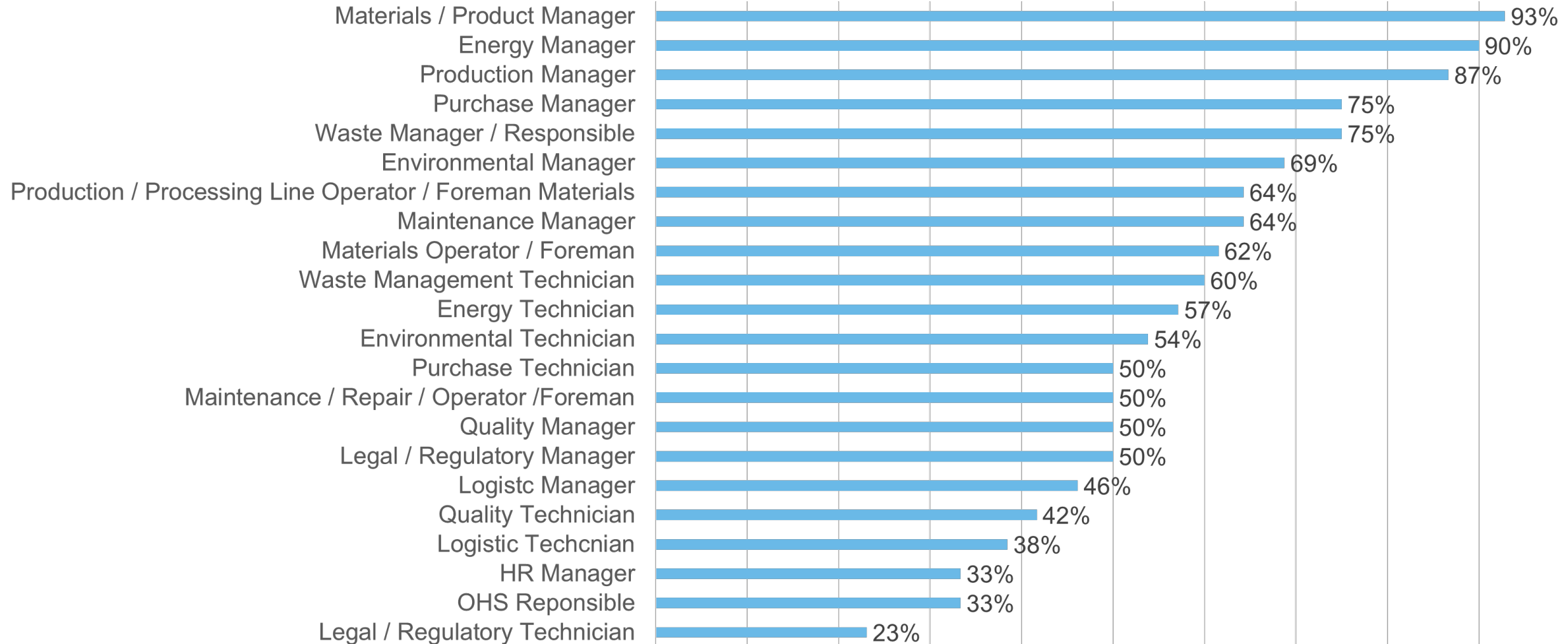
The most important profiles for Energy Efficiency



