



ENGINEERS 4 EUROPE

CLOSING EVENT

23 JUNE 2025, 14:00 – 17:00 hrs

European Economic and Social Committee (EESC), VMA 23

ABSTRACT of the Engineers4Europe “Skills Strategy”: September 2022 - August 2025

Europe’s engineering outlook hinges on six urgent realities:

- (1) demand is surging – especially for green-tech specialists – as sustainability and digital mega-projects scale across Europe
- (2) roles mutate rapidly, so adaptability is non-negotiable
- (3) the profession must sharpen its public image to lure wider talent pools
- (4) curricula need a hard pivot to competency-based learning and outcome-driven assessment
- (5) interdisciplinary collaboration and an entrepreneurial mindset rank alongside math and physics
- (6) only CPD and LLL keep skills globally competitive and future-proof

There are currently 15 million workers in technical and engineering jobs in the EU’s workforce. According to CEDEFOP projections, there will be around 8 million job openings (new and replacement needs) between today and 2035. Most of these jobs will be due to the replacement of current employees (six million job openings), but also around two million new jobs will be created due to the needs of the economy.

Who needs to do what by 2030?

- (1) **Professional organisations** should cultivate entrepreneurial and interdisciplinary mindsets; inspire youth and support veteran engineers; drive LLL through tailored, quality-assured micro-credentials; host knowledge-sharing forums; certify cross-border competence; advocate in policy arenas and disseminate EU recognition tools in combination with project results, widely across Europe’s engineering ecosystem.
- (2) **Policy makers** must reignite youth interest in STEM, broadening diversity through awareness campaigns and inclusive, problem-based learning. Sustainably fund HEI and VET modernisation, backing micro-credentials, joint and dual programs. Simplify visas, scholarships and a central talent platform to draw global engineers. Build an EU engineering micro-credential hub, embed AI competence frameworks and promote green-skills literacy across all education levels nationwide.
- (3) **HEIs & VET providers** must overhaul training to meet 21st-century demands. Integrate SDGs, making green and digital competences core of every curriculum by 2030. Adopt Education 4.0 pedagogies, expand micro-credentials and practical, hands-on learning to close theory-practice gaps. They must diversify pathways through vocational apprenticeships, dual degrees and STEM mentorship. Embed entrepreneurship skills – strategy, finance, opportunity recognition – into programs. Forge enduring industry partnerships, co-run labs with up-to-date equipment and upskill faculty in technology and pedagogy. Promote cross-border exchanges and EQF-aligned modular qualifications for learner mobility.
- (4) **Industry** should counter talent shortages by co-designing curricula with HEIs, offering project-based apprenticeships and mentorship; funding in-house, micro-credential upskilling in renewable and digital fields; retaining senior engineers through flexible work; broadening recruitment to women, under-represented groups and career changers to build a competitive workforce.

Engineering demands outpaced supply; declining enrolments compel stronger STEM pipelines, streamlined skilled migration and lifelong up-/reskilling. Guided by the “European Engineering Skills Council”, these measures underpin sustainable growth and leadership.



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Event Program

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| I. WELCOME | Chair of the EESC TEN Section (Transport, Energy, Infrastructure and the Information Society) Mrs. Baiba MILTOVIČA Mr. Pietro Francesco DE LOTTO |
| II. OPENING SPEECH | Director General DG REGIO Mrs. Themis CHRISTOPHIDOU |
| III. PRESENTATION ON THE E4E RESULTS | Project Coordinator and ENGINEERS EUROPE Secretary General Mr. Dirk BOCHAR European Engineering Skills Council Chair Mr. Hannes TREIER |
| IV. BEST PRACTICE EXAMPLE | Presentation of the Danish startup GGL Logistics Mr. Laurits Hytting FIIG Mr. Gustav Minor JENSEN Mr. Gustav JUUL |
| V. PANEL DISCUSSION WITH Q&A | Panel discussion featuring representatives from industry, academia, policy making and professional organizations. Mr. Lorenzo COSTANTINO (Moderator) Mr. Hans VAN DER LOO Mrs. Francesca MALTAURO Mr. Piotr KIRSCHKE Mr. Wesley CROCK Mr. Balázs NAGY |
| VI. CLOSING WORDS | President of ENGINEERS EUROPE Mr. Ralph APPEL |



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SPEAKERS

Baiba MILTOVIČA

Baiba MILTOVIČA has been appointed in 2020 President of the “Transport, Energy, Infrastructure and Information Society” Section (TEN) of the European Economic and Social Committee (EESC). At the same time, MILTOVIČA serves as Board Member of the Latvian National Association for Consumer Protection (LPIAA) and actively cooperates with the European Consumer Organization (BEUC) on the European Commission Horizon 2020 and DG Justice and Consumers projects. She is member of the European Consumer Consultative Group (ECCG) of the European Commission, subgroup on Energy and Sub-Group on Artificial Intelligence (AI), connected products and other new challenges in product safety.



