Skills Council Meeting: Friday, 6 December 2024

Present: António ANDRÉ (Protecna), Antoaneta ANGELOVA-KRASTEVA (DG EAC), Martin BARRETT (TU Dublin), Sofia BAZZANO (REHVA), Dirk BOCHAR (ENGINEERS EUROPE), Lorenzo COSTANTINO (ENGINEERS EUROPE), Inès CRAUWELS (ENGINEERS EUROPE), Cedric D'MELLO (AECEF), Antonio DE SOUSA (FEUP), Georgi DIMITROV (DG EAC), Majella HENCHION (ESB), Thomas KIEFER (VDI), Alexandre KOUNITZKY (SIA), Greet LANGIE (KU Leuven), Bert LAUWERS (KU Leuven), Juan Blanco LINO (ECEC), Nikos MORAITIS (IVEPE), Aloizia MOSCHOVAKOU (IVEPE), Gerhard MÜLLER (TU München), Balasz NAGY (SEFI), Aidan O'FLAHERTY (Engineers Ireland), Michal POLIAK (Newport Group), João Pedro PÊGO (FEUP), Astrid PETERSEN (External), Antonio PORTILLA FIGUERAS (ANECA), Dominique ROSSIN (Institut Polytechnique de Paris), Lídia SANTIAGO (Ordem dos Engenheiros), Laura SECO (EYE), David SEDANO (CNE ENGINEERS EUROPE), Heracles SIOULIS (IVEPE), Eef SMITS (KIVI), Keith SUNDERLAND (TU Dublin), Klaus THÜRRIEDL (ECEC), Emanuela TILLEY (SEFI), Hannes TREIER (ENGINEERS EUROPE), Katrijn VANDENBORNE (BEST), Ekatharina VLADISLAVLEVA (ACCENTURE), Iring WASSER (ASIIN), Christina WILEN (DG DEFIS), Ivica ZAVRSKI (AECEF)

9:00 – 9:30: Welcome & overview of day 2 by ENGINEERS EUROPE

Mr. D. BOCHAR (ENGINEERS EUROPE) welcomed everyone to the 3rd Skills Council Meeting, particularly the new members representing various institutions and organizations. He then invited Mrs. Antoaneta ANGELOVA-KRASTEVA, Director of Innovation, Digital Education and International Cooperation in DG EAC, to open the meeting.

Mrs. A. ANGELOVA-KRASTEVA expressed her gratitude to ENGINEERS EUROPE and the Engineers4Europe Project for the invitation. She highlighted that projects like these are crucial not only for the work of DG EAC but also for the broader objectives of the European Commission. Referring to the goals of European Competitiveness outlined by Mr. Mario DRAGHI for example, she emphasized the importance of European engineers and the ongoing need for upskilling and reskilling. She further noted that the E4E Project could be of support to the Union of Skills, the STEM Strategic Plan and new initiatives in VET education. She also pointed out that the expansion of micro-credentials and initiatives focused on the portability of competences are high priorities in this area.

Mr. D. BOCHAR (ENGINEERS EUROPE) thanked Mrs. ANGELOVA-KRASTEVA and Mr. G. DIMITROV (Head of Unit, DG EAC) for their recognition of the project, expressing that it is encouraging to see the Commission's interest in Engineers4Europe.

9:30 – 10:00: Presentation of the Second Skills Strategy

Context: Mr. D. BOCHAR delivered a presentation on the Second Skills Strategy, focusing on the two rounds of research conducted, including some of the Primary Research results from 2024. He also compared the E4E Skills Strategy with the Draghi Report, a document that was distributed to all attendees. The presentation further outlined actionable recommendations for the Skills Council, highlighting current skills challenges that are being addressed in the four (4) E4E courses. Proposed actions and recommendations for various stakeholder groups, such as education providers, professional organizations, VET providers, industry and policymakers, were presented.

