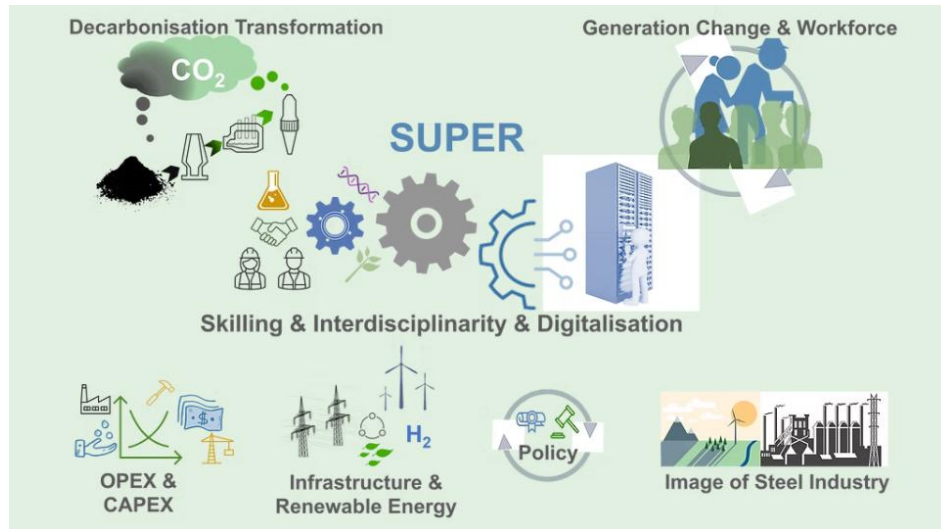


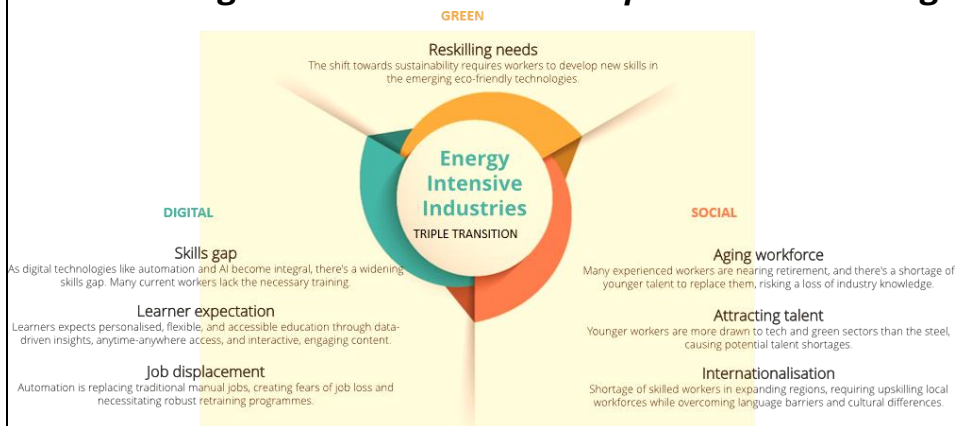
Sustainable fUture steel Production and pEople Recruiting and skilling



Newsletter n. 2

People, Skills and the Future Workforce for Green Steel

Building the Workforce for Europe's Green and Digital Steel Future.



The European steel industry is facing a major transformation driven by **decarbonisation, digitalisation, and demographic change**. Emerging technologies such as hydrogen-based steelmaking,

artificial intelligence, digital twins, and advanced automation are creating new opportunities while increasing demand for new skills and competencies.

SUPER explores how the sector can successfully manage this transition by placing **people at the centre of change**. The project highlights the importance of workforce development, talent attraction, and lifelong learning to ensure that Europe has the skills needed to support a competitive, sustainable, and climate-neutral steel industry.

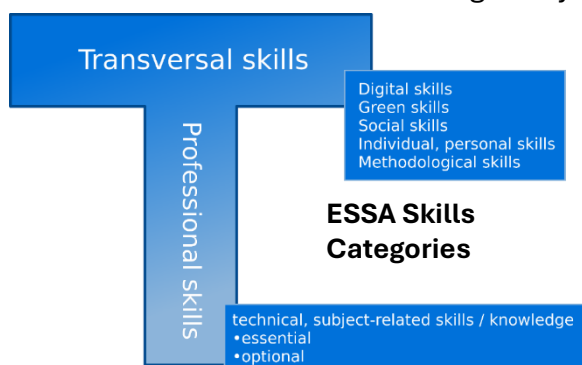
Learning from European Skills Alliances: SUPER builds upon the results of major European initiatives that have already laid important foundations for workforce transformation. The adjustment of the workforce qualification for the green and digital transformation of the steel industry so far is mainly covered by recent the Skills Alliances:

- European Steel Skills Alliance (ESSA)
- Skills Alliance for Industrial Symbiosis and Energy Efficiency of Energy Intensive Industries (SPIRE-SAIS)
- Skills Alliance for the Green, Digital and Social Transformation of the Energy Intensive Industries (Skills4EII).

