

#CECIMOBrusselsForum

CECIMO BRUSSELS FORUM 2023

Highlights

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CECIMO BRUSSELS FORUM 2023 SPEAKERS



Filip Geerts
CECIMO



Markus Schulte
European Commission



Cesare Dunker
European Commission



Thomas Hahn
Siemens AG



Michael Präger
European Commission



Ivan Štefanec
European Parliament



Nicholas Deliyankis
European Commission



Kerstin Jorna
European Commission



Paola Fantini
EIT Manufacturing



Felix Rohn
European Commission



Mark Jordan
Skillnet Ireland



Olha Hunchak
CECIMO



INTRODUCTION

The first edition of the CECIMO Brussels Forum, organised by the European Association for Manufacturing Technologies (CECIMO), took place on 6-7 December in the heart of Brussels. The event gathered industry experts, leaders and innovators, aimed to explore and discuss the advances in manufacturing technologies and skills that are critical to the growth of the sector.

The two-day event featured an insightful programme of high-level panel discussions that explored the nuances of innovative manufacturing and skills development. Industry leaders and experts shared their perspectives, fostering a rich exchange of ideas to shape the future of manufacturing in Europe.

A key moment of the Forum was the launch of the inaugural Machine Tools Innovation (MTI) Awards. This competition marks a pioneering effort by CECIMO to recognise and celebrate the most innovative projects in the machine tool sector. The awards serve as a platform to recognise the tireless efforts and ground-breaking achievements of individuals and organisations that contribute to the advancement of machine tool technology.





Opening Remarks

Filip Geerts

Director General, CECIMO

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OPENING REMARKS

By Filip Geerts, Director General, CECIMO

With a firm grasp on the pulse of the industry, Mr Filip Geerts set the tone for the day by highlighting the key topics to be explored. From advanced manufacturing and innovation to sustainability and skills development, the agenda promised a deep dive into the pressing issues at the forefront of the manufacturing landscape. Mr Geerts' opening remarks paved the way for the insightful discussions and collaborative dialogues that would unfold throughout the event, shifting the focus to a future where technological prowess, sustainability and skills development converge to shape the trajectory of European manufacturing.

He also introduced the CECIMO Machine Tools Innovation Awards (MTI Awards) that aim to recognize pioneering innovations in Machine Tools, making a lasting impact on the manufacturing industry. A panel of judges from industry, academia and trade associations selected the top three finalists.

On behalf of everyone at CECIMO, Filip Geerts thanked all participants for their contribution on making this event a success!



CECIMO Brussels Forum was moderated by Andrew Lynch
Chief Innovation Officer, Irish Manufacturing Research

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Keynote Speech

Markus Schulte

Head of Cabinet of Commissioner for Innovation, Research, Culture, Education and Youth, European Commission

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FIRST KEYNOTE SPEECH

By Markus Schulte, Head of Cabinet to Iliana Ivanova, European Commissioner for Innovation, Research, Culture, Education and Youth

Mr Markus Schulte in his keynote speech underlined key elements related to innovation in advanced manufacturing.

Policies on Manufacturing

Net-Zero Industry Act Proposal: The Commission is actively working on the Net-Zero Industry Act, focusing on scaling up the production of clean technologies within the Union. This legislative move aims to significantly contribute to the decarbonization and greening of the industry, promoting the manufacturing of clean technologies such as solar cells, hydrogen tanks, and turbine blades. The Act also targets the creation of a favourable regulatory environment to attract investment, emphasizing efficiency in administration, speedy permits, and investments in skills.

Critical Raw Materials Act: Another crucial regulatory initiative is the Critical Raw Materials Act, designed to ensure a secure and sustainable supply of critical raw materials for the Union's industry. The objective is to reduce dependency on imports from single-country suppliers, enhancing the resilience of the Union's industrial sector.

Recycling of Critical Raw Materials: The Commission is ambitious about increasing the recycling of critical raw materials within the Union. An agreement has been reached on an ambitious benchmark, aiming for a recycling rate of 25%. This initiative holds significant potential for the Union's manufacturing industry.

Focus on Advanced Materials: President von der Leyen, in her State of the Union speech, highlighted the importance of advanced materials for industrial leadership. This emphasis is a notable announcement with far-reaching implications for the manufacturing industry.

Industrial Forum's Report: The Industrial Forum, established under the Union's Industrial Strategy, released a report titled 'Advanced Manufacturing at the heart of a resilient, sustainable and competitive Europe.' The report underscores the critical role of transitioning to advanced manufacturing for every industrial ecosystem across Europe, emphasizing resilience, sustainability, and competitiveness.

