



Building Skills Alliances for the Energy Intensive Industries Transformation

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H4C Webinar
Best Practices and Innovative
Solutions in Education for IS, I-US
and CE

29th of July 2025



An initiative of the European Commission

SKILLS EII

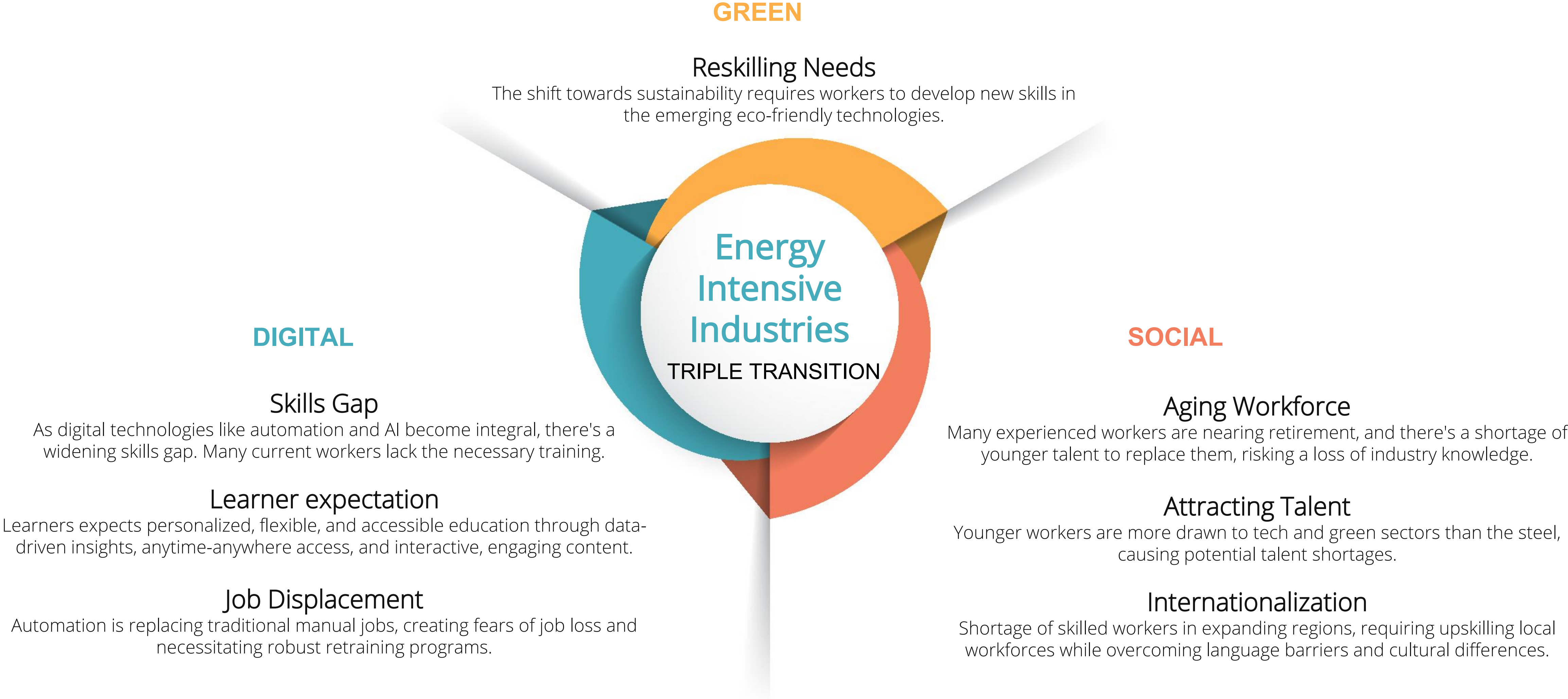
Skills Alliance for the Green,
Digital and Social Transformation
of the Energy Intensive Industries



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Problem statement



Enhances efficiency, sustainability, and workforce resilience for long-term competitiveness

Skills Alliances for an Industry-driven Longterm Skills Strategy



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



Blueprint “New Skills Agenda Steel”: Industry-driven sustainable European Steel Skills Agenda and Strategy (ESSA)



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Skills4EI Partnership Based on the LSP Energy Intensive Industries of the Pact for Skills

Large Scale Partnership for Energy-Intensive Industries (LSP EII)



Find out more:



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)



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PARTNERSHIP

33 applicants, from 9 EU Member States and Turkey:

- **21 labour market actors** are including 4 companies (represented by their training departments) and 17 representative intermediary organisations (trade unions or trade associations, including 3 national ones),
- **8 Higher Education or VET providers** (most of them are targeting to Higher Education or both)
- **3 consultancies**
- **1 civil society organisation** (Circle Economy).

The consultancies, research institutions and education and training providers mostly cover more than one energy intensive industry sector.

Different perspectives complementing each other to form a comprehensive eco-system partnership.

As ESSA and SPIRE-SAIS focused on VET, there is now a stronger focus on Higher Education and the integrated universities.