# Job Profiles for Industrial Symbiosis (Survey 2024)

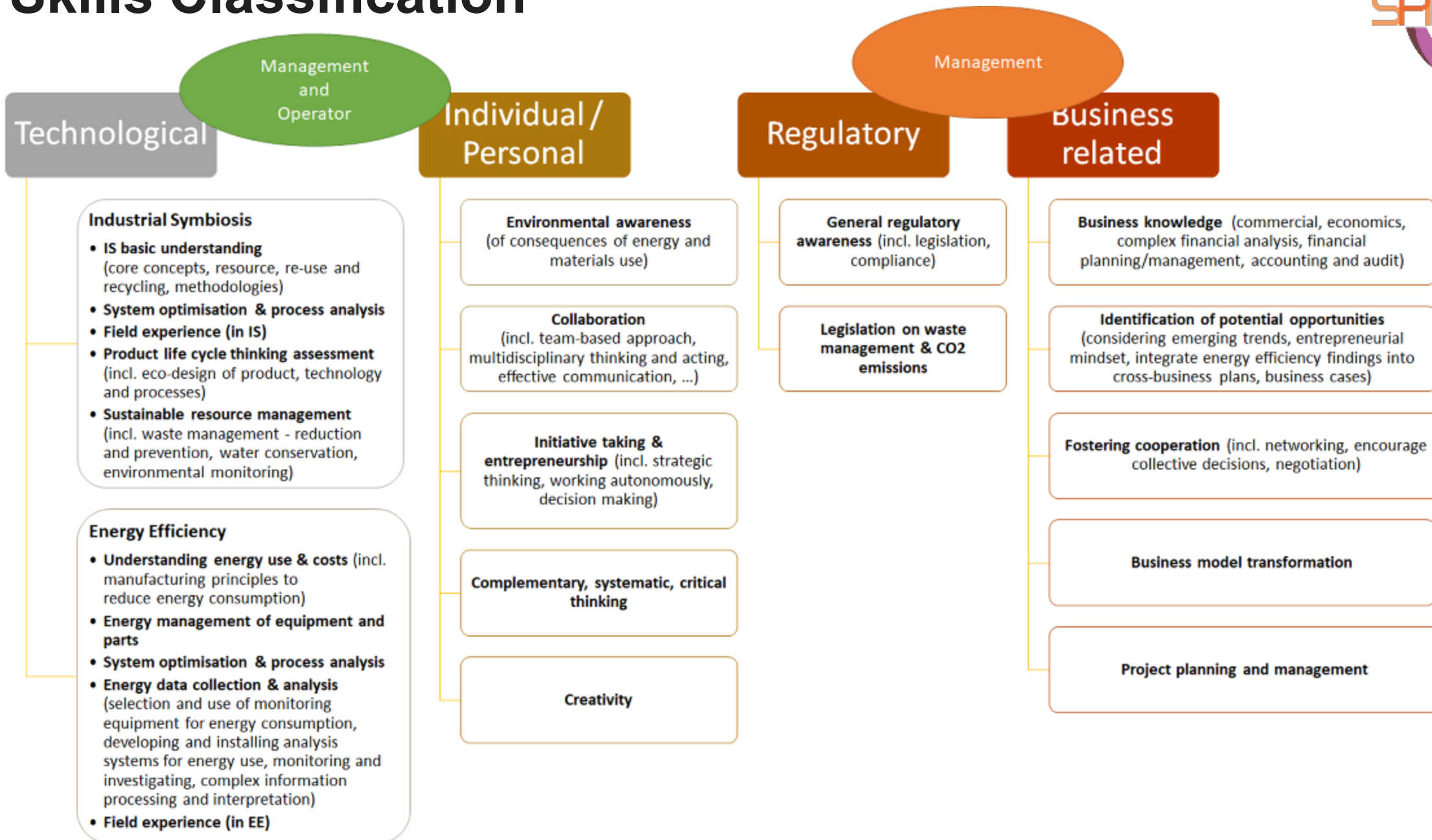


The most important profiles for Industrial Symbiosis