Challenges in manufacturing

Circularity integration: A primary challenge lies in integrating excellent circularity technologies systematically and connecting them to value chains. Shifting from smart factories to smart value chains is crucial for addressing this challenge.

Manufacturing as a service: Another challenge is adapting to 'manufacturing as a service' and leveraging new business models that capitalise on manufacturing assets.

Capitalise on the opportunities of digitisation and Artificial Intelligence in manufacturing.

Breakthrough innovations: The Commission recognises the need for breakthrough innovations, considering bringing the biological component into manufacturing.



I think that the machinery industry has an indispensable role to play, acting as the backbone of manufacturing and bringing innovations in human-centric manufacturing technologies, in data ecosystems, and in new technologies for circularity.

INNOVATION



Panel Discussion – Innovative Manufacturing: Paving the way to a sustainable future

The panel discussion on **“Innovative Manufacturing: Paving the way to a sustainable future”** highlighted the intricacies of innovative manufacturing, bringing together industry experts to share insights on sustainability, digitalisation, and the challenges faced by the European manufacturing sector.

Michael Präger, Chief ESG Officer at Bystronic Group presented the company's central role in the green and digital transition. He emphasized that sustainability is not merely a regulatory obligation but an opportunity for innovation and business growth. Bystronic, historically committed to proper practices ensuring sustainability, aims to exceed legal requirements through sustainable engineering and circular economy initiatives. He underscored the dual role of sustainability and digitalisation as enablers of innovation, urging a perspective that views sustainability as a business and recognises the opportunities inherent in it. In the context of an inter-generational perspective on innovation, Michael emphasized that innovation is ingrained in European companies' culture. He highlighted the market-driven approach, serving mid-sized companies that seek digitised, sustainable solutions for navigating transitions. Responding to a question about who bears the cost of sustainability initiatives, Präger urged a shift from a compliance-focused approach to one that prioritises reducing emissions. He emphasized the importance of ensuring the industry is prepared and ready for sustainable operations, leveraging opportunities and incentives to drive real impact.

Shifting the focus to the realm of funding and support programs, **Nicolas Deliyannis, Policy Coordinator and Work Programme Sherpa, DG RTD, European Commission**, clarified the role of Horizon 2020 and Horizon Europe in facilitating the digital and green transition.

He pointed out that significant funding is available at Technology Readiness Levels 6 and 7, with a particular emphasis on the exploitation phase in Horizon Europe. Deliyankis stressed the need for private players' cooperation and investment in projects, highlighting initiatives like Made in Europe as essential for furthering collaboration and innovation in the manufacturing sector. Deliyankis, discussing European Digital Innovation Hubs (EDIHs), highlighted their collaboration with DG Connect and their crucial role in spreading innovation across Europe. He emphasized the importance of scaling up efforts, as, despite support from programs like Digital Europe, EDIHs have not reached all manufacturing companies. The need for private players' cooperation was underscored, leading to the development of public-private partnerships like Made in Europe.

Addressing the question of scaling and market conditions to foster innovation, **Cesare Dunker, Policy Officer at Digital Transformation of Industry Unit at DG GROW of the European Commission**, shed light on the digital angle and the challenges companies face in adopting emerging technologies. Through the Industrial Forum and the related Task Force 5 on the Uptake of Advanced Manufacturing, efforts are made to facilitate a two-way dialogue with industry stakeholders, aiming to reduce operational barriers. The outcome of these discussions is a policy report containing 36 recommendations to support innovation in the manufacturing sector. Dunker stressed the importance of aligning industrial policy with industry needs and pace, ensuring that it moves forward with a consideration of short and long-term priorities.

Thomas Hahn, Member of Platform Industry 4.0 and Chief Expert Software, Siemens AG, shared insights into Manufacturing X, an initiative covering various verticals with the goal of building a data ecosystem. Collaboration involves numerous institutions, companies, and research centers working together to optimise existing use cases. Hahn emphasized the pragmatic approach of not just pushing everything into the cloud but allocating data efficiently to benefit different players. He highlighted the importance of raising interest in organisations, providing evidence through impactful use cases, and being business-oriented and concrete in approach. Hahn added that the regulatory environment, particularly regarding the Data Act, is complex for companies. However, he expressed optimism about the extensive knowledge base within European players. When discussing the impact of globalisation and supply chains, Hahn emphasized the importance of the international dimension for businesses. He acknowledged the need for interoperability, citing joint approaches with countries like Japan as positive steps.