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Objectives

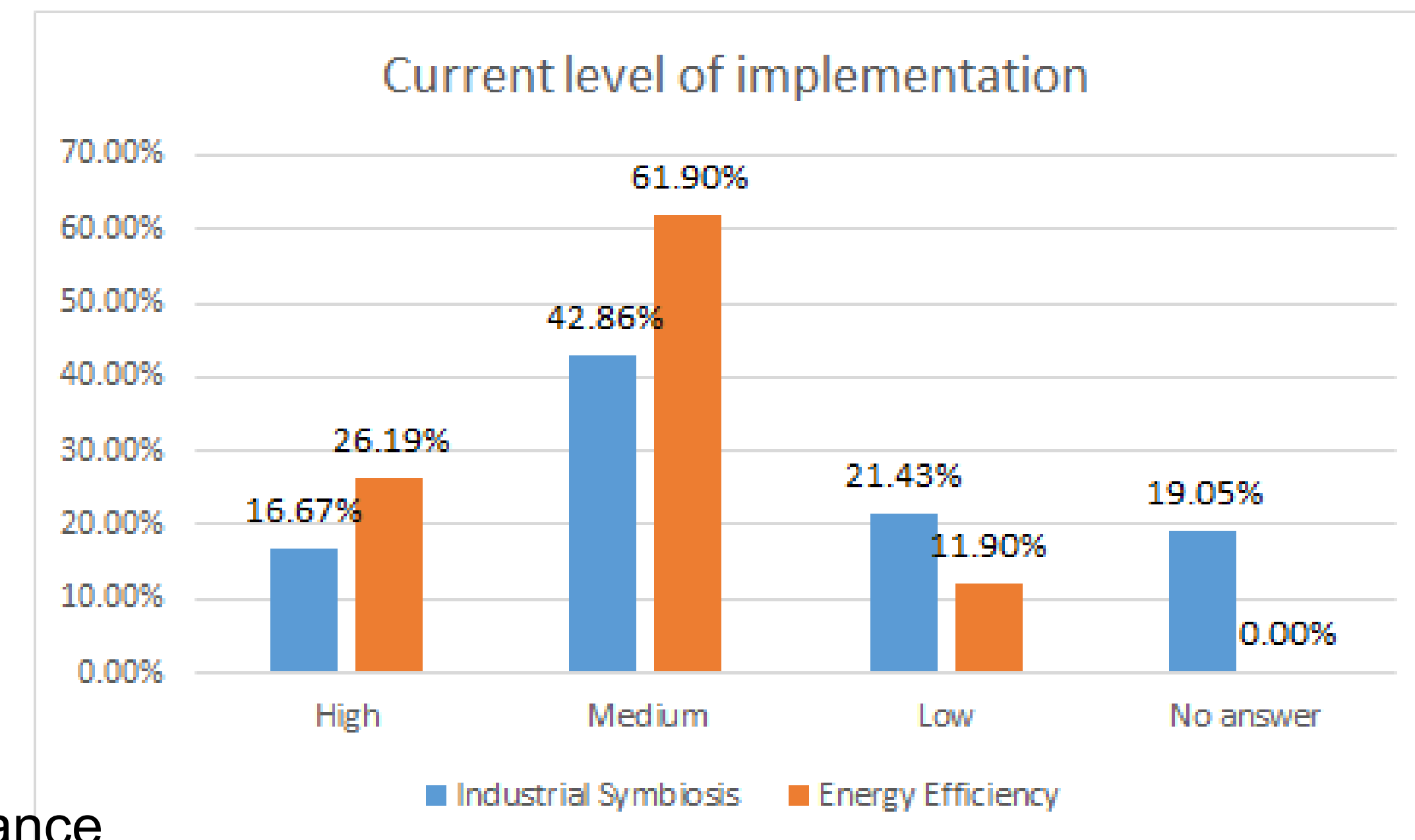
Expected results:

- Adjusting the workforce proactive, to deploy and implement new technologies aiming at an optimisation of the production process
- Monitoring and shorten the implementation of industry relevant qualifications and training
- Political support measures by mobilising and integrating stakeholders and policy makers of the EU and national level;
- Successful cross-sectoral upskilling schemes and efficient management of knowledge;
- More attractiveness of the industries and careers for talented people (recruitment and retention)