Discussion:
Mr. B. NAGY (SEFI): How can educational evolution bridge the gap? SEFI is actively involved in this area, exploring new methodologies and tools. It is important to remember that many tools are already available.
Mrs. E. Tilley (SEFI): Some institutions are already making progress, such as the integrated engineering programs in the UK. Achieving this required extensive research, which took about 10 years. It is essential to recognize that while professors may excel in research, they sometimes lack expertise in education. The ideal blend of educators and researchers could offer part of the solution.
Mr. I. WASSER (ASIIN): There are indeed powerful tools available, such as the DQR toolkit, a global quality assurance tool. The challenge now lies in how the Skills Council can effectively utilize such tools.
Mr. G. MÜLLER (TU München): It would be useful to categorize the recommendations for different groups. When engaging with professors, these categories could be particularly helpful, as they might view the issues from different perspectives.
Mr. K. THÜRRIEDL (ECEC): When focusing on dissemination and implementation, it is important to consider bureaucracy and costs.

10:00 – 10:20: Brainstorming on the Second Skills Strategy and Quality Assurance Measures by ENGINEERS EUROPE and ANECA

Mr. A. PORTILLA (ANECA) provided an overview of the Quality Assurance efforts related to the Skills Strategy. He emphasized the need for greater involvement from larger countries in the third round of Primary Research, as countries such as the UK, the Netherlands and France tend to be underrepresented in the surveys. Regarding the Secondary Research, he pointed out that there is often overlap in the topics explored by different partners. Coordinating research efforts in advance could help ensure that all relevant topics are covered from various perspectives. He sought feedback on the Skills Strategy in two ways: through today's Skills Council meeting and through informal feedback via email or other channels.

Mr. H. TREIER (ENGINEERS EUROPE) informed participants that after the coffee break, there would be a round of brainstorming in breakout sessions.

10:20 – 10:40 ***Coffee Break***

10:40 – 11:10: Preparation for the final round of Analysis for the Skills Strategy 2025

For the final research and the last version of the Skills Strategy, participants were invited to brainstorm on the research approach, as well as the structure and content of the Strategy. Mr. A. PORTILLA (ANECA) introduced several questions to kick off the discussion. To ensure the upcoming round of analysis is thorough, validated and stakeholder-driven, the Skills Council could identify topics that require deeper analysis in the third round. Additionally, challenges specific to the sector regarding Quality Assurance during data collection and analysis could be addressed to enhance the quality and comprehensiveness of the final research.

11:10 – 11:40: Breakout Sessions: Planning the Final Round of Analysis

Mr. H. TREIER divided the participants in five different groups to brainstorm on the Final Skills Strategy 2025.

11:40 – 12:00: Group presentations: Outcomes from the Breakout Sessions

Group 1: Sofia BAZZANO (REHVA), Juan BLANCO LINO (ECEC), Cedric D'MELLO (AECEF), Greet LANGIE (KU Leuven), Nikos MORAITIS (IVEPE), Aloizia MOSCHOVAKOU (IVEPE), Christina WILEN (DG DEFIS)

It was suggested to place a greater emphasis on the differences in engineering education and the profession across various countries. This would provide valuable insights into the challenges and opportunities faced by the sector on a global scale. Strengthening the collaboration between industry and academia was also highlighted, with a focus on aligning the skills taught in educational institutions with the practical needs of the industry. This is particularly important for sectors such as defence and security, which require specialized expertise.

Ensuring traceability for all sources and statements used throughout the project was deemed important for maintaining transparency and credibility. It was proposed that graduate students, VET students and policymakers be considered as additional key stakeholders, as their perspectives would offer a more comprehensive understanding of the issues at hand.

Conducting a systematic literature review was identified as a valuable step in gaining a thorough understanding of the existing research and identifying gaps in the current knowledge base. Regarding data collection, it was suggested to differentiate gender in the survey to better understand the specific challenges faced by different groups. Lastly, the development of a well-defined action plan for the research was recommended to ensure that the findings can be effectively translated into meaningful actions and policy recommendations.