Ivan Štefanec, Member of the European Parliament, shared thoughts on Europe's position in the manufacturing sector, stressing the importance of fostering trade agreements and the need for global cooperation on standardisation. While Europe has advanced legislative frameworks, challenges exist in aligning regulations with the USA, he concluded.

After having voted through a Slido poll results, the audience's top priorities included boosting R&D and adopting more innovation-driven regulation. The panelists discussed the importance of driving innovation through guidelines rather than hard regulations, with MEP Štefanec emphasizing the need for predictability and stability in regulatory frameworks.

In conclusion, the panel provided a comprehensive exploration of the challenges and opportunities in innovative manufacturing. Key takeaways included making sustainability a business priority, connecting sustainability to society, emphasizing R&D, and integrating private investment within a proper framework. The importance of guidelines over hard regulations, stability in regulatory frameworks, and collaboration between public and private sectors were recurrent themes. The panel collectively underscored the critical role of sustainability, digitalisation, and collaboration in driving innovation and ensuring the future competitiveness of the European manufacturing sector.



European industry is a front-runner in sustainable manufacturing, and the Commission is committed to supporting the uptake of clean technologies and advanced manufacturing solutions. The CECIMO Brussels Forum 2023 is a great opportunity to see European innovators at work.

OPENING OF THE MACHINE TOOLS INNOVATION AWARDS

By Kerstin Jorna, Director General for Internal Market, Industry, Entrepreneurship, and SMEs at the European Commission

In her keynote speech, Kerstin Jorna, Director General for Internal Market, Industry, Entrepreneurship, and SMEs at the European Commission, highlighted the fundamental role of the machinery and tooling industry in Europe. Stressing the importance of embracing digital and green transitions for increased production efficiency, she acknowledged the industry's reputation for quality in European products. Ms. Jorna reflected on the past and current challenges such as the COVID-19 pandemic, energy crises, geopolitical fragmentation, and disruptions in supply chains. Despite these challenges, she noted the resilience of the machine tool sector.

Ms. Jorna emphasized **the need for new forms of private-public cooperation** to navigate uncharted paths sustainably. She expressed gratitude for collaboration with the industrial forum task force on advanced manufacturing, focusing on shaping the path beyond 2030. Discussing data spaces, Ms. Jorna highlighted efforts to create spaces for manufacturing, public procurement, tourism, and other fields, emphasizing the importance of **data-sharing** for the efficiency of solutions. She underscored the significance of digital twins and the digital product passport for market surveillance and the public sector's move towards digital efficiency.

Addressing key drivers, Ms. Jorna highlighted business cases, value chains, and the importance of raw materials. She discussed the Critical Raw Materials Act and efforts to address skills shortages through innovative approaches like skills academies. Ms. Jorna also emphasized harmonising access to finance in Europe to facilitate company applications.

Ms. Jorna discussed access to markets, introducing the concept of a **regulatory sandbox** to understand the positive implications of specific innovations. She emphasized the role of **international harmonised standards** as door openers to markets and the European Commission's contribution to standards processes. Ms. Jorna highlighted the assessment of production needs for certain goods categories and efforts to build independent ecosystems, fostering long-term contracts and resilient supply chains. She outlined the importance of understanding critical single-source products and promoting diversification and mitigation through raw material partnerships.

In conclusion, Ms. Jorna conveyed the European Commission's eagerness to embrace innovation, expressing confidence in the path forward and congratulating the top three finalists of the Machine Tools Innovation Awards 2023.

MACHINE TOOLS INNOVATION (MTI) AWARDS 2023

The first edition of the Machine Tools Innovation (MTI) Awards took place during the CECIMO Brussels Forum. In collaboration with esteemed partners, EIT Manufacturing, European Factories of the Future Research Association (EFFRA) and European Round Table for Industry (ERT), the MTI Awards aim to spotlight notable contributions within the machine tool sector and showcase best practices that can provide that edge - boosting productivity, growth and profitability.



JURY MEMBERS MTI AWARDS 2023

 <p>Judith Ay Policy Director, ERT</p>	 <p>José Pérez Berdud President, AFM Cluster and CEO, Fagor Automation, Spain</p>	 <p>Christian Boelling Managing Director, EIT Manufacturing Central</p>	 <p>Michael Merkle CEO and President, Agathon AG</p>
 <p>Željko Pazin Executive Director, EFFRA</p>	 <p>Heinz-Jürgen Prokop CECIMO President</p>	 <p>Thomas Schneider Managing Director of Research & Development, TRUMPF</p>	 <p>Marco Taisch Professor, Politecnico di Milano</p>

The jury members evaluated all applications and have selected the most notable projects to present their ground-breaking ideas at the CECIMO Brussels Forum.

