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Memorandum of Understanding (MoU)

Pact for Skills Alliances for Energy Intensive Industries

This Memorandum of Understanding (MoU) outlines a common pact for skills for energy intensive industries on the background of the results of the two sectoral Blueprints “European Skills Alliance for Industrial Symbiosis” (SPIRE-SAIS) and “European Steel Skills Alliance” (ESSA). These skill alliances are setting the ground for cross-sectoral cooperation and commitment of stakeholders from energy intensive industries. Our vision is to institutionalise ESSA and SPIRE-SAIS under the umbrella of the Pact for Skills by establishing a “large-scale partnership and ecosystem” of Energy Intensive Industries (EIIs).

The Partners of the EII Pact for Skills

SECTORS INVOLVED:

The **Energy Intensive Industry sectors** involved are cement, ceramics, chemicals, non-ferrous metals, minerals, pulp&paper, refining, and steel. All of them are part of A.SPIRE and Processes4Planet (P4Planet) Partnership. The steel sector is also involved in the Clean Steel Partnership, led by ESTEP from the private side. The glass sector despite the fact that is not a SPIRE member can be invited to join the pact for skills.

The **Partner Sectors**: engineering and water as well as critical raw materials. These partners are key partners of the EII to develop and deliver the solutions for energy transition, climate neutral and circular economy solutions. Other partner sectors can include ICT, critical raw materials, or waste management. In this document, we will refer to both (EII and Partner) as the **Process Industry**.

ECOSYSTEM INVOLVED

For the purpose of the Pact for Skills, the ecosystem of the large-scale partnership of the Process Industry includes any other organisation that can support to bridge the skills and talent gap of the Process Industry. This can involve: companies, associations, social partners, research organisations, universities, other educational or training organisations, civil society et al.

HOW TO GET INVOLVED IN THE PACT FOR SKILLS OF THE PROCESS INDUSTRY

All the sectors and members of A.SPIRE and ESTEP will be invited to sign the Pact for Skills of the Process Industry. The Pact is open to the involvement of any company from the Process Industry or any organisation belonging to the ecosystem. In order to become member of the Pact for Skills, each organisation needs to fill in the application form available on the Pact for Skills website: https://pact-for-skills.ec.europa.eu/index_en. Optionally they can become members either of ESTEP (Clean Steel Partnership) or of A.SPIRE (Processes4Planet Partnership).

The Challenge

The process industry is essential to multiple strategic/critical value chains of the EU economy and society. They design, manufacture and deliver materials and solutions for wind turbines, solar plants, high-speed trains, road infrastructure, and buildings for housing or comfortable workspaces among other.

The EU Process Industry stands for more than 20% of the European manufacturing sectors in turnover and employment, more than 7 million direct jobs and more than 19 million indirect jobs in Europe.

The need to transition to a climate-neutral and circular economy is more pressing than ever. Developing and deploying climate neutral solutions, closing the energy and feedstock loops and accelerating innovation to achieve global competitiveness leadership are the main challenges of the EU Process Industry. **In order to achieve these various objectives, an unprecedented transformation of production and consumption practices must be deployed** at scale within less than 30 years.

The ERA-Low carbon report signals the process industry account for 17% of the EU's total greenhouse gas emissions in 2019. The EII Masterplan signals they reduced emissions by 36% between 1990 and 2015 (accounting for 28% of the total EU economy-wide emissions reduction). Any emissions reduction by the EII will have a direct and multiplying effect in the circular value chains.

In addition, critical raw materials play a crucial role in many energy intensive industries. Although availability is a key issue for many industries, other issues include innovative processing methods, production of alloys with specific structural properties, and recycling are important topics for delivering innovative, high-quality and sustainable products.

