



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

## FINAL CONFERENCE

Deliverable: D7.5

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Work package leader:	RINA/CSM, A.SPIRE
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Dissemination level:	Public



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# 1. Introduction

This document outlines the deliverable D 7.5 *Final conference* – presenting the SPIRE-SAIS project conference – “Shaping the Future: Emerging Skills for a Sustainable Process Industry”.

The event marked the culmination of a four-year initiative focused on addressing the skills and manpower needs of the European Energy Intensive Industries (EII). Skill-needs with regard to Energy Efficiency and Industrial Symbiosis in energy-intensive sectors were identified and measures were developed to meet these needs, as part of the SPIRE-SAIS unfolding. One of the important outcomes of the project are comprehensive policy recommendations.

The conference took place on 23 May 2024 at the International Meeting Centre (IBZ) of the TU Dortmund University. Over the course of the day, the key findings of the SPIRE-SAIS project were presented to the attendees.

## 2. The Conference: *Shaping the Future: Emerging Skills for a Sustainable Process Industry*

### 2.1. Organisation and Dissemination

The SPIRE-SAIS final conference was a hybrid event, conveniently taking place both online and on-site. In the weeks prior to the event, information about the conference, its agenda, the speakers, and the registration link were disseminated through the project’s website<sup>1</sup>, TU Dortmund’s website<sup>2</sup>, SPIRE-SAIS’ social channels<sup>3</sup> and through the consortium partners’ networks. Furthermore, a booklet presenting the conference, the project and its outcomes and a brief bio of the speakers (excerpts below), as well as an abridged version of the policy recommendations developed by SPIRE-SAIS were printed and handed to the attendants before the conference.

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<sup>1</sup> [Skills Alliance for Industrial Symbiosis – a Cross-sectoral Blueprint for a Sustainable Process Industry | A.SPIRE \(aspire2050.eu\)](https://aspire2050.eu)

<sup>2</sup> [SPIRE-SAIS Final conference “Shaping the Future: Emerging Skills for A Sustainable EU Process Industry” will take place at the TU Dortmund on 23 May 2024 - sfs - TU Dortmund \(tu-dortmund.de\)](https://www.tu-dortmund.de/sfs)

<sup>3</sup> [\(3\) SPIRE-SAIS project | LinkedIn](#); [SPIRE-SAIS Project \(@SaisSpire\) / X](#)



*1 Meet the Speakers campaign on X (formerly Twitter)*

## 2.2. The Agenda

The agenda of the conference reflected the multisectoral approach of the project. As the conference unfolded, a diverse list of speakers explored the replicable, cross-sectoral solutions developed by SPIRE-SAIS, highlighting the project’s significant impact and future potential in guiding Europe’s green and digital transition, while talking, with expertise, about the challenges their sectors are facing in terms of skills.

The good structure of the conference programme and the expertise of the panellists were highlighted in a survey part of D8.2 - *Final project evaluation report*, where one of the answers to the question “*What was the most positive aspect of this event?*” was “*The quality of the agenda and the speakers.*”

# SHAPING THE FUTURE: EMERGING SKILLS FOR A SUSTAINABLE EU PROCESS INDUSTRY

**Date:** 23 May 2024  
**Time:** 10:00 am - 5:00 pm  
**Location:** Dortmund, Germany  
**Venue:** TUDO International Meeting Center (IBZ)  
**Moderator:** Ángels Orduña, A.SPIRE Executive Director