Group 2: Martin BARRETT (TU Dublin), Gerhard MÜLLER (TU München), João Pedro PÊGO (FEUP), Astrid PETERSEN, Eef SMITS (KIVI), Keith SUNDERLAND (TU Dublin), Katrijn VANDENBORNE (BEST)

The discussion began with "Agility," where it was agreed that more freedom should be allowed in teaching methods and course selection. However, accreditation constraints were recognized as a potential limitation. It was suggested to explore this further through desk research and to include a question on curriculum agility in future surveys.

Next, the topic of the "Gender Gap" was addressed. It was emphasized that this issue should be tackled early, ideally in school, and that efforts should be made to promote engineering as a viable career for girls, who are often discouraged in high school.

The conversation then shifted to the question of "Why being an engineer?" It was highlighted that young people are looking for meaningful connections to their work. The suggestion was made to use primary research to collect personal stories from engineers, which could serve as inspiration for high school students considering their future careers.

Group 3: António ANDRÉ (Protecna), Majella HENCHION (ESB), Aidan O'FLAHERTY (Engineers Ireland), Michal POLIAK (Newport Group), Dominique ROSSIN (Institut Polytechnique de Paris), David SEDANO, Ivica ZAVRSKI (AECEF)

Artificial Intelligence (AI) was discussed with a focus on the importance of digital literacy and industry preparedness for AI. It was suggested that AI awareness should be evaluated across various engineering disciplines to better understand how different fields are addressing the technology.

Another point of discussion was research into registration in regulated markets. The conversation covered mandatory registration, lifelong learning and micro-credentials, with an emphasis on conducting further research to promote lifelong learning, especially when comparing regulated and non-regulated markets.

The topic of achieving gender balance in engineering was also raised. It was noted that political and cultural factors, which may be beyond the control of employers or academia, could explain why some countries have achieved a 50/50 gender balance in the field.

Group 4: Alexandre KOUNITZKY (SIA), Balasz NAGY (SEFI), Lídia SANTIAGO (Ordem dos Engenheiros), Laura SECO (EYE), Klaus THÜRRIEDL (ECEC), Emanuela TILLEY (SEFI)

The first topic discussed was "Questions to Companies" for the survey. The group suggested the following questions: “Are there salary differences between male and female engineers in your company?”, “Do you offer flexible workloads or working times for women engineers?”, and “Do you hire women engineers for technical, management, or decision-making roles?”

The second topic was "Questions to HEIs" for the survey. The group proposed these questions: “What challenges do you face in implementing curriculum changes based on research findings, and how can you overcome them?”, “What is the ratio of basic vs. practical research in your institution?” and “Is there support for creating applied mathematics programs and training teachers in new pedagogical methods aligned with digital transition and AI?”

The third topic covered "Questions to Primary and Secondary Education" for the survey. The group suggested: “How can we promote and facilitate young people's understanding of mathematics and science?” and “Is there openness to teacher training in teaching mathematics?” They recommended teaching theory visually, using practical examples to help students understand and apply concepts through experiments.

Lastly "Questions to Policymakers" were covered. Proposed questions include: “What marketing campaigns could highlight the role of engineers in society and make engineering careers more attractive, including: a) showing society's debt to engineers, b) promoting engineering careers, and c) valuing engineers in society?”

Group 5: Antonio DE SOUSA (FEUP), Bert LAUWERS (KU Leuven), Antonio PORTILLA FIGUERAS (ANECA), Heracles SIOULIS (IVEPE), Ekatharina VLADISLAVLEVA (ACCENTURE), Iring WASSER (ASIIN)

There is a recognized need for further research, particularly in quantifying the outcomes of the E4E project. A comprehensive KPI measurement system should be established, not only to assess the impact after the courses but also to monitor the ongoing effects of the Skills Strategy. This would allow for a more thorough evaluation of how the courses and Strategy are influencing participants and the broader engineering community.

It is also important for the organizations involved to actively showcase the outcomes of the E4E project within their own activities. By integrating these outcomes into their ongoing work, the visibility and relevance of the project’s findings can be significantly increased. This would help ensure that the knowledge and insights gained from the project are effectively disseminated and applied in real-world settings.