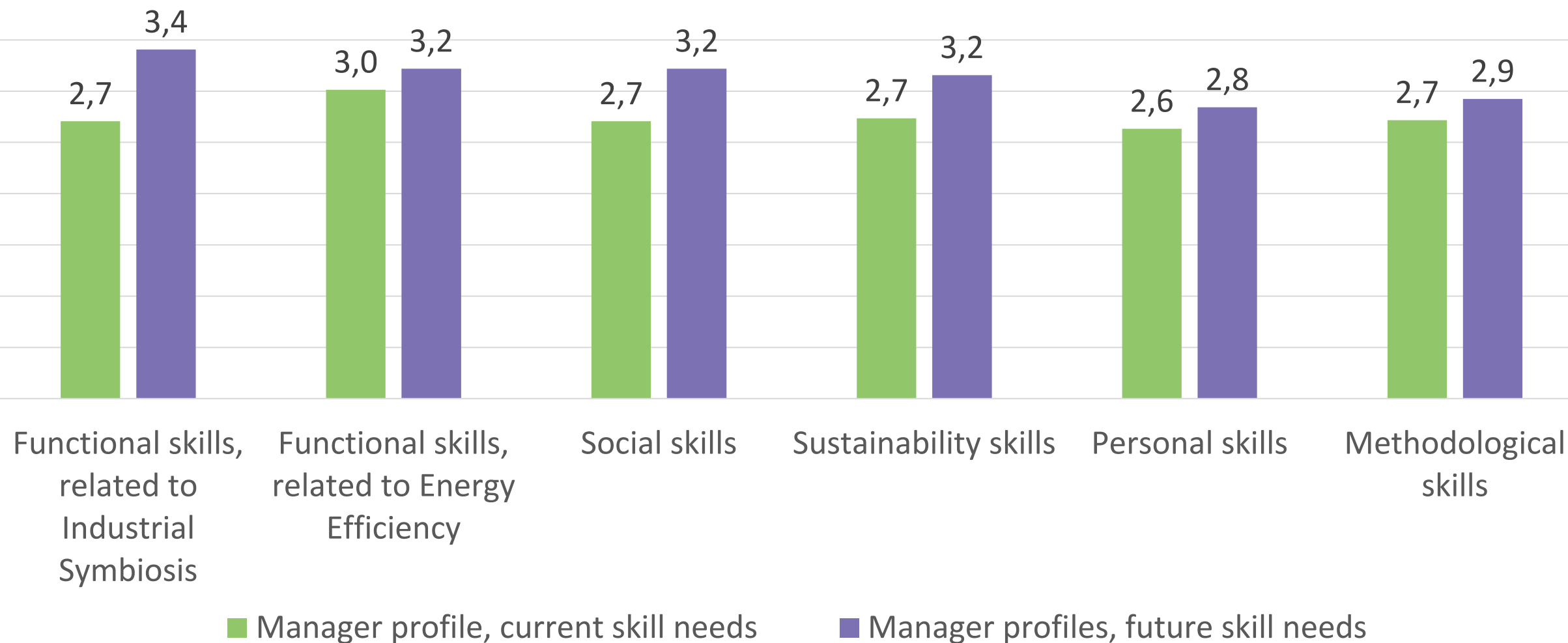


# Skills Classification



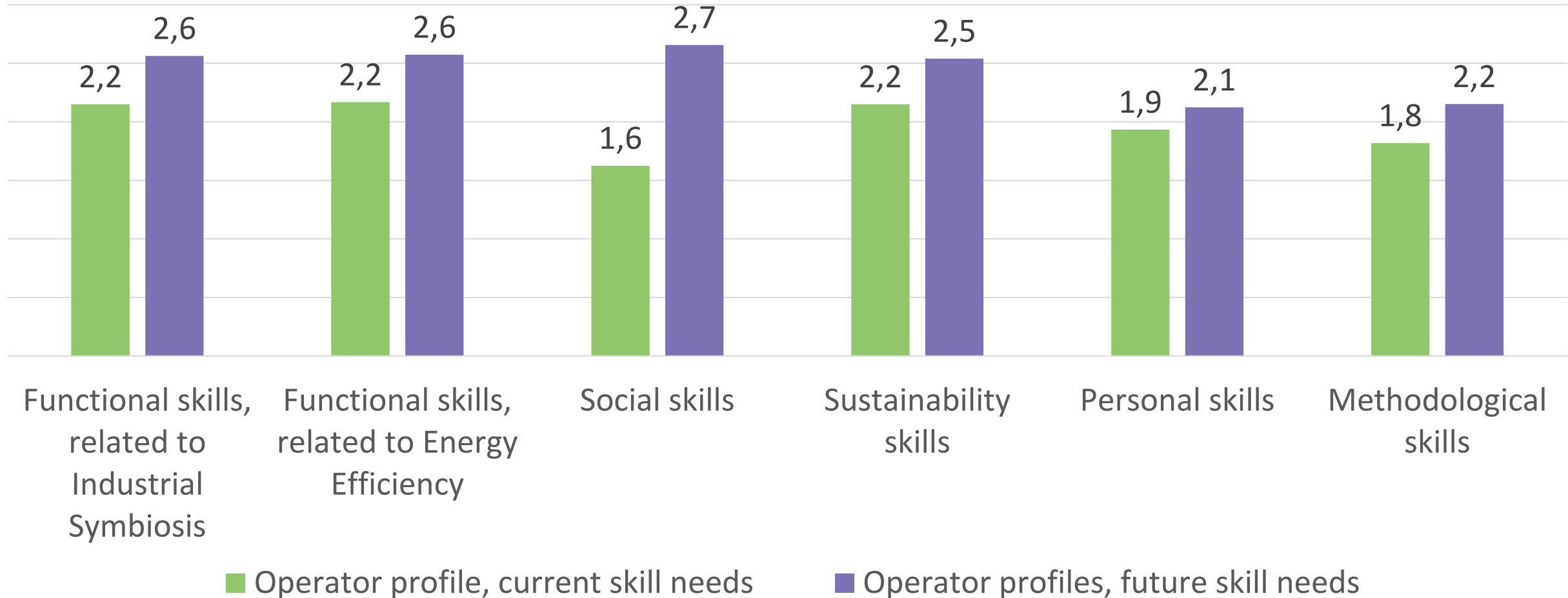
# Manager Skill Needs (Survey 2024)