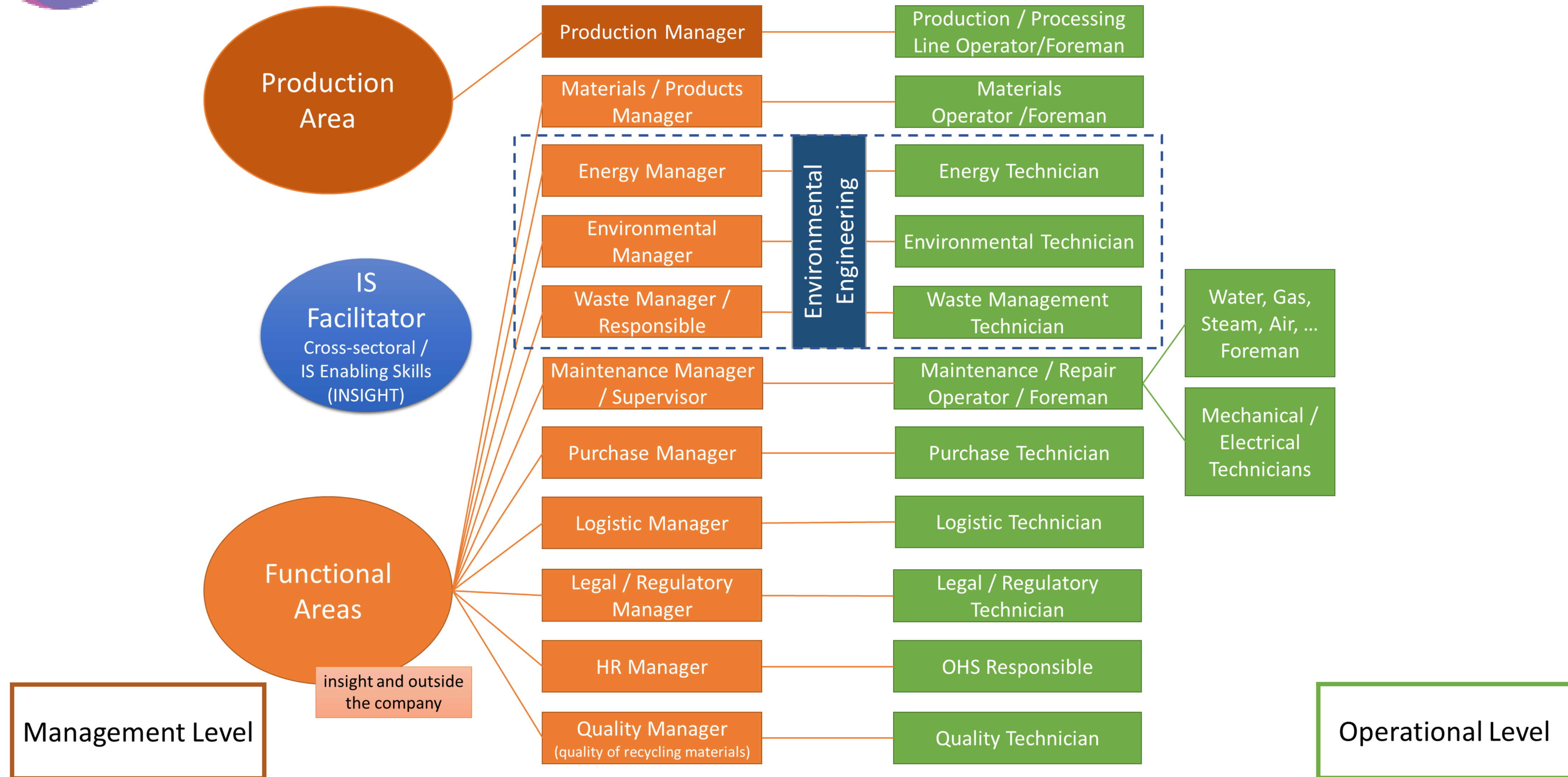
➤ Our mission:
Industry-driven proactive adjustment of future skills with the industry and for the industry

Technological and Economic Demands and Skills Requirements

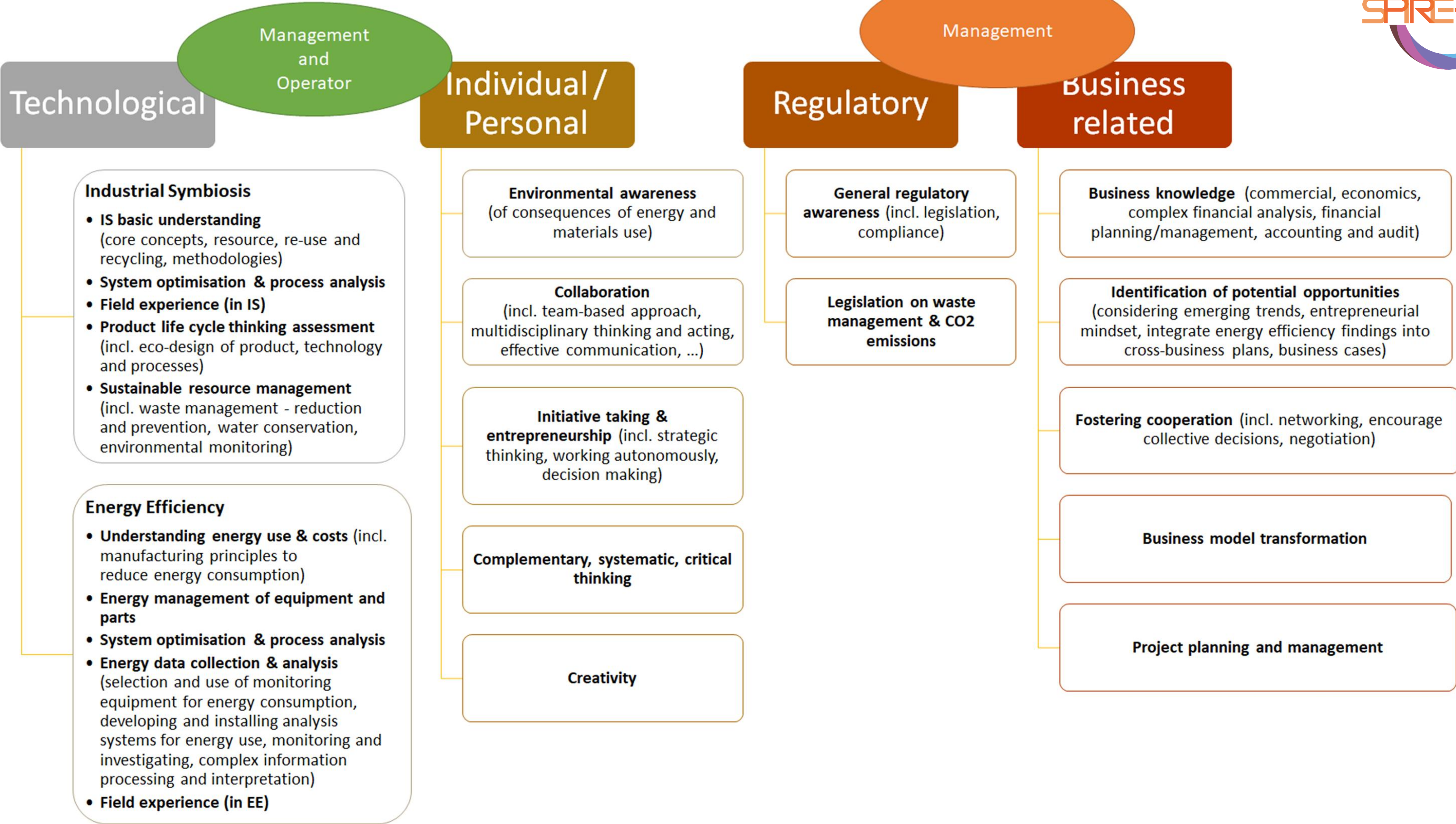
- The current **level of implementation and skills** is higher for EE rather than for IS
- Beneath internal and industrial actors: **public actors** are also main actors of IS (41%) and EE (48%)
- The **main barriers for EE/IS**:
 - cost of investments
 - regulatory issues
 - outdated plants, infrastructure and equipment
 - cooperation challenges, integration of regional stakeholders, working across different sectors
 - skills gaps.
- Mainly **no specific training programs (57% EE, 74% IS)** existing training measures are primarily **non-formal/unstructured but a high training needs: EE 69%, IS 81% (very) large need for training**
- **Middle and high level of skills needs** to be updated:
 - Specific job-related technical / professional skills
 - Transversal skills (esp. digital, green and personal skills)
 - Management skills
- IS is leading to **new jobs/professions** and higher workforce performance
- **Difficulties in filling vacant jobs: 72% (very) difficult**