The effective deployment of the innovative solutions requires a highly qualified and skilled workforce and talented people with a bold entrepreneurial mindset. However, **the Process Industries face a scenario of fast-changing new skills demands and difficulties to attract new talent**. The lack of skills and education are a bottleneck to overcome prior to realise the full potential of new technological solutions within and across companies (e.g., for industrial symbiosis). **Awareness on the process industries on strategies to deliver climate neutral and circular solutions and new available training and education programmes** for the new skills are needed to bridge the skills and talent attraction gap observed now, especially on topics related to digitalisation, industrial symbiosis and sustainable ways of valorising valuable resources to deliver on the climate transition challenges ahead.

The Ambition: Cross-sectoral Skills Alliance and Strategy

To address the challenges of European digital and green twin transition, SPIRE-SAIS and ESSA are including the social transition by developing an industry driven Skills Agenda and Strategy for an ongoing and short-termed implementation of new skills demands in the sectors of P4Planet.

Economic, digital and technological developments, as well as increasing energy and resources efficiency and environmental demands (e.g. decarbonization, emission and waste reduction), present the European (and global) process industries with many challenges, not least to continuously update training and qualification, knowledge and skill profiles of the workforce. To address multi-faced, cumulative and constantly changing economic challenges and technological development, human resources policy could only be successful by integrating all the concerned and relevant actors and stakeholders.

A Blueprint strategy for human capital and skill development through a **Cross-Sector Skills Alliance of Process Industry** is already developed within a (social) innovation process of ESSA and SPIRE-SAIS involving a broad range of key stakeholders from the involved sectors: companies, associations and social partners, education and research institutions, policy and civil society organizations.

Three principal objectives are supported by an underpinning strategy framework:

1. Identify existing skill gaps and demand for the ongoing transition
2. Build appropriate training and curricula, including new vocational education content and pedagogies across the sectors (thus enabling mutual recognition of skills and training), within companies as well as education and training institutions;
3. Identify, develop and promote successful sectoral recruitment and upskilling schemes, including first (framework) training tools for: i) the efficient management of knowledge towards high skilled workers, and ii) tackling recruitment difficulties (e.g. industry attractiveness) for widening the talent pool and establishing a more diverse workforce.

With the existing skills alliances two different foci are in place:

- SAIS: common cross-sectoral new skills demand concerning the specific topics of industrial symbiosis and energy efficiency.
- ESSA: sector specific overarching solution, job profile overarching up-skilling of transversal skills (technical skills, complemented by green, digital, social, methodological, and individual skills).

Based on this we will develop both strands further under a common umbrella, by integrating new (non-Blueprint) members and addressing further skills demands and related training solutions.