09,30	<b>Meet&amp;greet</b>
10,00	<b>Opening</b> Antonius Schröder, TUDO, Project Coordinator Paolo Zancanella, EACEA European Commission
10,30	<b>SPIRE-SAIS: The Pathway to Deliver Impact on Future Skills and High-Value Jobs</b> <b>SPIRE-SAIS in a Nutshell</b> Antonius Schröder, TUDO <b>SKILLS4Planet Training Platform</b> Jorge Muract, worldsteel
11,30	<b>Implementation and Rollout of the European Blueprint</b> <b>SPIRE-SAIS Policy Recommendations</b> Simona Pace, Andrea Tropeoli, RINA
11,40	<b>Step into Action: Shaping the "Circular" Future of Industrial Symbiosis and Energy Efficiency</b> <b>Moderator:</b> Miikka Nieminen, EUROFER  <b>Speakers:</b> Aurela Shtiza, IMA Europe Christian Leroy, European Aluminium Klaus Peters, ESTEP Sophie Grenade, IndustriALL Europe
12,30	Lunch
13,30	<b>SPIRE-SAIS Sectoral Blueprint: The European Challenge in Implementing IS and EE Skills and Jobs in the Future Process Industry</b> Veit Echterhoff, ThyssenKrupp Monica Perez-Clausen, AGBAR
14,00	<b>The European Community of Practice: Sectoral and Regional Strategies for Future Skills in the IS and EE Industry</b> <b>Moderator:</b> Clara Behrend, TUDO  <b>Sectoral Roll-out</b> ITC Ceramics Newcomer Training - Teresa Ros, ITC European Junior Water Programme - Naomi Timmer, H2O People  <b>Regional Roll-out</b> Emilia Romagna - Daniela Sani, ART-ER Basque Country - Felix Bayon, Sidenor  <b>H4C European Community of Practice</b> James Woodcock, International Synergies
15,00	Coffee break

*2 Conference agenda (excerpt from the conference booklet) 1*

<b>SHAPING THE FUTURE: EMERGING SKILLS FOR A SUSTAINABLE EU PROCESS INDUSTRY</b>	
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<b>Moderator:</b>	Ángels Orduña, A.SPIRE Executive Director
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15,15	<b>Future Skills - Pitches of Other Findings and Perspectives</b> Moderator: Antonius Schröder, TUDO
	<b>Community of Practice Industry 5.0</b> Daniela Angione, InnoGlobal <b>BRIDGES 5.0</b> Steven Dhondt, TNO <b>A.SPIRE/P4Planet</b> Raquel Almeida, ISQ <b>RACE</b> Jan Eggert, EIT RawMaterials <b>ChemSkills</b> Anni Siltanen, ECEG <b>greenSME: Strengthening manufacturing SMEs for sustainability</b> Clara Behrend, TU Dortmund University <b>IS2H4C</b> Michael Kohlgrüber, TU Dortmund University
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16,25	<b>Questions &amp; Answers - Feedback from the Audience</b>
<hr/>	
16,40	<b>Looking forward: Large Scale Skills Partnership Energy Intensive Industries and Pact for Skills</b> Felix Rohn, European Commission
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16,55	<b>Wrap-up and Next Steps</b>
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17,00	<b>Cocktail</b>
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*3 Conference agenda 2 (excerpt from the conference booklet)*

## 2.3. Unfolding the Conference: Sessions and Highlights

### 2.3.1 Opening

The conference was moderated by A.SPIRE's<sup>4</sup> Executive Director, Angels Orduña, who introduced Antonius Johannes Schröder (TU Dortmund<sup>5</sup>), the coordinator of SPIRE-SAIS. He welcomed Paolo Zancanella, SPIRE-SAIS project officer from EACEA (European Education and Culture Executive Agency of the European Commission<sup>6</sup>). He highlighted the substantial

<sup>4</sup> [The Association | A.SPIRE \(aspire2050.eu\)](https://www.aspire2050.eu)

<sup>5</sup> [TU Dortmund - TU Dortmund \(tu-dortmund.de\)](https://www.tu-dortmund.de)

<sup>6</sup> [https://www.eacea.ec.europa.eu/index\\_en](https://www.eacea.ec.europa.eu/index_en)

contributions of the Large Scale Energy Intensive Industries Alliance and the EU skill initiatives, as well as the good design, coordination and strong partnership of the consortium.



*4 Paolo Zancanella, SPIRE-SAIS project officer from EACEA (European Commission)*

One of Paolo Zancanella’s key remarks was: “You have achieved great results, and I am confident that the impact will be lasting”. Another strong concluding remark of the project officer was “*I can clearly say, and I’m glad to say that, indeed, it was the right choice to fund this project*”.

### **2.3.2 The Pathway to Deliver Impact on Future Skills and High-Value Jobs**

Antonius Schröder presented the main outcomes of the project: the cross-sectoral skills alliance with its open governance approach, the rollout, and the Skills4Planet online training platform<sup>7</sup>. Jorge Muract, from worldsteel/steeluniversity, presented the platform. The aim of Skills4Planet is to have a centralised platform and content. The platform provides access to courses, possibilities to integrate further pieces of training, but also integrates the knowledge gathered during the project about skill needs, and skill definitions.