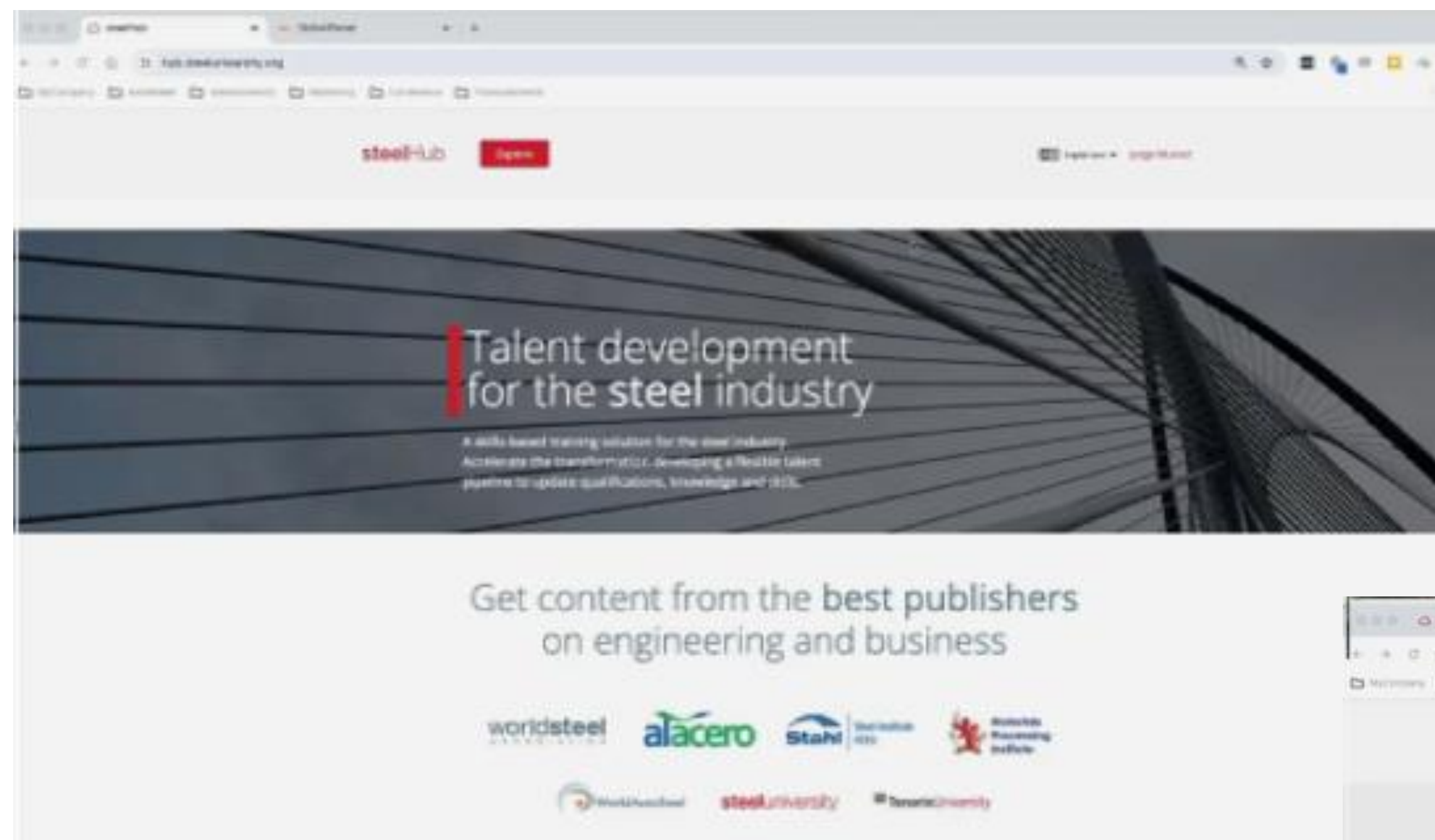
Cross-sectoral Generic Job Profiles



Skills Classification



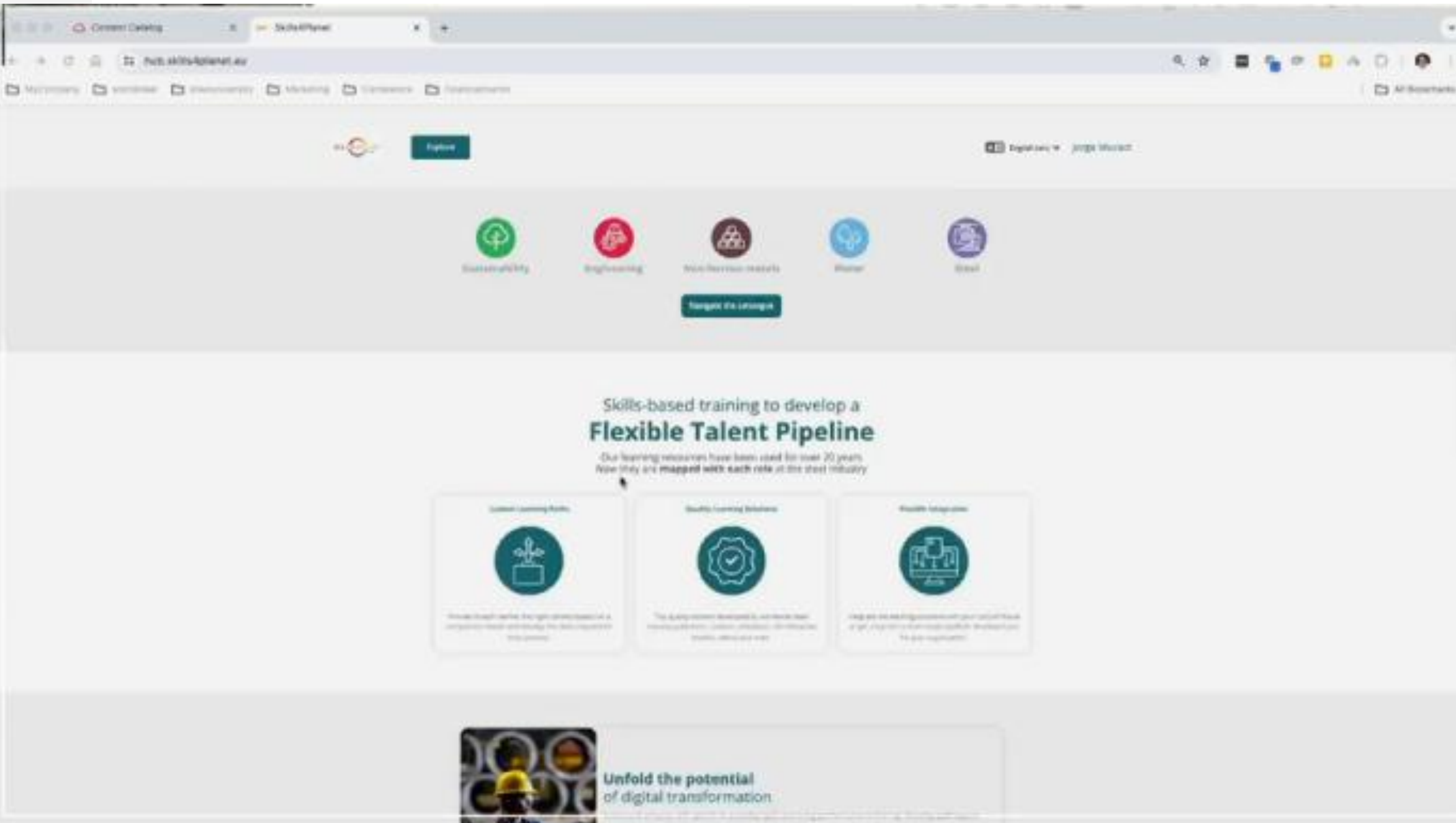
Online Training Platforms: SKILLS4Planet and steelHub