The Vision: Operationalisation and Institutionalisation of the Blueprints

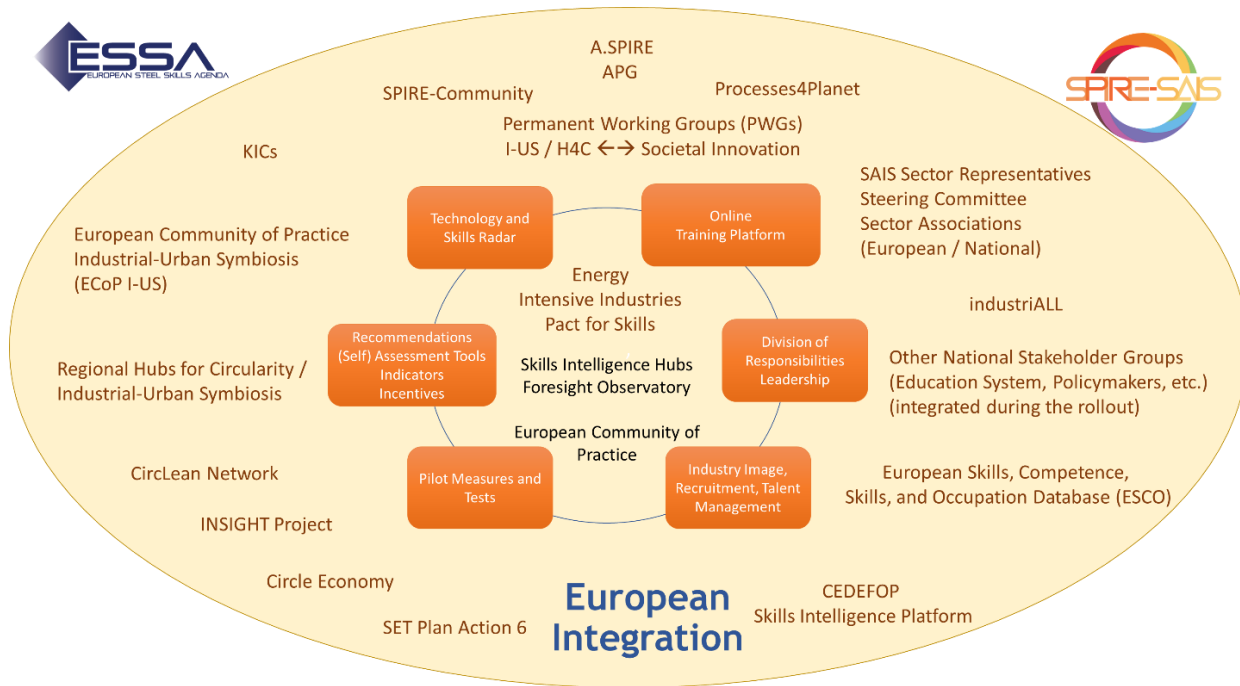
Our vision is to ensure a smart ongoing and dynamically developing cross-sectoral alliance and cooperation integrating the skills perspective in common programs (as of today already done in the P4Planet Strategic Research and Innovation Agenda 2050 and the Clean Steel Partnership. Via the Focus Group People of the European Steel Technology Platform ESTEP, the Permanent Working Group Societal Innovation of Processes for Planet and its Advisory and Programming Group, as well as with the Sector Representatives Committee of SPIRE-SAIS we will support the future activities of the Large Scale Partnership and Process Industry Ecosystem under the Pact for Skills.

What we offer: Integrated Coordination and Cooperation Structure, Tools, and Actions

Via the Open Coordination Method task and actions of the Process Industries Pact for Skills based on the ESSA and SPIRE-SAIS structures we aim with our action and deliverables to address three central pillars in priority:

- Technology and Skills Foresight for all Process Industry sectors
- Skills Intelligence Hubs (including online training platforms SKILLS4Planet, steelHub)
- European collaboration of the sectors, member states and regions.

Via the foresight we aim to update the relevant skills demand and training framework continuously (Skills Intelligence). The ESSA and SPIRE-SAIS Blueprint tools (e.g., skills assessment survey, training framework, training modules, train the trainer measures) are planned to be offered on a European level with the possibility to adapt them to sectoral-national-regional specific needs. Recruitment and image campaigns are considered to attract specific target groups (young people, women, etc.). Bundling and exchanging best practice will be done by addressing and integrating members of existing sector associations and structures.



The proposal and objectives

A general European joint framework commitment will be complemented by sector specific actions or sub commitments. With a cross-sectoral exchange strategy and alliance the aim is to dynamically detect and adjust future skills demands in line with the ambitions of the Process Industries European Strategies (e.g., P4Planet’s Strategic Research and Innovation Agenda, ESTEP Strategic Research Agenda and Clean Steel Partnership CSP). Alignment with other European programs and activities will ensure the integration of the EII’s skills perspective (esp. Erasmus+, Horizon Europe, P4Planet, CSP calls and projects). Possible complementarities with the Raw Materials Academy managed by the EIT Raw Materials will be explored to identify new areas for skills-focused actions. Rollout to the different sectors, member states, selected regions (esp. Hubs4Circularity, sector related clusters) is planned to be done by the members of the Pact for Skills through different means (e.g., platforms, events, workshops). This can be done in collaboration with European Community of Practices, the Pacts for Skills Support or other.

