



Preparing Europe's industry for the "new" normal



Executive Summary

COVID-19 showed Europe's industry needs digital-first industrial policies. Technologies like robotics, cloud computing and advanced data analytics stepped in to mitigate some of the hardest production challenges in the pandemic. The EU should accelerate their implementation in the factory with bold investment measures and a cautious approach to legislation which recognises the Single Market high safety standards, open trade dynamics and contractual freedom that made Europe an industrial giant.

The impact of the virus on advanced manufacturing has been higher than in other sectors.¹ The resources of the Commission, Council and European Parliament should now focus on a specific set of priorities to equip industrial actors with the digital tools for a post-COVID-19 world. Policy-makers' attention should be on:

- ▶▶ **Industrial Digital Sovereignty:** a collaborative leadership that allows our industrial players to reassert their position, to promote open markets, European democratic values and international standards.
- ▶▶ **Governance:** carefully designed indicators to guide the EU industrial policy towards the twin digital and green transitions
- ▶▶ **Industrial data:** preserving freedom of contract in industrial data sharing. It is key for the emergence of the industrial data economy
- ▶▶ **Sustainability:** methodologies to measure the benefits of ICT for sustainability, and ambitious criteria to assess the green and digital credentials of the national recovery and resilience plans under Next Generation EU.
- ▶▶ **New technologies:** the option of local campus networks for 5G industrial deployment and SME-targeted AI funding, rather than new AI regulatory provisions. Skills forecasting, sharing of best training practices and upskilling investments should support digital technology deployment.

¹ McKinsey, [Organizing for speed in advanced industries](#), 2020

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1. A Stronger Digital Industrial Europe and digital sovereignty in the EU's interests

- ▶▶ The development of a Stronger Digital Industrial Europe is key for the recovery and economic growth. We fully share the aim of making Europe a centre for research and growth of new digital technologies, digitally enabled citizens, and innovative digital business models in an open economy.
- ▶▶ Digital Sovereignty is all about building capabilities and innovative competences in the space of digital. This can best be achieved through boosting EU investment, including the Recovery and Resilience Facility.
- ▶▶ The resilience of European industry means collaborative leadership by Europe beyond its borders. Diverse international and digitally-enabled value chains provide a necessary foundation for the European economy to bounce back and stay flexible during a period of prolonged uncertainty. All this should be achieved through continued openness to the global market and reciprocal market access between trading partners, and take a strategic approach to building trade relations.
- ▶▶ We support a collaborative leadership that allows our industrial players to reassert their position, to promote open markets, European democratic values and international standards.



2. Governance of industrial policy

We support the Commission's and Member States' attention to a regular monitoring of the EU's industrial policy strategy:

- ▶▶ Monitoring should ensure the EU delivers on the twin transition to a green and digital economy. The Commission and Member States should propose indicators assessing long-term progress in areas like broadband access; reduction of global CO2 emissions; re-use of material in production and construction (e.g. buildings); use of big data, AI and robotics in enterprises; number of cybersecurity professionals in Europe; workforce ICT training; ICT spending in R&D investment.
- ▶▶ Industry should be formally embedded into the monitoring process and structures. Businesses, including SMEs, are uniquely placed to suggest whether policies or investments schemes designed for them are heading in the right direction. Council and Commission should involve in particular

industry stakeholders with expertise in the green and digital transition at the core of the strategy.



3. The Industrial Data Economy

Contractual freedom is essential for the success of the industrial data² economy. The road to Europe's industrial recovery is paved with data. Freedom of contract ensures steady investments into Europe to innovate on data collection and use, creating economic growth and improving sustainability. DIGITALEUROPE members are committed to implementing the following principles to incentivise the industrial data economy in Europe:

1. *Contractual arrangements between the involved parties conducted in a fair and transparent manner.* In principle, each generator of data should be able to decide how to handle the data it generates. This ensures that customers and business partners can determine and control which data is accessed by whom, for what purpose and for how long it is used. The EU should abstain from introducing any industrial data sharing or data localisation obligations. Contractual agreements should continue to define know-how protection and data confidentiality.
2. *Promotion of data security through security by design and security lifecycle management.* Basic requirements for the sharing and use of data are:
 - access that protects against misuse
 - secure transfer, processing, storage, and handling of industrial data
 - maintenance of industrial data integrity and confidentiality.

DIGITALEUROPE members are therefore committed to promoting industrial data security as comprehensively as possible through a holistic approach which includes both security by design in the development phase and security lifecycle management throughout the entire product and data lifecycle (brownfield and greenfield applications).

² "We define 'Industrial Data' as data derived from machinery and plants in an industrial context in different vertical sectors

3. *Portability and interoperability of data to enhance competitiveness.*

We are committed to achieving data portability through interoperable data formats and information models based on freely accessible standards. This guarantees data usage across different generation and application contexts in parallel, making data exchange or data pooling among different actors possible. Industrial data portability leads to more competition and collaboration

4. *Promoting transparent operation of industrial digital platforms.*

We support the provision of suitable opt-in/opt-out functions in order to allow industrial platform users to track-and-control in a differential manner the use and exploration of the data they contributed to in industrial platform operations. An industrial platform interconnects different actors pursuing different interests. This also includes the operator of the platform, which has the task of making these interests as transparent as possible to all industrial platform users. This is particularly the case when the content or functionality of the industrial platform are influenced by the interests of individual actors, such as the order of search results.

5. *Enabling fair competition between digital industrial platforms.*

We reject any introduction of new data ownership legislation. We are actively committed to fair and innovation-promoting international competition between platforms that would prevent the monopolisation of data in the industrial context. We support designing B2B industrial platforms in a way that prevents the creation of anti-competitive lock-in mechanisms that artificially obstruct users from switching to other platforms. In particular, we support ensuring the migration capability of data and the notion that the simultaneous use of multiple platforms should be made possible.