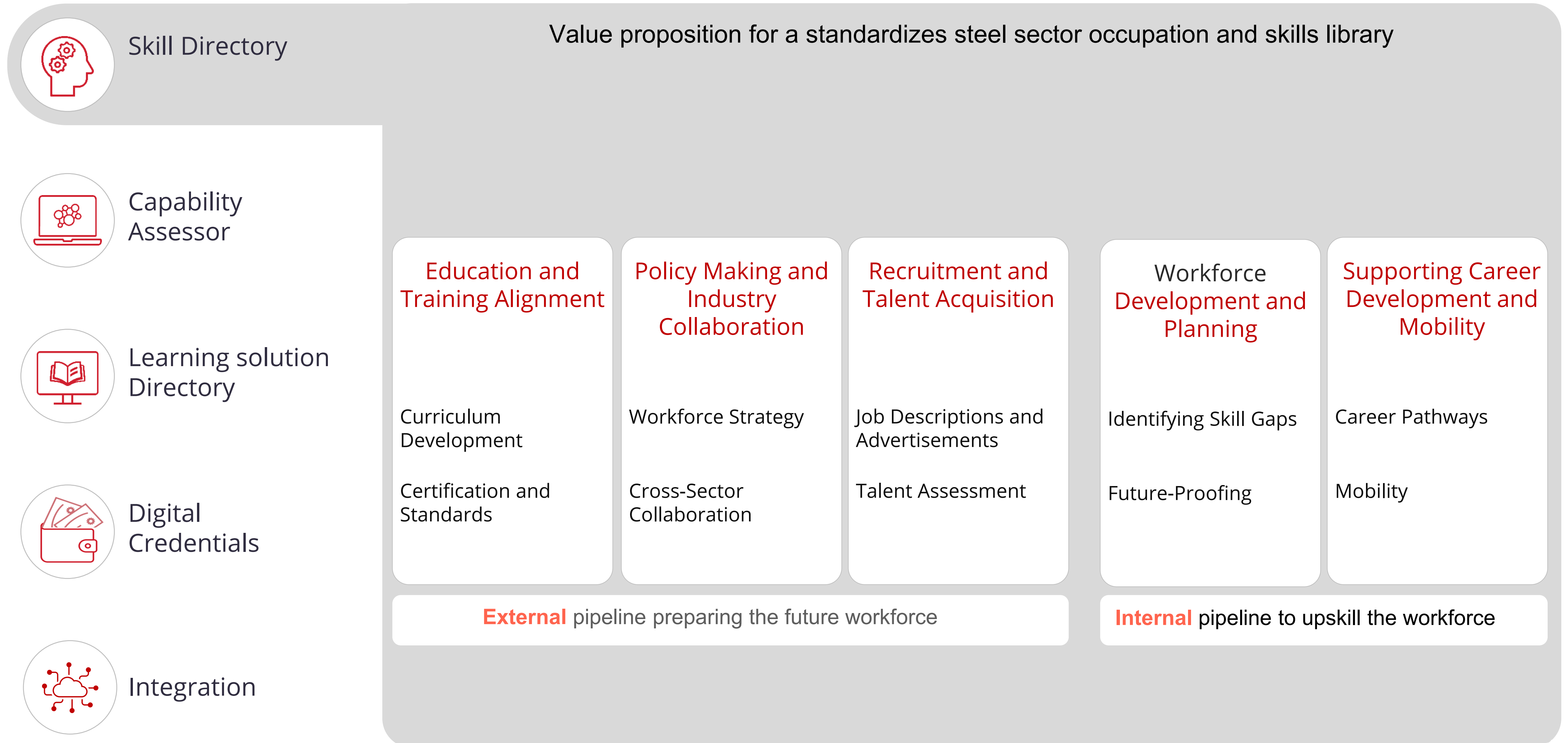
<https://hub.steeluniversity.org>



<https://hub.skills4planet.eu/>



steelHub / SKILLS4Planet Modules



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

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

SUS0210



Industrial Symbiosis

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.

SUS0310



Strategy for enhanced learning

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.