Pietro Francesco DE LOTTO

Pietro Francesco DE LOTTO is a prominent member of the European Economic and Social Committee (EESC), where he has held several influential roles. He currently serves as President of the Consultative Commission on Industrial Change (CCMI) and is the Coordinator of the EESC's flagship "EU Blue Deal" initiative, which advocates for a comprehensive European water strategy to address increasing water-related challenges. DE LOTTO has a strong background in economics and industrial policy. Before joining the EESC in 2010, he was a Senior Researcher and Aggregate Professor in International Economics at the University of Trieste until 2009. He also served as Director General of Confartigianato Imprese, the largest European network for artisan enterprises and small businesses.



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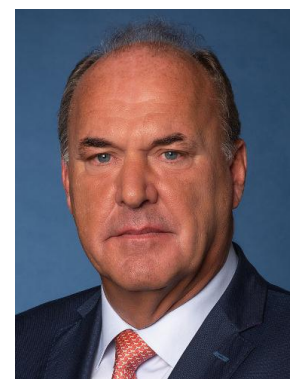
Themis CHRISTOPHIDOU

Themis CHRISTOPHIDOU is the Director-General of the European Commission's Regional and Urban Policy department (DG REGIO) since September 2023. Between 2018 and 2023, she served as Director General of the European Commission's Education, Youth, Sport and Culture department. She is a civil engineer with 38 years of professional experience in the public and private sector. CHRISTOPHIDOU has been serving the EU for over 23 years. She has held various posts, from transport program manager in the Directorate-General for Regional Policy to Member of Cabinet of the first European Commissioner from Poland, Danuta HUEBNER. She has also served as deputy head of Cabinet of Commissioner Androulla Vassiliou, as Head of Cabinet of the Commissioner for Fisheries and Maritime Affairs, Maria DAMANAKI and as Head of Cabinet of the Commissioner for Humanitarian Aid and Crisis Management, Christos STYLIANIDES.



Dirk BOCHAR

Dirk BOCHAR has more than 30 years of professional experience in various international "umbrella" Organisations and for a variety of industrial sectors. He holds the position of Secretary General of ENGINEERS EUROPE (till 2023 FEANI), since September 2010. Being of Flemish origin, he holds a Master Degree in Archeology of the East Roman Empire (UGhent), a Bachelor in International Marketing (Frankfurt/Main) and finalised his MBA-studies in TQM as valedictorian at the City University of Seattle (USA). He subsequently lectured TQM to MBA-students in Zürich, Frankfurt and Berlin. He started his career at the Belgian Royal Military Academy, worked previously for the European Standardization body CENELEC and the European Automobile Association. Over the last 15 years he contributed to the mobility of professional engineers, amongst others in the review of the Professional Qualifications Directive. He is member of the EESC Liaison Group and has an excellent command of five modern languages.



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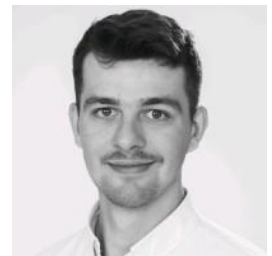
Hannes TREIER

Hannes TREIER is a Swiss civil engineer and strategic consultant with extensive international experience in project management and stakeholder negotiation. He is the founding partner and co-owner of REFLECTA AG, where he has advised public institutions and private companies since 1998. He has held several leadership roles in engineering organizations, including President of the Swiss National Committee of ENGINEERS EUROPE (2018–2020) and member of the ENGINEERS EUROPE Executive Board. He was also part of the organizing team for the 2011 World Engineers Convention in Geneva.



Laurits Hytting FIIG

As co-founder and Process and Innovation Student at DTU, Laurits is the hands-on builder behind GGL's hardware systems. He spends most days at Skylab prototyping new device enclosures, troubleshooting sensor integrations, and testing LiftSync units directly on forklifts. Laurits handles everything from soldering boards to coordinating with suppliers, always focused on making sure LiftSync is durable, accurate, and easy to install for customers with no technical background.



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Gustav Minor JENSEN

Co-founder of GGL and Global Business Informatics graduate from ITU. Gustav Minor JENSEN develops the software that ties everything together. He writes and refines the code that collects live data from forklifts, manages the cloud infrastructure, and builds the dashboards used by warehouse staff. Gustav is also responsible for system migrations and error handling—he's the person Laurits and Gustav J. reach out to when they need a new feature, want to connect existing tools, or just want help getting started.



Gustav JUUL

Co-founder of GGL and Process and Innovation student at DTU, Gustav JUUL is often out talking to warehouse managers and forklift operators, mapping their needs and frustrations. He leads our pilot projects with customers, collects feedback from day-to-day use, and translates those insights into features for Laurits and Gustav M. to build. He also handles new partnerships and demos—if someone is curious about LiftSync, Gustav is the one to contact.



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PANELISTS

Lorenzo COSTANTINO (Moderator)

Lorenzo COSTANTINO has over 20 years of international experience in finance, innovation and SME competitiveness. He has also served as a Consultant for the World Bank, working on large development and support projects for the private and financial sector. At IDP European Consultants, he takes care of all aspects of planning in the EU. He is also involved as a high-level lecturer in the delivery of courses and modules dedicated to Europlanning in academic and professional contexts. He holds specific assignments as external expert and evaluator for the European Commission on various European funding programmes and facilitated the "Engineers4Europe"-project.



