How to relaunch manufacturing in a post-COVID-19 world

Executive Summary

How policy-makers design their COVID-19 recovery plans will shape Europe's competitiveness for decades. The industry, which has suffered tremendously from this crisis, urgently needs a bold EU Recovery Package grounded on a fast approved multiannual financial framework (MFF) and a new Recovery Instrument. The priority of the EU Recovery Package should be to stimulate unprecedented levels of EU investments in the digitalisation of the manufacturing industry.

In this paper, we present our recommendations on how to relaunch the European manufacturing sector after the COVID-19 crisis, and we look forward to discussing our perspectives with the European Commission and all relevant stakeholders.

Recovery package goals

Europe must invest in a 'digital-first' stimulus package. We strongly urge the EU to:

- **Reach a quick and ambitious agreement on the next MFF**. It is key to support manufacturers as soon as possible and preserve business continuity. The EU must guarantee companies' plans for much-needed technology investment are not postponed because of COVID-19. A timely, ambitious, digitally-focused Recovery Package would also bolster manufacturers' preparedness against the next virus outbreak.

- **Allocate to digital spending at least 10% of the overall EU recovery package funding**. This is absolutely crucial to accelerate the decarbonisation of manufacturing and boost the transition to the circular economy, through digital and the deployment of very high capacity

connectivity to spur economic recovery, which should be key priorities for industrial recovery.

▸▸ **Increase the overall EU R&D funding from 2% to 3% of EU GDP**. Funding should focus on better integration between European and national R&D activities as well as SMEs to break the silos between sectors.

▸▸ **Focus on the resilience of the EU's Strategic Value Chains (SVC)**, such as the Industrial Internet of Things (IIoT).

Recovery package focus areas

SMEs support: a voucher scheme for businesses

Manufacturers are struggling to stay afloat while paying employees, managing the costs of doing business and keeping operations running. To increase manufacturers' competitiveness, much-needed technology investments must not be postponed. We need an EU voucher scheme to offer them immediate support on vital innovation spending. The scheme should have a simple online registration system. Its support should be conditional on beneficiaries' current or future adherence to internationally recognised sustainability standards (like ISO 14040:2006). It should focus on:

▸▸ Upgrading obsolete equipment, especially connected devices;

▸▸ Setting up incentives for knowledge transfer. This would help SMEs to identify the right use cases for technologies like industrial artificial intelligence (AI);

▸▸ Upskilling workforce with immediately needed digital skills to allow remote asset control, production monitoring and employee collaboration.

A list of Recovery Projects of Common Interest

We need to set up a list of new and existing high-priority projects in Europe and worldwide that would benefit from fast approval procedures, simplified export financing and export credit insurance access. SMEs should be a specific focus of these projects. Recommended examples are:

▸▸ **Investing in AI & robotics for manufacturing**. Automation is key to minimise the impact of physical-distancing measures, which are dramatically altering factory operations.

▶▶ **5G roll-out**, which is crucial to provide reliable connectivity for numerous IoT devices and sensors and create digital industrial ecosystems composed of various industries, research centres and end-users. This is fundamental for manufacturing companies and 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 European harmonised approach for those Member States implementing local campus networks (based on best practice) for a fast industrial 5G rollout and to open markets for industrial 5G solutions.

▶▶ **Investing in low-carbon industry**. We have, here in Europe, the digital technologies to help reduce emissions across the continent by up to 80% or more compared to 1990 levels, in sectors like chemical, cement, iron and steel[1]. We must now boost them to create a sustainable competitive advantage for Europe at a difficult time.

Pace of decision-making aligned to industry realities

The European Commission should consider the impact of additional technical and administrative requirements in its current legislative process. Industrial companies operating in the EU, from small to large, are struggling for survival and need all their forces (especially technical experts) focused on returning to stable business conditions. Certain envisaged proposals would run counter to the swift recovery of industry.

At the same time, the European Commission must do more to address the backlog of standards not cited in the Official Journal of the EU (OJEU). This is key to reduce product time to market.

We urge the European Commission to:

▶▶ Delay the implementation or prolong evaluation periods for the Radio Equipment Directive Delegated Acts under discussion, the Machinery Directive, the Electromagnetic Compatibility Directive, the General Product Safety Directive, the Directive on security of network and information systems, and the Low Voltage Directive all into 2021.

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[1] IEB, Decarbonising Europe's energy intensive industries: The Final Frontier, 2016

▶▶ Streamline the current standards assessment process prior to the citation of harmonised standard in the OJEU. This is vital to bring back stability for economic operators. As harmonised standards are developed by stakeholders and experts on a consensual basis, we propose:

- Simplifying and accelerate their evaluation by the European Commission by temporarily skipping the current assessment done by Harmonised Standards (HAS) consultants.

- Harmonised standards provided by European Standard Development Organisations (CEN, CENELEC and ETSI) should be cited in the EU Official Journal without delay.

- The date of cessation (DoC) and date of withdrawal (DoW) should also be aligned.

Timely listed standards from European Standard Organisations give certainty to all players: market surveillance bodies, companies, and citizens. It is what is needed most in times of COVID-19.