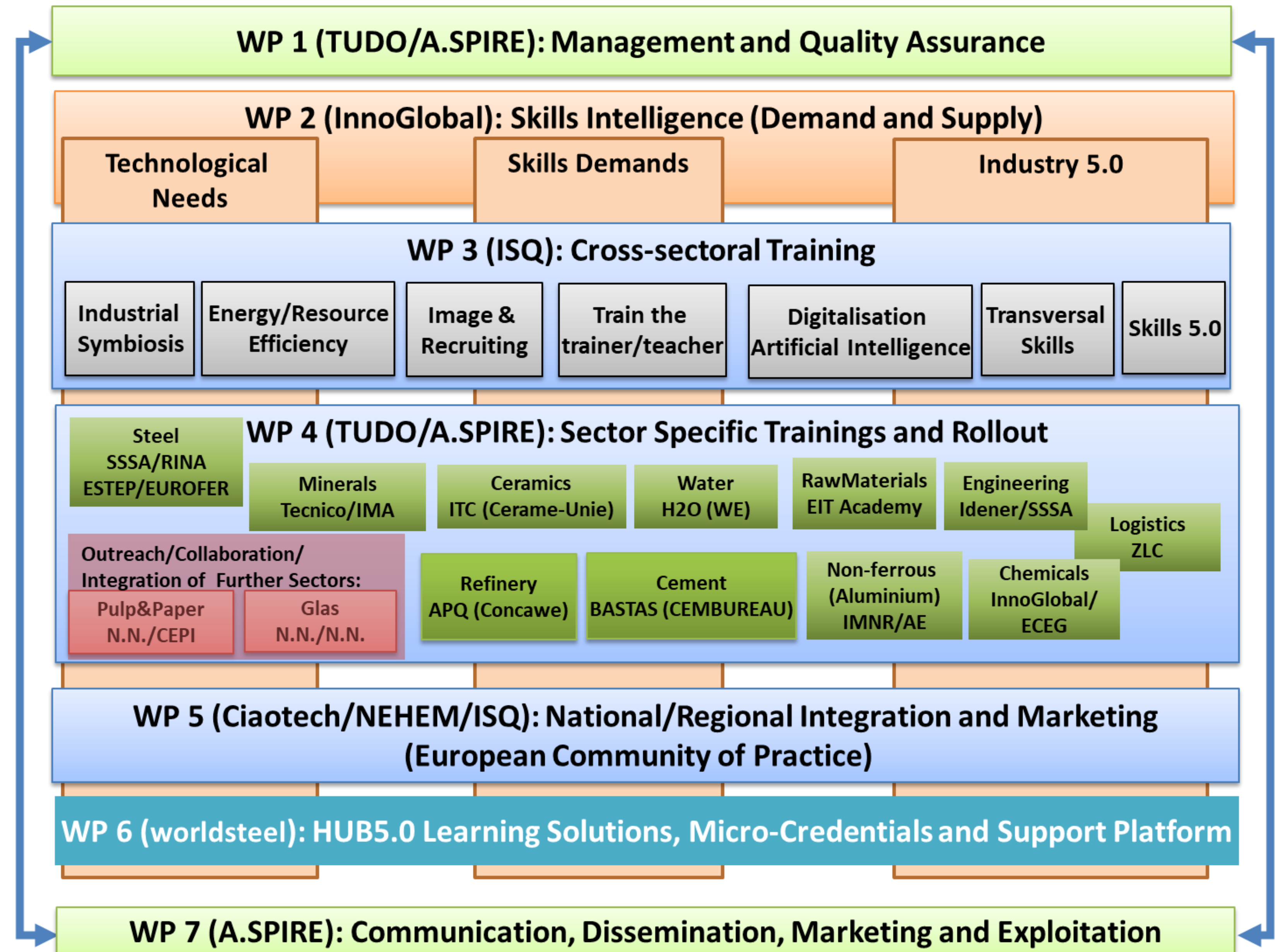
EDU0101

Skills4EII Work Program



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Skills4EI: WP 2 Skills Intelligence

Skills4sight TOOL

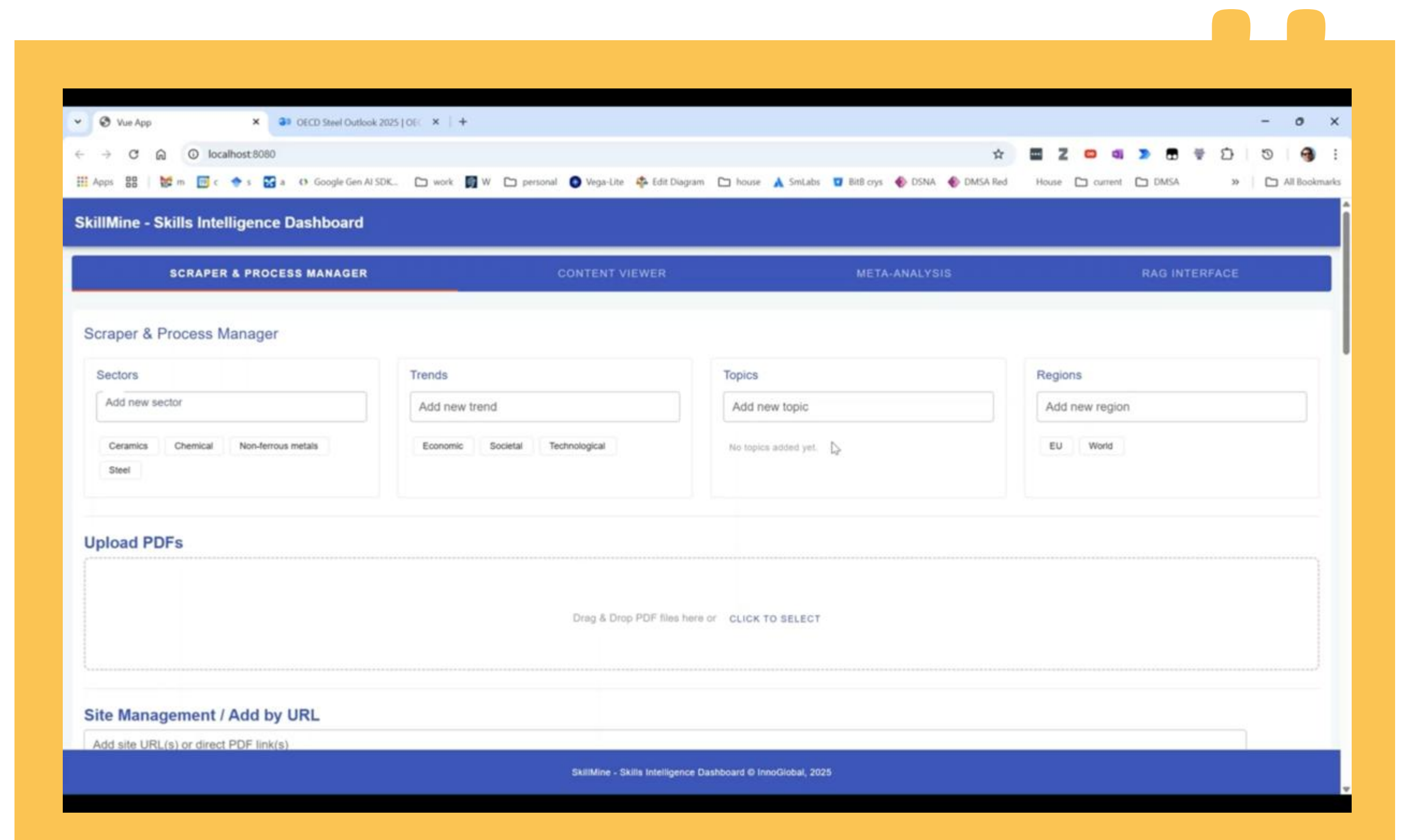
- **Monitors**
 - Reports
 - Trade associations
 - Regulations
 - Company news
- **Tracks emerging job & skill trends**
- **Adaptable for future initiatives**