ESSA – European Steel Skills Alliance

ESSA developed a comprehensive framework for identifying future skills requirements in steelmaking. The project established:

- more than 200 professional role profiles;
- 26 steel job families;
- a European Steel Technology and Skills Foresight Observatory;
- the steelHub online training ecosystem.



ESSA also highlighted the growing importance of digital, green, social and methodological competencies alongside traditional technical skills

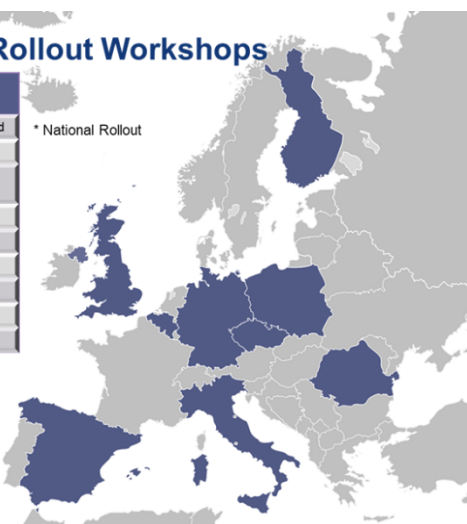
ESSA set up **national-regional training ecosystems** in several steel-producing countries. These ecosystems brought together companies, training providers, public

authorities, social partners, and research organisations to discuss local skill needs, test new training formats, and improve coordination between industrial practice and VET systems. They also served as platforms to address region-specific challenges such as hydrogen-related competencies, labour shortages, or the needs of steel regions dominated by small and medium-sized enterprises (SME). On the left, the 9 rollout regions of the ESSA project.

National/Regional Rollout Workshops

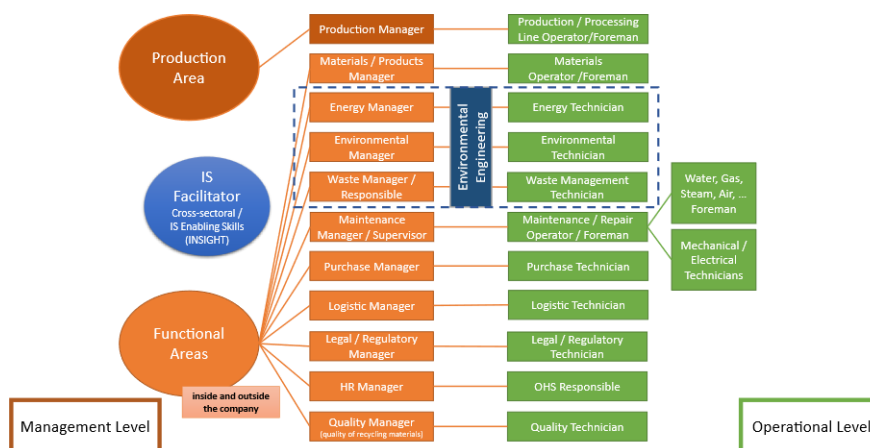
Country	Regional Focus
Germany*	Rhein-Ruhr-Area, Saarland
Czech Republic*	Moravia-Silesia
Spain*	Basque Country Asturia
United Kingdom	South Wales
Italy	Friuli Venezia Giulia
Poland	Silesia
Finland*	No focus region
Belgium*	No focus region
Romania	Galati region

Reach out to more than **100 additional stakeholders:** companies, public authorities, associations, unions, research institutions or universities, training providers, and others

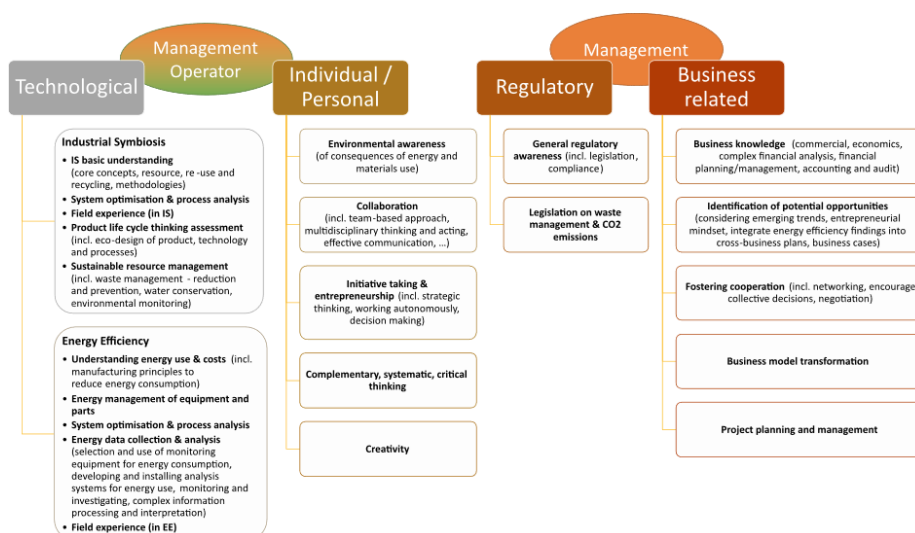


SPIRE-SAIS (2020–2024). The project highlighted that the transition towards energy-efficient and symbiotic industries requires not only new technologies, but also new skills and workforce capabilities. While covering six energy-intensive sectors, the project paid particular attention to the steel industry, developing dedicated analyses of its job profiles, training needs, and organisational challenges. This ensured that the steel sector's specific requirements were fully reflected in the project's cross-sectoral skills and training roadmap.