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<sup>7</sup> [Skills4Planet](#)

### 2.3.3 Implementation and Policy Recommendations

In the second session “Implementation and Rollout of the European Blueprint SPIRE-SAIS Policy Recommendations”, Simona Pace and Andrea Tropeoli (who joined online) from RINA<sup>8</sup> presented the first version of the Policy Recommendations. Illustrating once more the universality of skills, the policy recommendations are divided into European, national and regional, specific recommendations for individual companies and organisations and overarching recommendations.



5 Speakers from RINA introducing the SPIRE-SAIS Policy Recommendations

### 2.3.4 Industrial Symbiosis and Energy Efficiency.

In the third session, Miikka Nieminen from Eurofer<sup>9</sup> moderated the panel discussion *Step into Action: Shaping the “Circular” Future of Industrial Symbiosis and Energy Efficiency*.

Four representatives from different sectors took part in this panel: Sophie Grenada (IndustriALL<sup>10</sup>), Aurela Shtiza (IMA Europe<sup>11</sup>), Christian Leroy (European Aluminium<sup>12</sup>), and Klaus Peters (ESTEP<sup>13</sup>). They discussed what is needed to ensure circular production in the process industries, what needs to be done to raise awareness of Industrial Symbiosis and related skills, and how this awareness would make the EII sectors more attractive to job candidates. Sophie Grenada urged for more robust action from industry and policymakers to support Circular Economy, Energy Efficiency, and workers training, noting that 20 million EU workers needed upskilling in 2020. Aurela Shtiza reported gaps in Industrial Symbiosis roles and stressed the

<sup>8</sup> [Our experience. Your growth. - RINA.org](https://www.rina.org)

<sup>9</sup> [Home \(strongerwithsteel.eu\)](https://strongerwithsteel.eu)

<sup>10</sup> [IndustriALL \(industrialall-union.org\)](https://industrialall-union.org)

<sup>11</sup> [IMA Europe | Industrial Minerals Europe \(ima-europe.eu\)](https://www.ima-europe.eu)

<sup>12</sup> [HOME - European Aluminium \(european-aluminium.eu\)](https://www.european-aluminium.eu)

<sup>13</sup> [Home \(estep.eu\)](https://www.estep.eu)



importance of inter-sectoral collaboration and practical case studies. Klaus Peters highlighted the necessity of stakeholder acceptance of Industrial Symbiosis, suggesting more positive terminology and advocating for citizen learning hubs and stakeholder implementation. Christian Leroy discussed the challenges in circularity and resource efficiency, emphasising the need for stakeholder dialogue and incentives to promote Industrial Symbiosis and related job profiles



6 The panellists of the third session

### 2.3.5 SPIRE-SAIS Sectoral Blueprint: Steel and Water

In the fourth session “*SPIRE-SAIS Sectoral Blueprint: The European Challenge in Implementing IS and EE Skills and Jobs in the Future Process Industry*”, Veit Echterhoff from thyssenkrupp Steel<sup>14</sup> presented the hydrogen qualification programme for apprentices in the steel sector in Germany, and Monica Perez-Clausen from AGBAR<sup>15</sup> presented different qualifications developed for the water sector in Spain on different topics of Industrial Symbiosis, Energy Efficiency and sustainability.

### 2.3.6 The European Community of Practice

The session “*European Community of Practice: Sectoral and Regional Strategies for Future Skills in the IS and EE Industry*”, was moderated by Clara Behrend (TU Dortmund). She introduced the

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<sup>14</sup> [Steel from thyssenkrupp \(thyssenkrupp-steel.com\)](http://thyssenkrupp-steel.com)

<sup>15</sup> [AGBAR](http://agbar.com)

threefold approach for the implementation of SPIRE-SAIS rollouts (European level: sectoral and cross-sectoral, regional level and H4C EcoP).

Teresa Ros (ITC<sup>16</sup>), presented the ITC Ceramics Training for Newcomers that was developed during the project and used as a blueprint for the development of further IS and EE training for newcomers in other sectors – showcasing the replicability of the solutions developed by SPIRE-SAIS.

