Virtual Skills Policy Workshop on

Towards more efficient and inclusive microelectronics talent pipelines

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Objectives:

- To inform the current and upcoming EU policies and activities on skills
- To discuss future policy and actions needed to strengthen the competitiveness of the microelectronics industry;

Agenda:

- Tour de table
- Opening speech by Laith Altimime, President of SEMI Europe
- Introduction on European Skills Agenda by Andre Richier, DG Grow
- Introduction on ESCO by Dimitrios Pikios, DG Employment
- Primary results of the Metis Project: Development of Skills Strategy by Léo Saint-Martin, DECISION
- SME's challenges and opportunities in the microelectronics by Meri Helle, Summa Semiconductor
- Open discussions on:
    - EU's digital transition and the importance of reskilling/upskilling in the microelectronics industry:
    - Discussions on future EU policies and actions, and how METIS can address them

Key takeaways from the workshop:

EU policy developments where METIS can contribute

- METIS can contribute significantly to EU skills policy developments and provide valuable inputs, to strengthen the skills of EU microelectronics workforce. **The Pact for Skills**, a new EU initiative launched in July 2020, is a new engagement and governance model that will support upskilling and reskilling in Europe. Industry, public and private employers, social partners, industry associations, chambers of commerce, education and training providers and employment agencies will be invited to work together and to create a shared vision and action. In particular, the Pact will support strategic industrial ecosystems, such as microelectronics, to build large-scale partnerships, aiming to unlock public and private investments in waves until 2025. METIS

can contribute to the Pact for Skills, by providing the basis to advance skills and diversity in the microelectronics ecosystem. The experience and outcomes of the project can nourish the long-term reskilling and upskilling efforts of the Pact for Skills, by identifying the industry's skills priorities and needs.

- **ESCO** is the European classification of skills, competences, qualifications and occupations. ESCO aims to provide a common reference language to mobilize workforce in the European labour market. ESCO can be used for job-searching and skill-match by public and private sectors. Since the next ESCO update will be drafted by November 2020, the METIS project will provide insights on new profiles based on outcomes of the questionnaire, interviews and focus group in October. We aim to convene a workshop to engage the METIS project, DG Employment, and stakeholders in ESCO, to finalize the new occupational profiles from the METIS project to ESCO in October. Potential new job profiles are: Microelectronics designer (analog and system), Microelectronics smart manufacturing engineer, Microelectronics material engineer, Microelectronic maintenance technician, Microelectronics software engineer and Microelectronics test engineers.

- **COVID-19** restricted travel of staff members and limited the number of employees that can stay on-site to protect the health of the workforce. This has exacerbated the need for flexibility and interdisciplinarity in workforce profiles, as on-site employees find themselves in the position to tackle issues not directly linked to their expertise. Moreover, the nature of training needs to be revisited, as on-the-job training, although indispensable for engineers , apprentices and technicians in the semiconductor industry, poses challenges to the social distancing rules imposed due to COVID-19. Since the outbreak, most live training programmes have been postponed or re-organised with fewer participants at a time. The development of traditional online content is crucial, but it can replace only part of the training. For the development of pioneering training materials, collaboration between industry and education is vital. For example, incorporating innovative tools such as virtual and augmented reality could represent a solution for new-age training, respecting COVID-19 restrictions. The Digital Europe Programme should take this into consideration when designing the programme particularly regarding skills.

Preliminary results and suggestions for future METIS actions

- The preliminary results of the Skills Strategy were discussed with the participants of the focus group. According to the preliminary results, the industry needs engineers with multidisciplinary knowledge and soft skills such as creativity and critical thinking. Materials engineers and cybersecurity specialists are also among the top priorities for the microelectronics sector. Finally, software integration, AI and big data / data analysis skills are crucial for all types of engineers, especially robotic engineers, test engineers and software engineers.
- The METIS project can use its partnership to promote and stimulate microelectronics as a career choice. As the sector is vital for Europe's competitiveness, attracting new talent should be a top priority. The policy makers expressed their support to support as much as possible these initiatives at the European level.

Additional Policy Recommendations from the METIS consortium

- Making infrastructure for R&D (e.g. laboratories from National research institutes) available will have great added value to train students and to support SMEs in this sector. More partnerships between key industry companies and education providers are needed to enable students to access state-of-the-art equipment, and to have real-life experience in corporate environment. EU policies to support such developments will be needed.

Participants:

Organization	**Name**
DG Employment	Dimitrios Pikios
	Felix Rohn
DG Grow	Andre Richier
DG Connect	Nikolaos KATTAVENOS
	Marco Ceccarelli
	Christine Simon
DG Research	Maija Breque
Bosch	Thomas Fleischmann
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