The top three finalists of the MTI Awards 2023 were:



Ibai Inziarte, Director of Innovation, Aldakin Automation S.L.
Project title: *Eliminating human exposure to potentially carcinogenic dust and increasing robot performance in machining of composite parts*



Philipp Humbeck, R&D Management, Equipment-as-a-Service and Performance Services, TRUMPF
Project title: *Remote Operations for Equipment as a Service*



Alexander Schuster, Fraunhofer Institute for Machine Tools and Forming Technology IWU
Project title: *smartTOOL – energy self-sufficient, sensory tool holder for process monitoring*

The winner of the 2023 MTI Awards was **Aldakin Automation S.L.** represented by Mr Ibai Inziarte, for their exceptional project on “Eliminating human exposure to potentially carcinogenic dust and increasing robot performance in machining of composite parts”.



European manufacturing companies need to increase their production flexibility since in an everyday basis new composite parts are being designed for products as diverse as aircrafts, automobiles and consumer goods. Currently used milling-machines are not suited for that flexibility. Current robotic solutions don't meet the accuracy requirements (+/- 0.25mm) of composite parts in sectors such as aerospace, wind power and automotive that are gaining momentum in the EU Green Deal for transport optimization, electrification and clean energy generation. Moreover, EU composite manufacturing industry is extremely concerned with the dust generated during composite machining due to the potential cancer risk related to the breathing of fibres and resin, and severe health issues on skin, eyes, lungs and liver . In an industry survey on carbon fibre machining 81% of respondents agreed that there is “very high” or “high” need for new actions in order to extract dust from the working area. In this context the product of Aldakin answers the needs of EU composite part manufacturers and the European Commissions' trends in Advanced Manufacturing Key Enabling Technology for cleaner processes and to increase the competitiveness of the EU industry by proposing a robotic system that will disrupt current state of the art of composite machining including an internal dust suction system (98% suction) for improved health and safety conditions by minimizing the exposure of humans to dust with fibres and resins, reduced energy consumption (22% less), increased performance (3 times more accurate than current robot systems) and continuous process monitoring and control for “right the first time” machining, while being significantly cheaper than milling machines.

-Ibai Inziarte, Aldakin Automation S.L., winner of MTI Awards 2023



SKILLS



Panel Discussion - Skills For Manufacturing: Bridging Current Gaps and Future Trends

The panel discussion on "Skills for Manufacturing: Bridging Current Gaps and Future Trends" was opened by a presentation of the "CECIMO Survey on Skills Trends for Advanced Manufacturing", which presented the survey results on current skills shortages, recruitment challenges and future skills and job profiles required.



Olha Hunchak, Policy and Projects Officer at CECIMO, stressed that the primary skills shortages are identified in three departments: Electrical Engineering, Production and Mechanical Industrial Engineering across diverse companies. Companies are grappling with a dual shortage with 70% facing labour shortages due to a limited pool of qualified applicants and 60% experiencing skills shortages due to mismatches between market demand and available skill sets. The survey results highlighted the significance of digital and hard skills across industries, while Soft/Transversal skills are gaining prominence.

The Digitized and Green era may reshape existing roles and give rise to new complementary roles, positively impacting companies.

CECIMO plans to publish the Full Report in January 2024.



This panel discussion focused on skills mismatches and labor shortages in Advanced Manufacturing, aiming to address challenges faced by industries and training facilities. The goal was to facilitate the acquisition of advanced technical skills across diverse generations through upskilling and reskilling initiatives.

Paola Fantini, Director of Education at EIT Manufacturing, highlighted EIT Manufacturing's role in fostering widespread manufacturing engagement by increasing awareness and participation among students and young people. The organization disseminates manufacturing insights to the public, promoting enhanced mutual involvement. EIT Manufacturing organizes open modular short digital courses, which can be combined with webinars and supplemented with training activities to address skills deficiencies. A notable facet of the evolving manufacturing landscape is the automation of the welding process through the integration of cutting-edge technologies. It is stressed that showcasing manufacturing's significance, particularly to young people, including women, is vital to increase their involvement into the sector. This involves explaining sustainable practices that contribute to a better quality of life to attract more young people into the sector.