A key outcome was the development of a dedicated organisational flowchart for the steel industry, mapping all roles that interact with Industrial Symbiosis and Energy Efficiency in a steel plant. This flowchart enabled the identification of steel-specific job profiles - such as process engineers, metallurgical specialists, plant operators, maintenance experts, environmental officers and energy managers - that are directly involved in symbiosis and efficiency measures.



Steel partners contributed to defining sector-specific job profiles, highlighting skills related to industrial symbiosis, energy efficiency, circularity, waste valorisation, and digitalisation. Their input helped validate future skills needs and ensured the steel industry's perspective was fully reflected in the project's cross-sectoral skills framework.



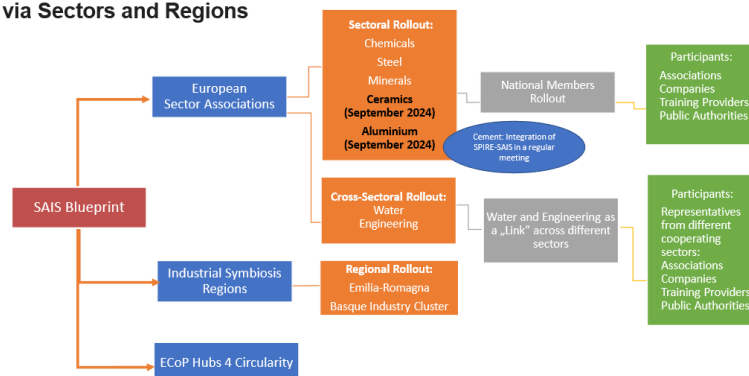
To support practical learning, SPIRE-SAIS developed the **SKILLS4Planet online platform**, providing training resources on energy efficiency, industrial symbiosis, and digital skills. The project also delivered train-the-trainer activities, stakeholder workshops, and talent attraction initiatives, bringing together industry, education providers, policymakers, and



civil society. Through this regional, ecosystem-based approach, SPIRE-SAIS helped strengthen skills development and support the twin green and digital transition across Europe.

These activities were complemented by train-the-trainer programmes, talent attraction initiatives, and regional stakeholder workshops, fostering collaboration between industry, education, policymakers, and civil society. Through this regional, ecosystem-based approach, SPIRE-SAIS helped align skills development with local needs and strengthen the implementation of training measures for the green and digital transition.

Open Coordination of the Rollout via Sectors and Regions



Skills4EII. The ongoing Skills4EII initiative is further developing this work by supporting the transition towards Industry 5.0.

A particular focus is placed on future-oriented roles such as:

- Green Steel Transition Architect;
- Digital Twin Deployment Lead;
- Green Skills and Capability Architect;
- Circular Resilience Strategist;
- Human-Machine Teaming and Resilience Lead.

These emerging profiles illustrate how future steel careers will combine technical, environmental and digital expertise.

Building the Workforce of Tomorrow- A successful transition to low-carbon steelmaking depends not only on technology, but also on people. One of the key challenges identified by SUPER is the gap between public perception and the reality of today's steel industry.

Modern steel plants are increasingly driven by:

- Clean and low-carbon technologies
- Automation and digitalisation
- Hydrogen-based production routes
- Circular economy practices
- Advanced data-driven systems

Inspiring Future Talent : To help attract the next generation of professionals, initiatives such as **RACE (Raw & Circular Economy Expedition)** connect students directly with industry, researchers, and innovation experts through hands-on challenges.

The 2025 edition, organised within the SUPER framework, involved **45 international participants** and demonstrated a strong positive impact on perceptions of the steel sector, particularly regarding its innovative and sustainability-driven nature.

Skills for Industrial Transformation: SUPER also supports workforce development through **HUB5.0**, a digital learning platform that brings together:

- Learning resources and training materials
- Skills and capability assessments
- Digital credentials
- AI-supported learning tools

The platform is designed to support students, workers, SMEs, universities, and training providers as industrial skill requirements continue to evolve.

Looking Ahead

*The future of European steel will depend on a workforce equipped for the challenges of **decarbonisation and digitalisation**.*

Through collaboration with industry, education providers, and European skills initiatives, SUPER is helping build the talent, knowledge, and lifelong learning opportunities needed for

a competitive and sustainable steel industry.

