



5 May 2020

DIGITALEUROPE recommendations on the manufacturing workforce in crisis times



Executive Summary

Manufacturers are facing an unprecedented economic crisis. Many of the 195 million jobs threatened by COVID-19¹ are in factories around the world. We need a serious reprioritisation of EU investments and policies for the short, medium and long-term. We can turn this massive business disruption into an opportunity for lasting, positive change in how the EU allocates funding and designs policies. European manufacturers deserve ambitious EU measures that truly give credit to their engineering creativity.

DIGITALEUROPE recommends to:

- ▶ **Prioritise in the European Pact for Skills a digital skills training catalogue valid for all manufacturing workers**, including MOOCs and coding classes. It is key to focus on quickly scalable manufacturing training solutions that can be replicated across Europe in a cost-efficient manner.
- ▶ **Make training for human-machine collaboration in the factory a priority of the Updated Skills Agenda for Europe**. COVID-19 was yet another reminder of automation's benefits in keeping production running while protecting workers' health.
- ▶ **Swiftly approve the Commission's proposal for SURE (Support to mitigate Unemployment Risks in an Emergency)**. It provides much-needed financial assistance for business continuity.
- ▶ **Strengthen European social dialogue on industry's digital transformation**. It is key the EU supports existing social partners in the

¹ [ILO, COVID-19 causes devastating losses in working hours and employment, 7 April 2020](#)

proposal of long-term policy solutions on the governance of training systems and best training practices to scale.

Please find below more details on our recommendations. Our members stand ready to discuss and share our expertise and experiences.



Business continuity

As we speak, many European manufacturers are facing COVID-induced liquidity problems. The digital transformation of industries will not slow down, but Europe's preparedness is at risk. Training is paying the price for that, as critical in-house programmes are being put on hold.

The EU must immediately encourage the use of e-learning resources to keep training on digital skills for manufacturing running. It should target both shop-floor and office workers and strive to involve social partners, lest Europe's ability to innovate will be at stake once this crisis recedes. We can't lose ground as industry moves into the digital age.

We urge policymakers to:

- ▶▶ **Make online training for digital skills a priority in the European Pact for Skills.** The European Commission should build a digital skills training catalogue valid for all manufacturing workers, including MOOCs and coding classes. We want to play our part on that. In the Annex, we illustrate quickly scalable manufacturing training solutions from our membership. The EU can replicate them across Europe in a cost-efficient manner, providing timely support to suppliers, end-users and contract manufacturers.
- ▶▶ **Make human-machine collaboration in manufacturing a priority area in the Update to the Skills Agenda for Europe.** 79% of producers in the EU report skills shortages.² New graduates lack work-ready competences. Experienced ones got trained in a pre-digital, traditional manufacturing world. The pandemic crisis will only exacerbate today's skills shortages. We need investments on training in human-machine collaboration, data-driven production systems, robotics, model-based systems engineering (MBSE), artificial intelligence, additive manufacturing, advanced analytics and collaborative engineering. All this would also support **factory automation**, which has emerged as an ally in keeping production running while protecting workers' health. It must become the norm. The EU must support human-centric, easily

² European Commission, Skills for Industry: Skills for Smart Industrial Specialisation and Digital Transformation, 2019

implementable trainings that make the most out of robots on the shop floor.

- ▶ **Swiftly approve the Commission’s proposal for SURE (Support to mitigate Unemployment Risks in an Emergency).** SURE financial assistance is aimed at supporting short-time work schemes and similar measures, key to guarantee business continuity and avoid wasteful redundancies.
- ▶ **Leverage EU funds and programmes from the current EU MFF and that for 2021-2027, including ESF, ESF+, ERDF and the Digital Europe Programme.** Short-work arrangements and furloughs induced by COVID-19 affect employee motivation. EU funds are fundamental to help on workforce retention, which will be a key success factor for companies to recover from the crisis. We must also increase the level of EU funding dedicated to training, and make sure it captures the potential of innovative learning methods. The EU Operational Programmes for 2021-2027, for instance, should guarantee structural funds can flow into flexible reskilling and upskilling programmes, not just programmes that prioritise traditional learning paths. Many manufacturing workers would benefit immediately from virtual courses and other flexible training solutions.
- ▶ **Establish an EU forecasting group on manufacturing skills composed by industry and other relevant stakeholders with strong sector knowledge.** The Commission should task it with predicting industrial skills supply, demand and mismatches across Member States. It should support the group with funding to launch manufacturing skills analyses in each Member State that leverage the predictive capabilities of AI and big data. Past examples from industry³ and the European Centre for the Development of Vocational Training (CEDEFOP)⁴ should inspire these efforts. The findings of the forecasting group should regularly feed into the Commission’s decision-making on initiatives to take and training investments to make for a balanced labour market. It is the future-readiness of our training systems here at stake. Employment policy-makers should also upgrade existing taxonomies like ESCO and incorporate into them latest skills and knowledge concepts in industrial technologies like AI, blockchain and 3D printing. This will help to achieve better competence-based industrial job-matching.

³ In Belgium, [Agoria](#) and employment agencies used AI to identify skills trends in the future of the country’s labour market until 2030.

⁴ CEDEFOP uses the classification of European skills, competences, qualification and occupations (ESCO) and complex big data analysis techniques to extract information on skills from online vacancies. More info [here](#).