Beside the existing skills approaches (ESSA: t-shape skills combining technical with transversal skills, SPIRE-SAIS: skills for industrial symbiosis and energy efficiency) and depending on the existing resources and funding possibilities the integration of further cross-sectoral skills demands for other and new challenges (e.g., decarbonization, hydrogen usage) are under consideration.

The LSP has committed to promoting the aim of involving 50% of the workforce in upskilling and reskilling across the ecosystem each year by 2030. For more information on this commitment, see Annex 1.

KPIs: quantitative / qualitative

- Engaged sectors (number of involved sectors, and their institutions)
- Involved stakeholders (number of companies, associations, research and education organizations, civil society organizations, public authorities)
- involved member states and regions with energy intensive industries (number of sector specific clusters/regions, H4Cs, industry parks, etc.)
- Number of related job profiles, skills identified, and related trainings
- Number of projects combining technological development with the skills demands and training (skills integration in new projects) by integrating this topic in regular observations and surveys (e.g., within the reporting of Clean Steel Partnership and Processes for Planet).
- The reporting to be covered by running projects

Supported by



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Idener Consulting

INEGI - Institute of Science and Innovation in Mechanical and Industrial Engineering

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Annex I. Commitment for the EII ecosystem

The Pact for Skills Large-Scale Partnerships commitment to supporting the upskilling and reskilling of their workforce.

In support of the objectives of the **European Year of Skills** and of the **European Pillar of Social Rights Action Plan**, the Energy Intensive Industries Large-Scale Partnership of the Pact for Skills supports the objective that by 2030 50% of the Energy Intensive Industries workforce will participate in upskilling or reskilling actions each year.

Headline commitment

50% workers participating in upskilling or reskilling actions annually by 2030.

This is estimated to mean approximately 3,500,000 workers each year by 2030.

Milestones

In order to achieve this goal, the Energy Intensive Industries LSP aims that:

- *2,310,000* workers are participating in upskilling and reskilling actions each year by 2025. *This is estimated to mean 33%* of the workforce.
- *2,800,000* workers are participating in upskilling and reskilling actions each year by 2027. *This is estimated to mean 40%* of the workforce.

The estimations in this commitment and milestones in terms of the workforce share are based on estimated ecosystem size of workforce at 7,000,000 million including projections of workforce growth and current levels of upskilling and reskilling actions calculated either in Erasmus+ Blueprint projects or existing external estimates. For this purpose, actions of the LSP and their members are expected to influence the share of the workforce participating in up- and reskilling at sector level, even if their actual remit of activity doesn't reach the whole ecosystem.

Additional commitments

As part of their Pact for Skills commitments, the Energy Intensive Industries LSP aims to support the following specific commitments of relevance to the ecosystem:

- **65%** or number of workers participating in upskilling or reskilling actions to cover topics relating to digital or green skills by 2030.
- **42%** or number of workers participating in upskilling or reskilling actions to be from underrepresented groups or specific social or educational backgrounds by 2030.
- **42%** or number of workers within SMEs participating in upskilling or reskilling actions by 2030.

Additional commitments can be found in the LSP's Partnership Agreement hosted on the [Pact for Skills website](#).

NOTES:

The [European Pillar of Social Rights](#) sets out 20 key principles and rights essential for fair and well-functioning labour markets and social protection systems. The [European Pillar of Social Rights Action Plan](#) turns the principles into concrete actions to benefit citizens and create a more Social Europe. It also proposes three headline targets for the EU to reach by 2030. One of them is that at least 60% of all adults should be participating in training every year by 2030. Delivering the Pillar of Social Rights is a shared responsibility for the EU institutions, national, regional and local authorities, social partners and civil society.

Upskilling or reskilling actions may include any formal or non-formal education or training supported by employers or associated training organisations in line with the definition of the European Labour Force Survey. Further, underrepresented groups can be understood as groups that make up a lower proportion of the workforce than they do in the general population.