Francois Duval, Managing Director at GF Machining Solutions SAS, reflected upon the current challenges faced by industries, emphasizing the discouragement of many young individuals due to extensive travel requirements, particularly associated with machine maintenance, leading to prolonged periods away from home and limited flexibility. Another significant concern is the existing gap between blue-collar jobs, characterized by manual labor, and white-collar jobs involving administrative tasks, contributing to a shortage of available blue-collar positions. Moreover, the demand for effective training programs is underscored, requiring a patient approach to gain practical experience. Industries prioritize individuals with a positive attitude and practical know-how over mere academic qualifications. However, in the domains of digital technologies and IT, companies specifically seek professionals with academic credentials, given the complexity of these fields. In the context of GF Manufacturing's ongoing digitization efforts, there arises a need for individuals equipped with university degrees. Simultaneously, there is a concurrent imperative to upskill the existing workforce in digital solutions to optimize overall performance.

Mark Jordan, Chief Strategy Officer at Skillnet Ireland, emphasised that Skillsnet Ireland serves as a talent and business development agency for the Government of Ireland, with a mandate to enhance competitiveness and innovation through skills development. In Ireland, approximately 41% of businesses face challenges in recruiting professionals, while approximately 80% recognize the importance of upskilling, and 85% express a desire for continuous lifelong learning. Despite the high demand for upskilling, only 20% of the workforce has participated in relevant initiatives. The key barriers to addressing skills shortages include the cost of training and the time required to equip the workforce with necessary capacities. Skillsnet Ireland actively supports companies by providing guidance on identifying and attracting the right talent, aligning with their commercial aspirations and strategic objectives. This proactive approach contributes to an overall level of engagement in upskilling efforts in Ireland.

Felix Rohn, Policy Officer at DG EMPL of the European Commission, underlined that the Commission will require new training content. The Pact for Skills is vital for upskilling and reskilling initiatives, involving collaboration among various stakeholders, including businesses, to enhance individuals' employability and align their skills with the evolving needs of the labor market. This initiative targets addressing skills gaps and nurturing a more skilled workforce across the EU. Additionally, the Commission asserts the necessity for new long-term training programs across Europe, to be initially integrated at the national level. This strategic approach aims to boost government engagement by supporting businesses. Lastly, there is a recognition that the key to addressing labor shortages lies in fostering understanding among the younger generation regarding the importance of the manufacturing sector. Emphasizing the role of technology and AI, these advancements are expected to enhance productivity, especially among the low-skilled workforce.



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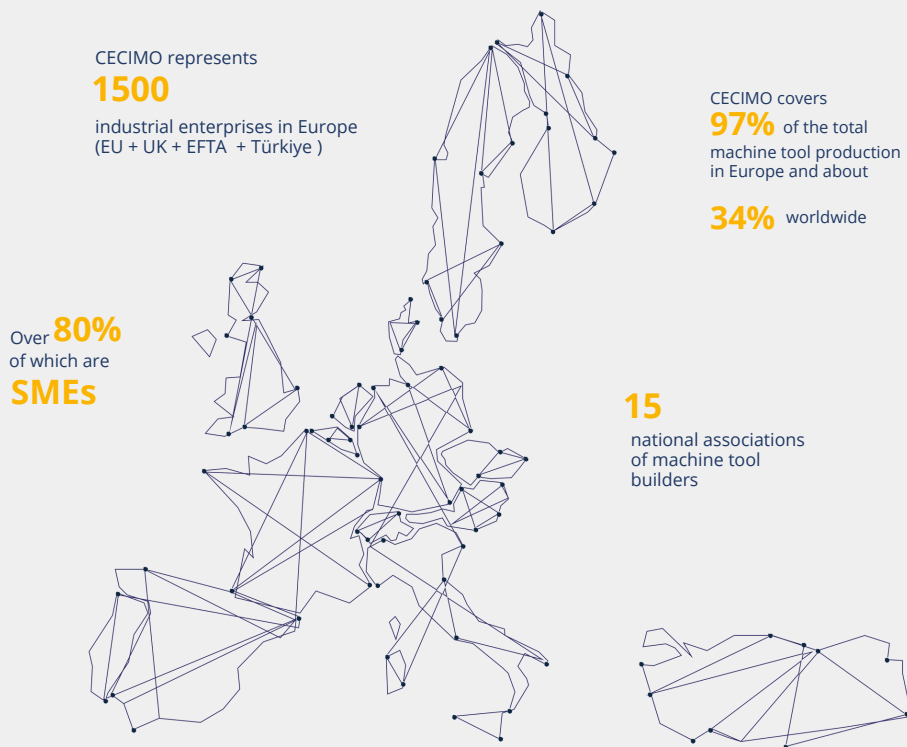
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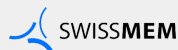


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