Naomi Timmer from H2O People<sup>17</sup> presented the European Junior Water Programme<sup>18</sup> for the water sector.

Daniela Sani (ART-ER<sup>19</sup>) presented the activities in Emilia Romagna supporting skills for EE and IS and Félix Bayón from Sidenor<sup>20</sup> reported from the workshop in the Basque Country.

James Woodcock (International Synergies Limited<sup>21</sup>) presented on the Hubs4Circularity European Community of Practice<sup>22</sup> and its links with the SPIRE-SAIS project.

### 2.3.7 Other Perspectives

In the last session “*Future Skills – Pitches of Other Findings and Perspectives*” several other related European projects were presented.

Daniela Angione of InnoGlobal<sup>23</sup> presented the Industry 5.0 Community of Practice<sup>24</sup>, Steven Dhondt from TNO<sup>25</sup> talked about the Bridges 5.0 project<sup>26</sup>, ISQ’s<sup>27</sup> - Raquel Almeida presented A.SPIRE and the Processes4 Planet Partnership<sup>28</sup>, Jan Eggert from EIT RawMaterials<sup>29</sup> presented RACE<sup>30</sup>, Anni Siltanen from ECEG<sup>31</sup> talked about the ChemSkills project<sup>32</sup>, TU Dortmund’s Clara Behrend (pictured below) showcased the greenSME initiative<sup>33</sup> and Michael Kohlgrüber - also from TU Dortmund - presented the IS2H4C project<sup>34</sup>.

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<sup>16</sup> [Sobre ITC - Instituto de Tecnología Cerámica \(uji.es\)](#)

<sup>17</sup> [Home - H2O People \(h2o-people.eu\)](#)

<sup>18</sup> [Home - European Junior Water Programme](#)

<sup>19</sup> [ART-ER – ART-ER](#)

<sup>20</sup> [Sidenor Special Steels - We make it sustainable](#)

<sup>21</sup> [International Synergies | Global leaders in industrial symbiosis. \(international-synergies.com\)](#)

<sup>22</sup> [Hubs4Circularity \(h4c-community.eu\)](#)

<sup>23</sup> [Home \(innoglobal.com\)](#)

<sup>24</sup> [Industry 5.0 - European Commission \(europa.eu\)](#)

<sup>25</sup> [Innovation for life | TNO](#)

<sup>26</sup> [dhondt-2023-bridges5.pdf \(tno.nl\)](#)

<sup>27</sup> [Welcome to ISQ - ISQ Group](#)

<sup>28</sup> [About Processes4Planet | A.SPIRE \(aspire2050.eu\)](#)

<sup>29</sup> [EIT RawMaterials - Developing raw materials into a major strength for Europe](#)

<sup>30</sup> [RACE pilot - Climate-KIC](#)

<sup>31</sup> [European Chemical Employers Group \(ECEG\) | Bruxelles | eceg.org](#)

<sup>32</sup> [ChemSkills Project](#)

<sup>33</sup> [greenSME – Empowering manufacturing SMEs towards sustainability \(greensmehub.eu\)](#)

<sup>34</sup> [Home Good - IS2H4C PROJECT - GA. 101138473 \(is2h4c-project.eu\)](#)



7 Clara Behrend presenting the greenSME project

### **2.3.8 Looking Towards the Future**

The session “*Looking Forward: Large Scale Skills Partnership Energy Intensive Industries and Pact for Skills*” was presented by Felix Rohn of the European Commission (The Directorate-General for Employment, Social Affairs and Inclusion) who emphasised how skills are a crucial pillar of Europe’s transformation and provided concluding remarks from the EC’s perspective, stressing the need of social fairness, dialogue, and education in the Green Deal’s transition, alongside large-scale upskilling to address skills shortages and the demographic decline. He also emphasised that the Pact for Skills, inspired by the SPIRE-SAIS project, supports these efforts and the Blueprint model has fostered alliances and partnerships.

### **2.3.8 Wrap-Up and Outlook**

Àngels Orduña and Antonius Schröder (pictured below) had the last words, closing the conference with important conclusions and a look towards the future: to ensure a skilled workforce, the Energy Intensive Industries must attract new talent and strategically address the lack of information systems-specific jobs, as identified by SPIRE-SAIS. The successful skills alliance fostered by the project will persist, with partners continuing to collaborate with other blueprints and the Large Scale Partnership Energy-Intensive Industries (LSP EII) inviting all SPIRE-SAIS members and stakeholders to join this ongoing effort.