0: Novice  
1: Awareness / Basic Actor  
2: Practitioner  
3: Expert  
4: Master



# Operator Skill Needs (Survey 2024)

0: Novice  
1: Awareness / Basic Actor  
2: Practioner  
3: Expert  
4: Master

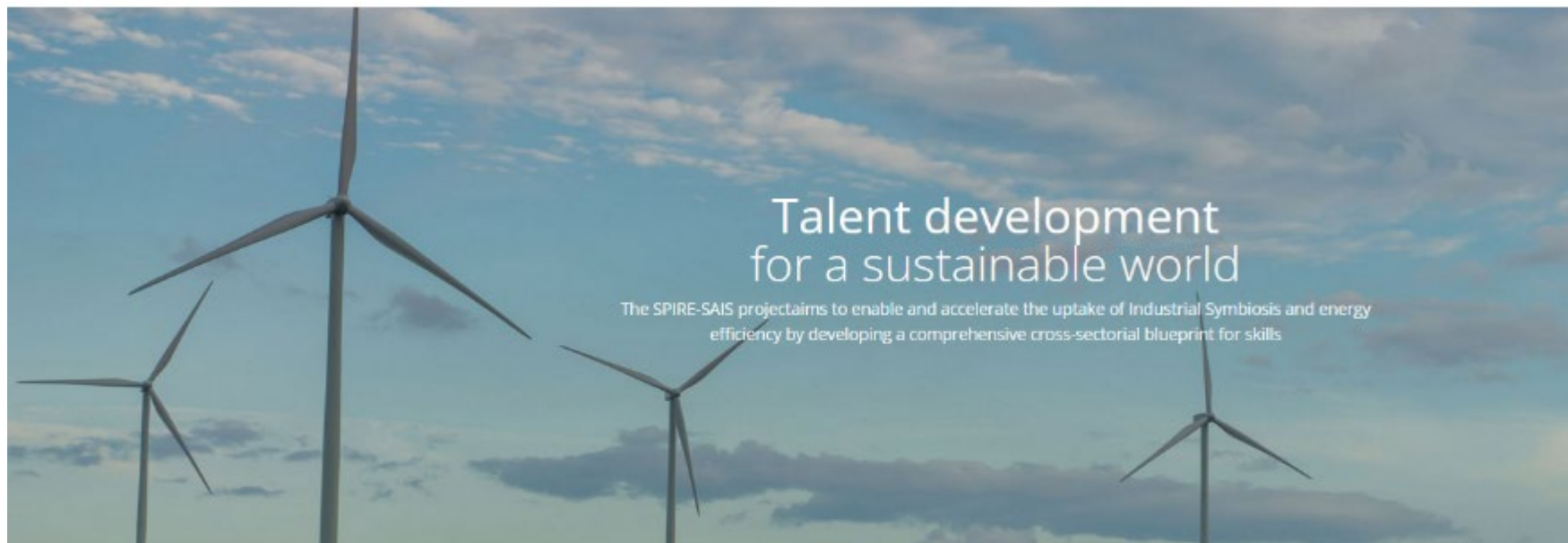




# Online Training Platform: SKILLS4Planet

 SKILLS4Planet SPIRE Project

AE



## Talent development for a sustainable world

The SPIRE-SAIS project aims to enable and accelerate the uptake of Industrial Symbiosis and energy efficiency by developing a comprehensive cross-sectorial blueprint for skills