Hans VAN DER LOO

Hans VAN DER LOO is an explainer and thought leader. As Chairman of the Institute for Integrated Economic Research he helps organisations & institutions develop a holistic view & systemic understanding of reality. He studied in Breukelen, Paris, Oxford, Düsseldorf and Tokyo, worked for McKinsey, Shell, WBCSD, co-authored VEERKRACHT (=Resilience), lectures at schools and speaks at conferences (incl Bilderberg, Climate Change Summit, COP21, EBS, Newton Summit, WEF). In the years he represented Shell in Brussels, he was ERT sherpa to CEO Jeroen van der Veer. Together they started work on the EU STEM Talent Pipeline and initiated the ERT report «Mathematics, Science & Technology Education Report - The Case for a European Coordinating Body» that Oct 2009 was presented to Pres Barroso and Commissioner Potočnic. In 2015 he helped found the EU STEM Coalition to exchange best practices on how to enthuse more young people for STEM, with today over 60 regional, national and pan-European members. Van der Loo still works on strengthening systemic thinking, stressing the need for Literate, Numerate and Ecoate citizens to reach the next century in a civilized & peaceful way.



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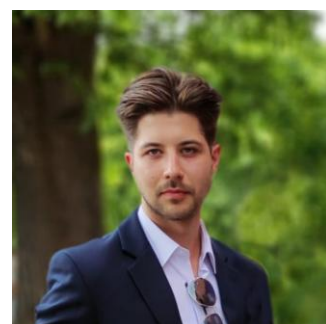
Francesca MALTAURO

Francesca MALTAURO is Deputy Head of Unit “Digital Education” at the Directorate General for Education, Culture Youth and Sport of the European Commission (DG EAC). Through its strategic and comprehensive approach to digital education and training, the Unit contributes to delivering on the European Commission’s ambitions for the European Education Area and for the Union of Skills, as well as on the 2030 targets and objectives of the Digital Decade policy programme. Francesca joined the Commission in 2016, leading the Erasmus+ team in the Higher Education Unit. Before joining the European Commission, she worked for the European University Association as a policy officer in the fields of institutional development and doctoral education. Before that, she has worked at the International Relations Office of the University of Bologna, and at the Brussels School of International Studies of the University of Kent. Francesca MALTAURO holds a Master’s degree in Interpreting and Translation from the University of Bologna.



Piotr KIRSCHKE

Piotr KIRSCHKE is an AVEVA PI System Engineer in the Pharmaceutical Manufacturing industry, specialising in System Administration, Computer System Validation (CSV), and GxP Compliance. His work supports the integrity and reliability of industrial data systems within regulated manufacturing environments. He is a member of Engineers Ireland and actively contributes to European Young Engineers (EYE) as an Outreach & Partnership Associate, promoting cross-border collaboration.



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Wesley CROCK

Since 2023 Wesley CROCK is the Global Manager University Relations at ASML, where he establishes and builds academic partnerships, co-creating conditions for collaboration and overseeing the implementation of strategic initiatives to meaningfully involve ASML in teaching and learning. Wesley is also in charge of the talent pillar of Project Beethoven, the strategy from the Dutch government to strengthen the Dutch semiconductor ecosystem. Prior to ASML, Wesley held a dual function at the European Institute of Innovation and Technology (EIT), as the founding Director of the HEI Initiative and Director Education at EIT RawMaterials, overseeing a portfolio in which 300.000+ learners were educated from 2016-2022. Before this, Wesley was a research manager at United Nations University, where he developed and implemented capacity building programmes for policymakers and SMEs in Africa and Latin America, to support them to design fit-for-purpose e-waste legislation. Wesley is an academically trained industrial ecologist with degrees from TU Delft and Ohio State University.



Balázs NAGY

Dr. Balázs Vince NAGY is Associate Professor and Programme Lead of Mechatronics Engineering at the Budapest University of Technology and Economics (BME), where he also served as Vice-Rector for International Affairs (2018-2021). He holds a PhD in mechanical engineering and was a post-doctoral fellow (2010-2014) and visiting scientist (2015-2016) at the Institute of Psychology, University of São Paulo. His main research areas include optics, optomechatronics, illumination, color science, visual perception and visual electrophysiology. He currently serves as President of the European Society for Engineering Education – SEFI and Chair of the EELISA European University Alliance Executive Board. He has represented Hungary in Division 1 of the International Commission on Illumination (CIE) since 2011.



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CLOSING WORDS

Ralph APPEL

Ralph APPEL is a certified industrial engineer with expertise in automation, product engineering, materials management, industrial management and economics. He studied industrial engineering at the University of Hamburg and the Technical University of Hamburg-Harburg. Since 2013, he has served as Executive Director and Board Member of VDI - The Association of German Engineers and as Managing Director of VDI GmbH. He is also President of ENGINEERS EUROPE and previously served as its Vice President (2015-2020). From 2015 to 2020, he was President of the accreditation agency ASIIN e.V.



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