*8 Angels Orduña and Antonius Schröder delivering the concluding words of the conference*

## **2.4. Attendance, Feedback and Digital Coverage**

The conference attendance was a total of 63 people - 50 people in person and 13 online. As previously mentioned, a survey was conducted as part of D8.2 - *Final project evaluation report*. 23 of the Conference attendees completed the survey.

The data excerpted from the document shows that 78% of the respondents considered the organisation of the event “*Perfect!*” and 22% “*Good enough*” and 70% found the panels in the event “*Perfect!*” and 30% “*Good enough*”. When asked about the relevance of the information delivered, 65% answered “*Perfect!*” and 35% “*Good enough*”, whereas when questioned about the discussions raised, 52% of the respondents reported it was “*Perfect!*”, 39% “*Good enough*” and 9% answered with “*Could have been better*”.

The Conference rollout was covered on SPIRE-SAIS’s social channels (below), and two debriefs were published on both the project’s<sup>35</sup> and TU Dortmund’s<sup>36</sup> websites.

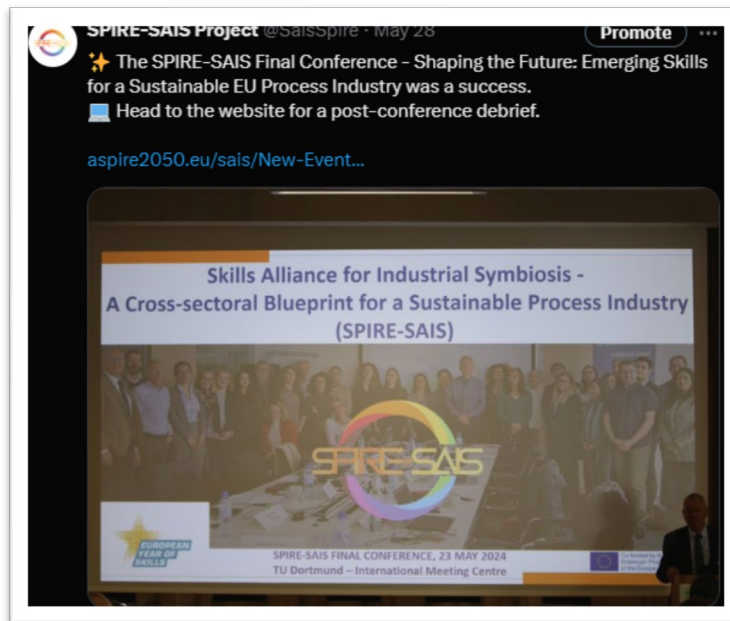
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<sup>35</sup> <https://www.aspire2050.eu/sais/New-Event/spire-sais-final-conference-post-conference-debrief>

<sup>36</sup> [SPIRE-SAIS Final conference was a great success - sfs - TU Dortmund \(tu-dortmund.de\)](https://www.tu-dortmund.de/sais/spire-sais-final-conference-was-a-great-success-sfs)



9 The SPIRE-SAIS final conference – LinkedIn



10 The SPIRE-SAIS final conference - X (Twitter)

### **3. Conclusion**

The final conference of the SPIRE-SAIS project - *Shaping the Future: Emerging Skills for a Sustainable EU Process Industry* - was a pivotal moment, marking the successful completion of almost five years of dedicated effort and collaboration. The event celebrated the SPIRE-SAIS' collective achievements and reflected the invaluable lessons learned throughout the project.

The project's key successes, including creating the Skills4Planet platform, designing a comprehensive Blueprint for an industry-driven, long-term strategy focused on industrial-urban symbiosis and digital skills, issuing comprehensive policy recommendations and an effective rollout of new skills activities at national, regional and European levels, as well as assessing the need for skills for the green transition of European the Energy Intensive Industries, highlight the project's significance.

The engaging discussions and presentations at the conference have not only reinforced the project's outcomes but have also fostered new ideas and partnerships. These connections and insights will guide the ongoing of SPIRE-SAIS and future initiatives and continued progress in upskilling, reskilling and continuous learning for the manpower in Europe.