Business medium and long-term viability

COVID-19 has taught us that industry still needs to adapt to new ways of working and to more digitalised, remotely-monitored production processes. All medium and long-term energies of manufacturing policy-makers must then concentrate on digital transformation. Fast-tracking it is the single most relevant factor to reach pre COVID-19 productivity growth levels. We strongly believe the following areas and recommendations are key:

Training investment and policies

- ▶ **Expand the number of Digital Innovation Hubs across Europe and boost dedicated funding.** They should include test beds and training facilities for large and small manufacturers. Digital Innovation Hubs should also capture significant investments to collect data as part of the Common European Data Spaces and put it at companies' disposal, especially SMEs. If we want the Digital Innovation Hubs to make a difference and be global centres of excellence, they should be platforms where to accelerate algorithm training and develop new AI applications. The Digital Europe Programme should drive the development of manufacturing competences through the Digital Innovation Hubs.
- ▶ **Step up cybersecurity training in the EU budget.** We expect the risk of cybersecurity attacks to increase as business operations move to a virtual space. Now more than ever, cybersecurity skills require more and more innovative, out-of-the-box trainings like cyber ranges, where companies can gain hands-on cyber skills in a safe, legal and virtual environment.⁵ The European Commission should incentivise the take-up of new cybersecurity training practices by education authorities and training providers all over Europe.

Dialogue among stakeholders

- ▶ **Reinforce European social dialogue on industry's digital transformation.** Europe has more experience in social dialogue than other regions in the world. It should use this process to propose policy solutions on the governance of training systems and scale up best digital transformation training practices. The future will bring new manufacturing roles, like the Digital Factory Automation Engineer, and reshape others.

⁵ More info [here](#)

EU social partners can help authorities to improve the provision of effective employee training. Policy makers should inspire themselves on successful models in Member States where social partners have collaborated to produce comprehensive curricula.

- ▶ **Introduce policies that accelerate collaboration between manufacturers and universities as well as vocational centres.** We need the EU to encourage educators to better involve senior industrial scientists and engineers in training delivery and curriculum shaping. This is fundamental to ensure university formation responds to the actual skills needs in the labour market. In Germany for instance, industry actors have designed mechatronics training programmes that can be easily integrated within a high school, college, or university curriculum, or as part of continuing education.⁶ Such programmes helped to interlink the country's industrial expertise with its successful dual education system.

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⁶ One example is the “Siemens Mechatronic Systems Certification Program” (SMSCP). The program combines the German dual education system with Siemens’ in-house know-how. It prepares students to work their way into a new system, and by means of the troubleshooting strategies which they learn, they are able to transfer their knowledge and expertise easily to another system. More details can be found [here](#).

About DIGITALEUROPE

DIGITALEUROPE represents the digital technology industry in Europe. Our members include some of the world's largest IT, telecoms and consumer electronics companies and national associations from every part of Europe. DIGITALEUROPE wants European businesses and citizens to benefit fully from digital technologies and for Europe to grow, attract and sustain the world's best digital technology companies. DIGITALEUROPE ensures industry participation in the development and implementation of EU policies.

DIGITALEUROPE Membership

Corporate Members

Accenture, Airbus, Amazon, AMD, Apple, Arçelik, Bayer, Bosch, Bose, Bristol-Myers Squibb, Brother, Canon, Cisco, DATEV, Dell, Dropbox, Epson, Ericsson, Facebook, Fujitsu, Google, Graphcore, Hewlett Packard Enterprise, Hitachi, HP Inc., HSBC, Huawei, Intel, Johnson & Johnson, JVC Kenwood Group, Konica Minolta, Kyocera, Lenovo, Lexmark, LG Electronics, MasterCard, METRO, Microsoft, Mitsubishi Electric Europe, Motorola Solutions, MSD Europe Inc., NEC, Nokia, Nvidia Ltd., Océ, Oki, Oracle, Palo Alto Networks, Panasonic Europe, Philips, Qualcomm, Red Hat, Ricoh Europe PLC, Rockwell Automation, Samsung, SAP, SAS, Schneider Electric, Sharp Electronics, Siemens, Siemens Healthineers, Sony, Swatch Group, Tata Consultancy Services, Technicolor, Texas Instruments, Toshiba, TP Vision, UnitedHealth Group, Visa, VMware, Xerox.

National Trade Associations

Austria: IOÖ

Belarus: INFOPARK

Belgium: AGORIA

Croatia: Croatian Chamber of Economy

Cyprus: CITEA

Denmark: DI Digital, IT BRANCHEN, Dansk Erhverv

Estonia: ITL

Finland: TIF

France: AFNUM, Syntec Numérique, Tech in France

Germany: BITKOM, ZVEI

Greece: SEPE

Hungary: IVSZ

Ireland: Technology Ireland

Italy: Anitec-Assinform

Lithuania: INFOBALT

Luxembourg: APSI

Netherlands: NLdigital, FIAR

Norway: Abelia

Poland: KIGEIT, PIIT, ZIPSEE

Portugal: AGEFE

Romania: ANIS, APDETIC

Slovakia: ITAS

Slovenia: GZS

Spain: AMETIC

Sweden: Teknikföretagen, IT&Telekomföretagen

Switzerland: SWICO

Turkey: Digital Turkey Platform, ECID

Ukraine: IT UKRAINE

United Kingdom: techUK