Moreover, a greater focus should be placed on identifying and sharing best practices. Showcasing successful examples and innovative approaches within the project can inspire other institutions and organizations to adopt similar strategies.

Final remarks:

Mr. D. BOCHAR pointed out that some decisions regarding the content of the Skills Strategy are influenced by the framework within which the work is being done. He also clarified that, since the document is a strategic paper rather than a thesis, not every paragraph includes a citation. However, he assured that all references are provided at the end of the Strategy.

Mr. H. TREIER urged the groups to send their inputs to e4e@engineerseurope.com after the meeting.

12:00 – 12:45: Continuation of the Skills Council

Context: As the Engineers4Europe (E4E) Project enters its final year, the question of sustainability becomes increasingly important. The European Engineering Skills Council has expanded its knowledge base and involved more stakeholders since its inauguration, making it essential to preserve this key achievement of the E4E Project.

Mr. D. BOCHAR presented proposals and suggestions for the future of the Council. Firstly, the Council should continue building on the Project's outcomes, including the comprehensive Europe-wide data collection on the profession, the identification of skills gaps, the development of the Skills Strategy with its stakeholder-specific recommendations and the ongoing micro-credential development. To ensure this progress continues, ENGINEERS EUROPE proposes establishing the Skills Council as a permanent panel of experts that formulates policy recommendations, engages in strategic monitoring and acts as a platform for corporate partnerships at EU level.

To attract attention from potential new members and partnerships, testimonials are being inquired from the current Skills Council members, as well as references from academic and industrial circles. Additional best practice examples should be identified for the last Skills Strategy as well.

ENGINEERS EUROPE plans to integrate the Skills Council as a permanent body within the Organization, maintaining it as an independent panel of experts. This should create a forum for dialogue among stakeholder groups while enhancing the public image of engineers across Europe.

The Council would convene twice a year to focus on specific topics, next to participating in events hosted by partner organizations. Regarding its funding, potential partners could include multinationals, sector organizations in Brussels and potentially further European funding sources. The envisioned partnerships would involve three-year commitments, with sponsorship and membership offering different levels of engagement at varying annual fees. Partners would benefit from direct access to data, participation in strategy development, involvement in future data collection and access to a Europe-wide engineering network of the 33 member countries of ENGINEERS EUROPE. Additionally, visibility could be enhanced through a shared event, such as the World Engineering Day on 4 March.

To advance these plans, ENGINEERS EUROPE will first focus on drafting proposals for EU consideration and developing an appealing sponsorship pitch. Mr. D. BOCHAR requested that the Skills Council members discuss this concept during the meeting and evaluate the feasibility of their continued involvement.

Discussion:
Mr. I. WASSER (ASIIN): This is a positive next step for the project but beware that securing financing could be challenging, as it may compete with other organizations.
Mr. K. THÜRRIEDL (ECEC): I confirm ECEC's commitment to remain in the Skills Council, though this will require internal discussion first.
Mrs. A. PETERSEN (External): Ther is a need for unity at the European level with a clear purpose, this would be the appropriate body to facilitate that effort.

Overall enthusiasm from the represented organizations and institutions was noted.

Key points discussed:

1. **Testimonials and quotes are being requested from Skills Council members.**
2. **Skills Council members are asked to confirm continued participation within their organizations by May 2025.**
3. **ENGINEERS EUROPE will draft a pitch to attract sponsorship for the initiative.**

12:45 – 13:00: Wrap-up and next steps

Closing Conference

The Closing Conference will take place on **23-24 June 2025**. On 23 June, the consortium will hold its final meeting in the afternoon, followed by a Skills Council meeting on the morning of 24 June and the Closing Event in the afternoon. As the final Skills Strategy, due by 31 August, will not be completed by this event, input is requested from all partners by 19 May 2025. This input should include two (2) key recommendations or takeaways from the Strategy or the final research to present to policymakers.

A date for the first Skills Council meeting after the Project will be determined soon.

Mr. D. BOCHAR thanked the partners and Skills Council members, with special recognition for the new members who joined, for their valuable contributions and closed the meeting.