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ASSOCIATION

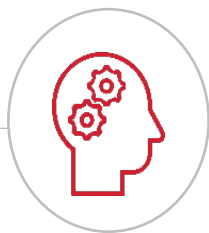
**alacero**

**Stahl** | Steel Institute  
VDEh

 **Materials  
Processing  
Institute**

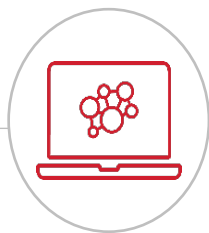


# Training Ecosystem Solution



## Skill Directory

Skill and knowledge directory that represent the current and future training needs of the steel sector.



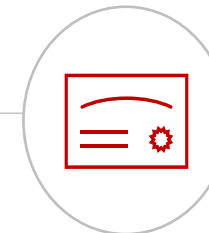
## Capability Assessor

Solutions to deliver capability assessments to organization and individuals to design customized development path.



## Learning solution Directory

Collection of learning solutions provided by experts and organizations into **steelHub** and **skills4planet**.



## Micro-Credentials





Enables learners to acquire, store, and share their credentials across platforms, enhancing their employability and professional development in a rapidly changing job market.



Technology infrastructure that facilitate communication and partnership between stakeholders of the Online Training Ecosystem.



# Learning Solution Directory

-  Classroom and Practical training
-  E-learning
-  Mentoring, Coaching and consultation
-  Webinars
-  Game-based learning
-  3D Models
-  Animated Videos
-  VR/AR solutions
-  Peer-to-peer



## Energy Efficiency SUS0210

This course offers a comprehensive overview of energy efficiency in industry, covering energy audits, system optimization, and sustainable practices.



## Industrial Symbiosis SUS0310

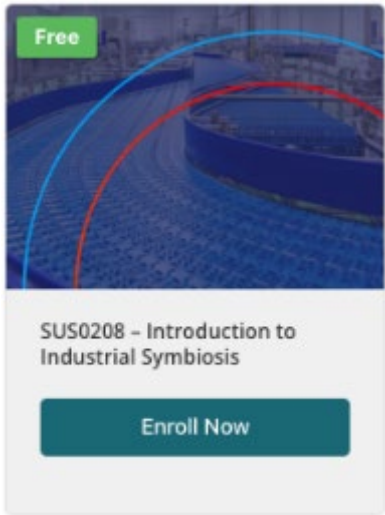
This course delves into industrial symbiosis. Participants will explore case studies and methodologies to foster eco-innovation and sustainability in their sectors, enhancing efficiency and environmental performance.



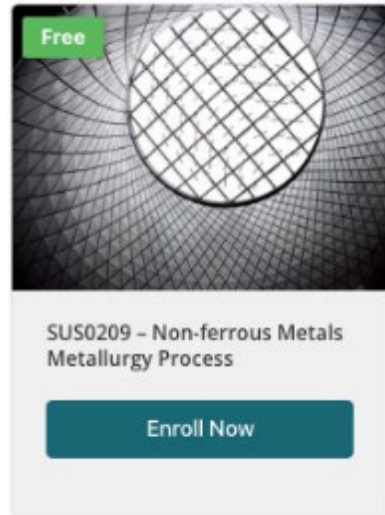
## Strategy for enhanced learning EDU0101

In this course students will explore innovative techniques to synergize academia and industrial practices, fostering a more integrated learning environment to implement technology for enhanced learning.

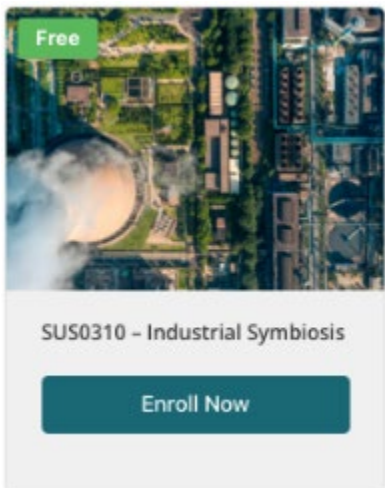
# Testing SKILLS4Planet



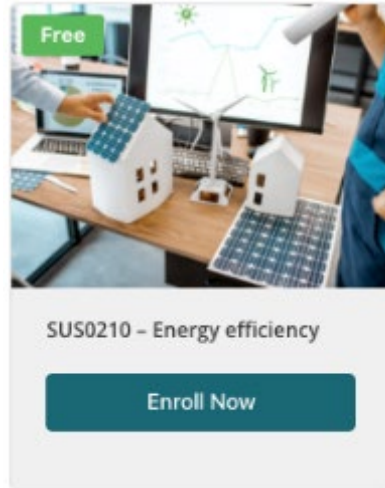
<https://skills4planet.eu/courses/sus0208-circle-self-assessment/>