*The workforce of today and tomorrow must adapt to digital transformations and changes in production processes, as well as to the new working practices and patterns of work organisation that are being introduced as a result of such developments - **ESSA***

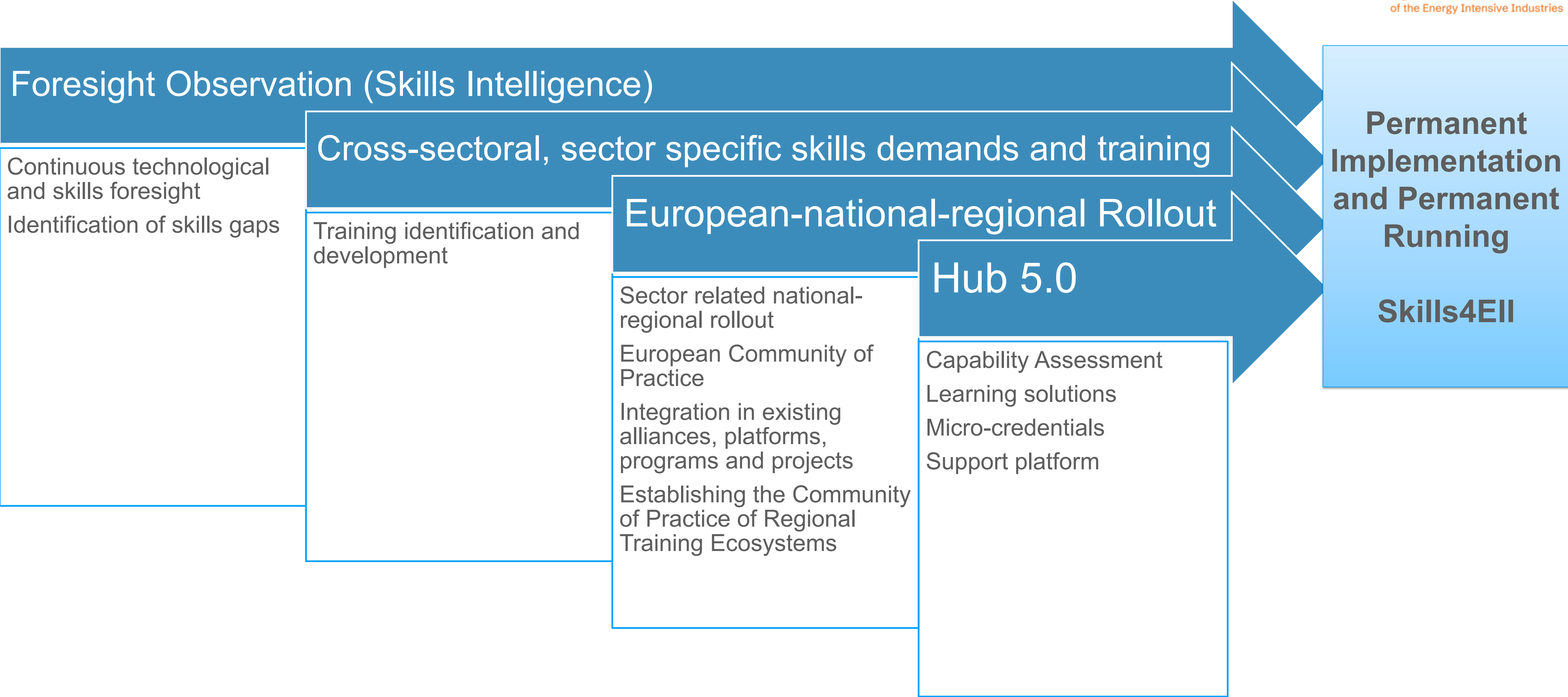
Please participate in our Stakeholder Survey

<https://forms.cloud.microsoft/e/x08YvxTHwg>



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Roadmap to a Sustainable Skills Alliance





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**PACT FOR
SKILLS** *Leader*

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Thanks for your attention!

ESSA: <https://www.estep.eu/essa>

SPIRE-SAIS: www.spire2050.eu/sais

Skills4EII:

<https://www.aspire2050.eu/skills4eii>

LSP EII: https://pact-for-skills.ec.europa.eu/about/industrial-ecosystems-and-partnerships/energy-intensive-industries-large-scale-partnerships_en

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