▶▶ Underscore the strategic importance of standardisation fora and consortia in addition to formally recognised Standard Development Organisations.

- These fora and consortia provide most of the relevant ICT technical specifications by which software and services meet customer requirements and drive interoperability from different vendors to work seamlessly together and scale rapidly across Europe and beyond. As such, they are key to reboot manufacturing recovery post-COVID-19.

- The Commission should emphasise their relevance in the upcoming Strategy for Standardisation announced in the ''Shaping Europe's digital future'' communication.

Supply chain digitalisation

We must fund disruptive production concepts for large-scale, close-to-market industrial projects to guarantee the digital transformation of the entire value chain. Digital transformation should reach all the thousands small suppliers that contribute to the success of large end-users. Recommended examples are:

▶▶ New initiatives for Europe's industrial competitiveness based on the example of the Joint Technology Initiatives under H2020. They accelerated co-development in production ecosystems and closer supplier/customer relationships.

▶▶ Well-targeted investments for the proposed European Industrial Ecosystems and Alliances. The identification and governance of these networks must be transparent, and their outcome be monitored and evaluated by the Industrial Forum.

▶▶ Large funding for additive manufacturing technologies. They are key to solve supply chain gaps by allowing to flexibly substitute critical parts from global sources with locally produced parts.

High-performance digital infrastructure and digital capabilities for economic recovery and climate leadership

Broadband, 5G/6G, AI, data centres, high-performance computing and edge-computing are key to power the digitalisation of manufacturing. Next-generation digital infrastructure is essential to support low-latency applications and time-sensitive supply chains where aspects like real-time condition monitoring and IIoT for track-and-trace logistics solutions are key.

Digital infrastructure and digital capabilities are also crucial for the energy efficiency of manufacturing assets. 5G networks enable robotics and connected manufacturing operations that help minimising resource usage. Digital tools, including AI-driven tools, rapidly optimise energy systems at a time of growing complexity of energy and materials flows. Recommended actions are therefore:

▶▶ Upgrading the most critical digital infrastructure and capabilities of manufacturers through the new MFF and Recovery Instrument.

▶▶ Placing sustainability at the core of any investment initiative designed. A policy framework to guide the greening of manufacturing is essential to support any project launched.

▶▶ Increased cybersecurity EU investments to manage a larger attack surface as more and more operations are digitalised.

Data quality, interoperability and security

Manufacturers are exchanging data to bring up innovative automation solutions in the factory. **The EU must preserve the voluntary nature of industrial data sharing in Europe and the value of contractual arrangements to govern data exchanges.** It should concentrate on supporting projects for:

▶▶ Data curation and labelling;

▶▶ Data format standardisation;

▶▶ Data security through security by design and security lifecycle management.

Data curation, labelling, standardisation and security would support increased automation when relevant and thus help meeting social-distancing norms on the factory floors when production is back to high or full capacity.

Workforce empowerment

Many of the jobs lost during the pandemic may never return. We must train our people with the right skills and know-how to improve their employability and meet future industrial requirements in areas like artificial intelligence for predictive maintenance, automation and digital twin technology.

Industry has been working closely with universities and technical institutes, donating software licenses, digital systems, or simulators to strengthen the digital skills of learners. Recommended actions are:

▶▶ Boosting funding for manufacturing training as part of the next MFF and make sure it captures the potential of innovative learning methods. The EU Operational Programmes for 2021-2027 must guarantee structural funds can flow into flexible reskilling and upskilling programmes, not just programmes that prioritise traditional learning paths. Many manufacturing workers would clearly benefit from virtual courses and other flexible training solutions.[2]

▶▶ Creating a Council of senior business and academic leaders to develop together targeted vocational programs for employees

▶▶ Promoting interdisciplinary curricula combining IT and traditional manufacturing processes. Europe needs talents that are well-versed in subjects like computer science and, at the same time, have familiarity with manufacturing processes and operations.

▶▶ Setting up an EU forecasting group composed by industry and other relevant stakeholders to predict future industrial skills gaps and shortages with the help of AI and big data's capabilities.

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[2] For more info, please read "DIGITALEUROPE recommendations on the manufacturing workforce in crisis times".

Value-based procurement

Public entities need to lead by example. They must make mandatory the principle of Most Economically Advantageous Tender (so-called MEAT principle) in any EU procurement and EU funding programme. Procurement should consider not only the lowest price, but also the greatest value projects have for society. Recommended actions are:

▸▸ Funding for the energy efficiency of public buildings and the digitalisation of the building sector to improve indoor air filtration, a painful problem in the pandemic

▸▸ Speeding up the roll-out of the European Train Control System (ETCS) to digitalise public transport

▸▸ Encouraging investment in remote services for all installed infrastructure to reduce in-person services

▸▸ Smart city initiatives for technological ecosystems to collect traffic, noise, air quality, energy consumption and movement data (the latter being especially relevant for COVID-19 response). Data-driven insights will lead to informed, sustainable decisions by authorities.

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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.

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