<https://skills4planet.eu/courses/sus0209-non-ferrous-metals-metallurgy-process/>



<https://skills4planet.eu/courses/sus0310-industrial-symbiosis/>

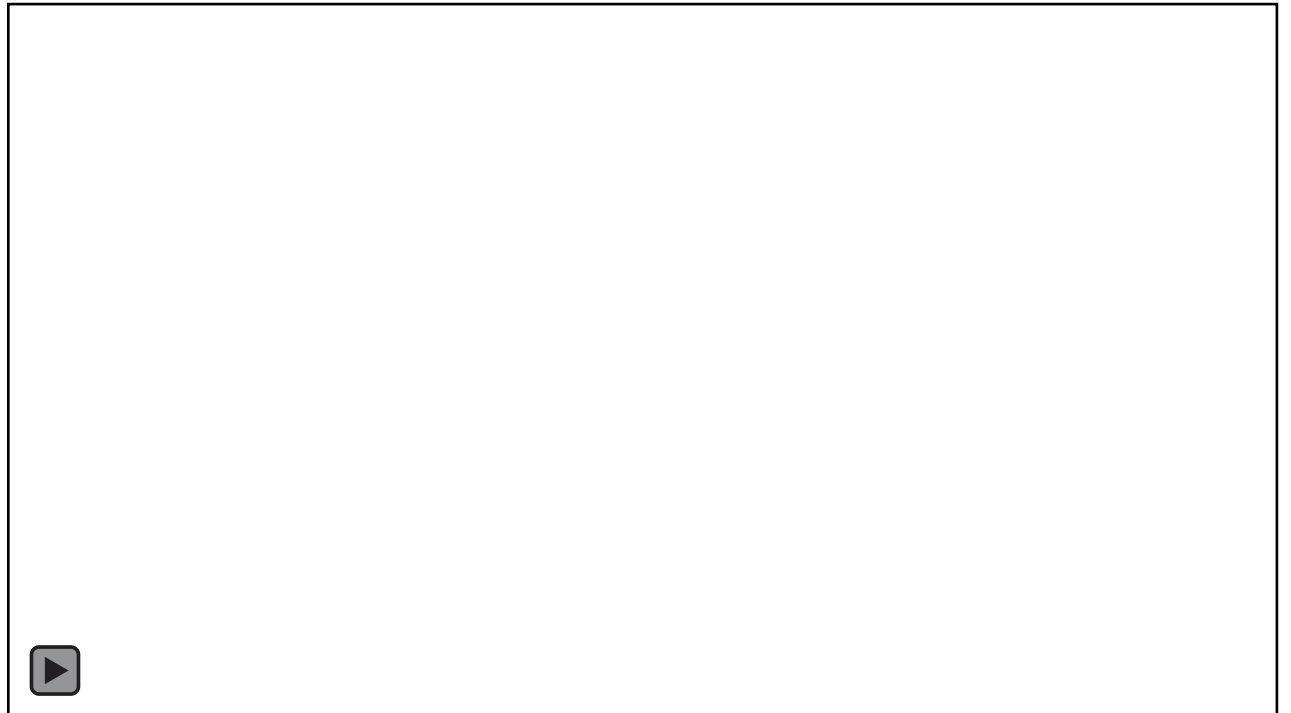


<https://skills4planet.eu/courses/sus0210-energy-efficiency/>

## Capability Assessor

Our tool enables organisations to accurately assess and analyse the skills and capabilities of individuals or teams, providing invaluable insight into strengths, weaknesses and overall effectiveness.