4. Digital-driven sustainability

Fast-tracking digital technology investments is a precondition for the EU to be the world's first climate-neutral continent by 2050. It is also key to facilitate the transition to a circular economy. Technologies like cloud and edge computing, IIoT, AI, digital twins, big data and additive manufacturing must now be used to “flatten” the climate curve and achieve circular economy goals. We underline the following considerations for EU policy-makers:

Co2 reduction: IIoT and monitoring software improve dramatically transparency in the value chain. Fully digitised, cutting-edge energy management and automation systems can today cut up to 50% of companies' carbon footprint.³ These technologies are ready to be part of Europe's factories. We have a duty to make them available to the largest group of industrial actors possible.

Energy consumption and costs savings: digital transformation makes it possible to deliver on the Green Deal's goals without sacrificing competitiveness, but rather increasing it. Studies show IIoT software decreased companies' energy consumption by 25% on average,⁴ while giving them extra control of their energy spending patterns. Additive manufacturing alone can reduce up to 27% of global energy use by 2050, thanks to savings in materials, transport, production, operation and maintenance.⁵

This digital-sustainability nexus should be at the centre of our industrial economy. Commission, Council and European Parliament need to:

- ▶▶ Develop EU-level methodologies and/or performance indicators to measure the decarbonisation, dematerialization and sustainability potential of digital technologies. They will help in quantifying the benefits of ICT in industry, enabling informed decision-making.
- ▶▶ Define ambitious criteria to assess the green and digital credentials of the national recovery and resilience plans under Next Generation EU. Digitalising production and construction will bring us closer to climate neutrality and circular economy while generating a positive return on investment.⁶ This is exactly what national governments now need to reinvent their industrial economies. We call on the Commission's Recovery and Resilience Task Force and Member States to draw up a list of conditions to qualify national recovery and resilience plans as digital- and green-first.

³ GreenBiz, [The State of Corporate Energy & Sustainability Programs](#), 2018

⁴ Schneider Electric, 2019 Global Digital Transformation Benefits Report

⁵ Verhoef et al., [The effect of additive manufacturing on global energy demand: An assessment using a bottom-up approach](#), 2018

⁶ Idem



5. Innovation

5.1 5G networks

5G roll-out will fundamentally provide reliable connectivity for numerous IoT devices and sensors. After energy & utilities, manufacturing is the sector accounting for the largest share of 5G-enabled digitalisation revenues by 2026.⁷

5G roll-out in Europe should include:

- ▶▶ Having the option of flexible, locally limited “own” 5G campus networks for communication among machines, systems and plants at production sites
- ▶▶ Foreseeing a harmonised approach for those Member States implementing local campus networks (based on best practice) for a fast industrial 5G roll-out and open markets for industrial 5G solutions

5.2 Artificial intelligence

Investments, not regulation, is what Europe needs to thrive on industrial AI.

We welcome, in this regard, the Commission’s pledge to ringfence 20% of NextGenerationEU for digital.

- ▶▶ Resources should concentrate on supporting SMEs in accessing, developing, and using AI. The Digital Europe Programme (DEP) should be a tool to stimulate small business engagement in the technology. It should provide SMEs with support from organisations and platforms aware of their industrial challenges. Strengthening the capabilities of existing Digital Innovation Hubs (DIHs) would be a better option to reach this goal than creating a new AI one-stop-shop, as the Commission AI White Paper proposed. Already familiar among SMEs, the DIHs would offer a better visibility of new funding opportunities, promoting the EU’s role on AI deployment.
- ▶▶ There is no justification to further regulate industrial AI in Europe today. The EU should rather encourage principle-based internal governance processes, industry standardisation, clarify the application of existing regulation and maintain the notion that sector regulators are the best-placed enforcement agencies of the existing rules. Manufacturers must already meet a vast set of essential safety and health requirements in the New Legislative Framework (NLF) and other EU product legislation, such as the Machinery Directive. They must address any AI-generated risk

⁷ EIT Digital, [Define the future of the Industrial IoT](#), 2017

during compulsory risk assessment processes. Any new requirement would unjustifiably raise compliance costs for the SMEs that make up Europe's industrial base.



6. Workforce development

We believe the EU is uniquely placed to add value in the areas of skills foresight, promotion of best training practices and upskilling. All manufacturers from all over Europe are invariably facing a common challenge: finding enough experts to power the digital transformation of the sector and upskilling their existing workforce. To maximise its value on skills policy, the EU should:

- ▶▶ Establish an EU forecasting group on manufacturing skills composed by industry and other relevant stakeholders with strong sector knowledge.⁸
- ▶▶ Accelerate collaboration between manufacturers and universities as well as vocational centres. The EU should build on existing good practices⁹ and make sure university formation responds to the actual skills needs in the industrial labour market.
- ▶▶ Make digital skills a top priority in the upcoming ERDF and ESF+ programmes and leverage digital skills funding opportunities in Erasmus+, Parts of Europe suffering from significant levels of unemployment, for instance, would greatly benefit from such funding.
- ▶▶ Strengthen European social dialogue on industry's digital transformation to propose long-term policy solutions on the governance of training systems and best training practices to scale.

⁸ More info [here](#):

⁹ One example is the "Siemens Mechatronic Systems Certification Program" (SMSCP) in Germany. It 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](#).

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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, Bidao, Bosch, Bose, Bristol-Myers Squibb, Brother, Canon, Cisco, DATEV, Dell, Dropbox, Eli Lilly and Company, 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, OPPO, Oracle, Palo Alto Networks, Panasonic Europe, Philips, Qualcomm, Red Hat, Ricoh, Roche, 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