<https://skills4planet.eu/capability-assessor/>



There is an online questionnaire for collecting your feedback, please use this [link](#)

## Large Scale Partnership for



Find out more:



## Energy-Intensive Industries (LSP EII)

The **Pact for Skills** is comprising 14 industrial ecosystems and more than 2,500 members

The **LSP EII** is one of the ecosystems and is focussing on Energy-Intensive Industries:

- it is based on and further developing two sectoral Alliances:



### Composition of LSP EII

- sectors represented so far: Steel, Minerals, Water, Engineering, Logistics, Non-Ferrous Metals (Aluminium), Ceramics, Raw Materials, Welding, Chemicals, Cement
- Blueprint members and new members
- 41 signatories: 8 companies (also training providers), 12 industry associations, 1 union, 1 industry park, 6 training providers, 13 consultancies and research institutions (most of them are also training providers)



**PACT FOR SKILLS** *Leader*

An initiative of the European Commission



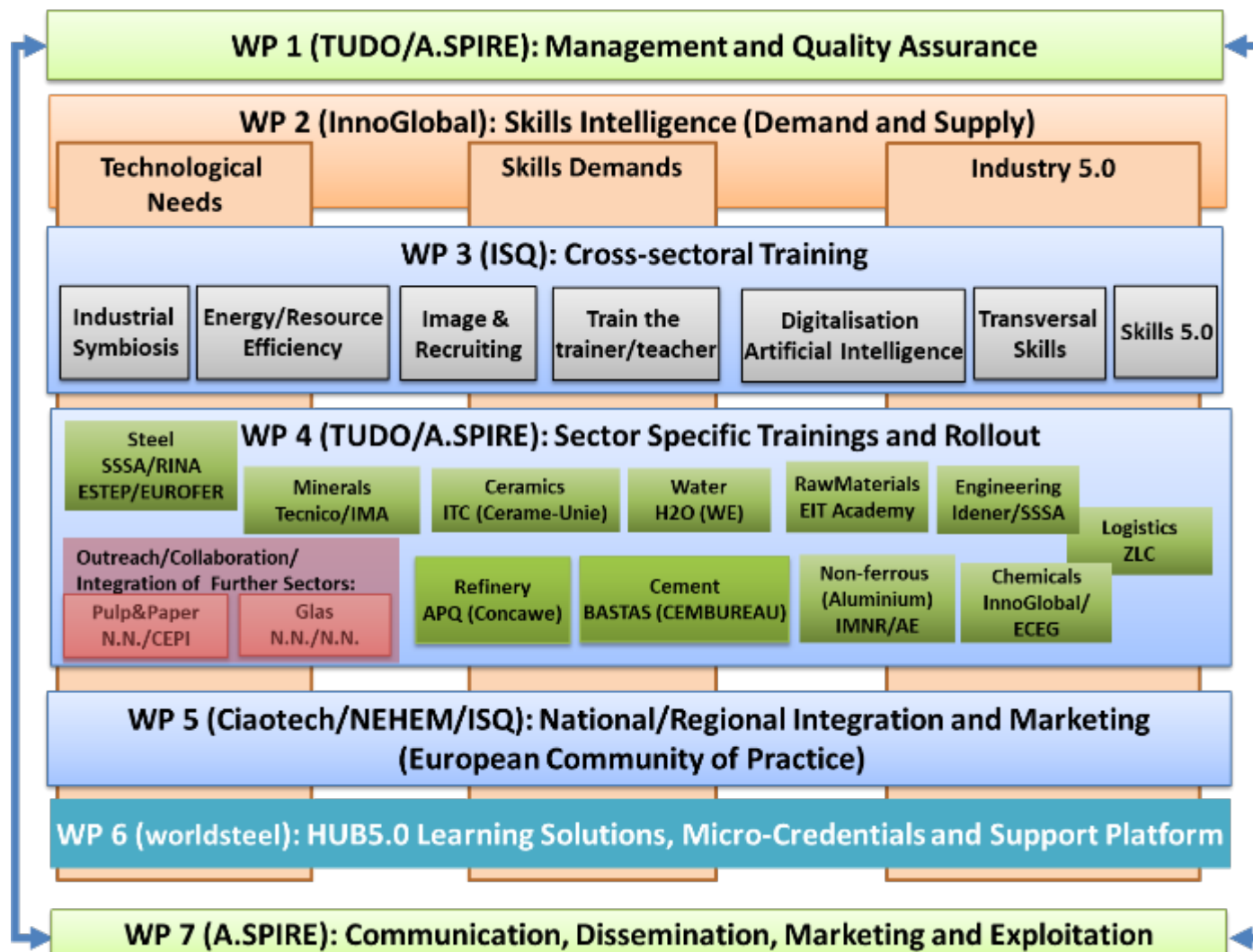


# Skills Alliance for the Green, Digital and Social Transformation of the Energy Intensive Industries (Skills4EII)



**PACT FOR  
SKILLS** *Leader*

An initiative of the European Commission



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[www.spire2050.eu/sais](http://www.spire2050.eu/sais)



ABOUT

OBJECTIVES

ACTIONS

PARTNERS

NEWS / EVENTS

OUTCOMES

–Deliverables

–Publications

NEWSLETTER

CONTACT

#### SPIRE-SAIS Deliverable 2.1

Report on **Industrial Symbiosis and Energy Efficiency in European Process Industry: State of Art and Future Scenario (v2, July 2022)** describing the current state of the implementation of the Industrial Symbiosis and Energy Efficiency concepts in the European process industries.

#### SPIRE-SAIS Deliverable D3.2

Report on **(Company) Skills Requirements and Foresight** providing more insights into industry skills requirements.

#### SPIRE SAIS Deliverable D4.1

Mapping of current VET provision (Version 1)

#### SPIRE-SAIS Deliverable D5.1

**Training Framework Version 1 2021** covering training courses, measures, arrangements, tools and activities for integration within VET, company and association training programmes.

#### SPIRE-SAIS Deliverable D5.2

**Blueprint Prototype 2021** analysing the current state of implementation of industrial symbiosis and energy efficiency concepts in the European process industry and the related skills needs.

#### Factsheets

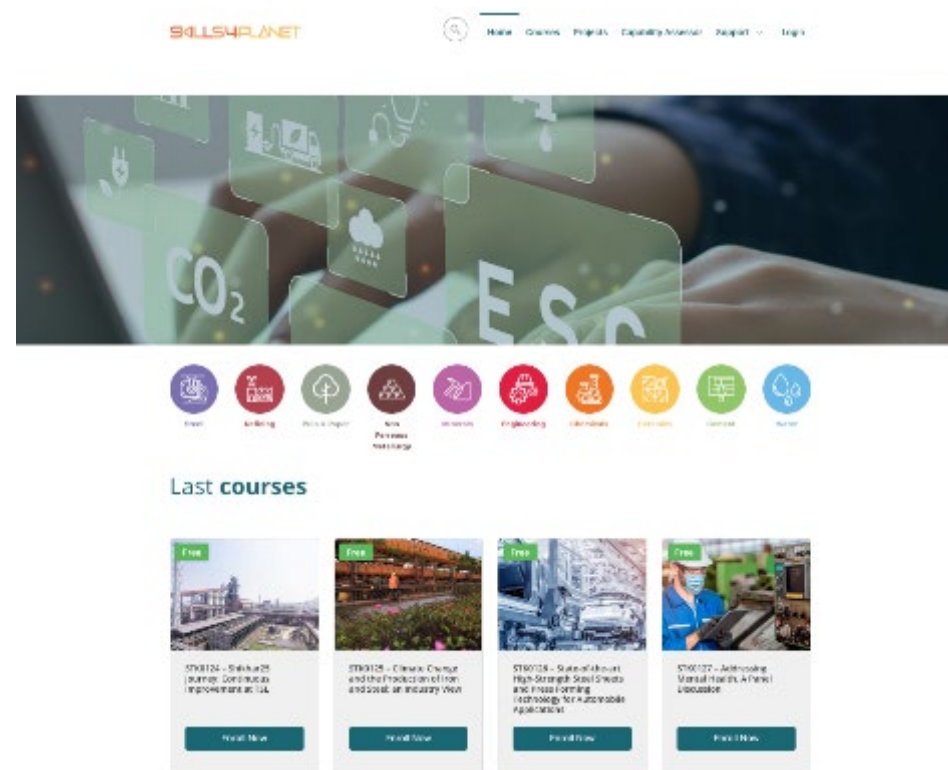
WP2 Technological Development

WP3 Skills Requirements

WP4 VET Systems

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Explore SKILLS4Planet:  
<https://skills4planet.eu/>



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