POSITION PAPER

Recommendations of the Trilateral Cooperation between France, Italy and Germany on Digitalising the European Manufacturing Industry

Since 2017, the trilateral cooperation between Alliance Industrie du Futur, Piano Impresa 4.0 and Plattform Industrie 4.0 has aimed at driving forward the successful digitalisation of the European manufacturing industry. The new legislative period offers the EU a great opportunity to harness efforts for a common European digital ecosystem. With this joint position paper, we encourage the European Commission to provide strong support for the implementation of our recommendations for a digitalised European manufacturing industry. As a trilateral cooperation our goal is to support and promote suitable conditions for the successful digital transformation of industry, while sustainably strengthening the European economy as a whole.

Digitalising the Manufacturing Industry for a Strong Economic, Environmentally Friendly and Sustainable Social Future for Europe

The increasing interconnectedness of people, machines and factories across global, digital networks is elevating manufacturing and industry. Meanwhile, Europe is faced with the economic and social challenges posed by protectionism and polarisation across societies. These contrast with European values such as entrepreneurial freedom, data and information security, transparency, self-determination and the protection of personal rights, which put the human at the centre of digital development. Its strength, values and B2B domain know-how allows Europe to address the aforementioned challenges – with the support of governments, initiatives and the backing of the industrial sector. Ultimately, the digitalisation of industry can only succeed when innovation, sustainability, ethics and society are understood as intertwining elements of one whole.

Promoting sustainable, trustworthy, value-creating digitalisation means using institutional instruments to invite all market actors to contribute to the Industry 4.0 discourse, while setting incentives for a market-orientated, circular industrial economy. For Europe to achieve both, economic success and social security, qualifications, retraining and reskilling are needed at all levels.

The future of Europe's economy lies not within national borders, but in the joint shaping of a strong, sustainable, cross-border process of value creation that takes into account the strengths of its individual partners. This is where the EU needs a common strategy for Industry 4.0 and a strategy from which tangible digital policies can follow, enabling work to take place across sectors and

borders. A networked governance structure, serving as an integrating interface to the corresponding EU initiatives (vertical initiatives such as EFFRA, MANUFUTURE but also to horizontal initiatives such as euRobotics, BDVA, AIOTI and the new initiatives towards an AI PPP), would provide the basis for a common digital strategy.

To turn the EU into an industrial leader for digital technology, we need to create an EU-wide environment favourable to connectivity, cybersecurity, data supervision and interoperable standards linked to ICT. Germany's Plattform Industrie 4.0, France's Alliance Industrie du Futur and Italy's Piano Impresa 4.0 present their recommendations in this position paper.

Interoperability and Legal Framework

Interoperability, common standards and integration enable cooperation among companies and across borders. In order to guarantee the interoperability of systems – an essential requirement for the emergence of digital ecosystems – companies need a regulatory framework that provides legal certainty while stimulating innovation.

- We encourage the creation of an interoperable and legally secure European cloud infrastructure that meets the security standard "made in Europe".
- Industrial competitiveness requires a highly effective EU-wide network in terms of speed, reliability and permanent coverage (including cross-border) and secure 5G network infrastructures in order to support the full deployment of technological innovations such as the Internet of Things.
- We recommend the relaxation of the usual competition law provisions applying to European companies cooperating horizontally and working in the field of innovation or standardisation. A preliminary auditing procedure would offer additional support for companies. This procedure would enable a fast and legally certain assessment of the cooperating companies' activities by the relevant competition authority.
- It is necessary to modernise EU competition law to enable European companies to compete at a global scale. A comprehensive view of market practices should be adopted and more flexibility in state aid rules needs to be established in order to enable research in strategic areas (facilitation of the IPCEI instrument).
- It should be examined whether, in the context of the regulation of platform operators with a "cross-market position", their access to market-relevant data (including data obtained from Industry 4.0 participants)

should be regulated under competition law in such a way that the platform operator does not use this data to prevent or hinder the market entry of third parties in other contexts.
- To test innovative technologies and applications, and for a fast and precise development of new regulation in the industrial domain, Europe must allow the use of "sandboxing" to temporarily exempt new applications from existing regulations as a tool to boost innovation, e. g. to test new concepts such as guidelines on ethical AI, or digital twins for manufacturing, in a safely delimited, regulation-free space.
- In order to make innovation processes more attractive for SMEs, a simplified approval procedure either through the introduction of field testing at the EU level or of an EU-wide approach is needed.

European Data Economy, Digital Value Creation and Artificial Intelligence

Europe can and should assume a leading role in the use and supply of data from industry. This drives forward the integration of the digital and non-digital sectors of the Single Market.

- A clear distinction should be drawn between personal and non-personal data in the context of EU data law; that is, the distinction between human-to-machine and machine-to-machine interactions. The data protection authorities, including the European Data Protection Board, should establish reliable criteria for the simplified processing of anonymised data, particularly with respect to artificial intelligence applications.
- It will be essential for the new European Commission to encourage companies based in or operating within the European Union to share their data for testing and development, particularly data gathered from industrial AI. Fair competition in the access of data should be strengthened and special attention paid to support SMEs and more traditional sectors to become active players in the new data driven economy.
- The Database Directive and revised copyright law should be examined as to whether they offer sufficient opportunities for data collection in the context of industrial artificial intelligence.
- Data portability and the regulation of the free flow of non-personal data should continue to be secured and strategically promoted, in order to strengthen incentives for their practical implementation. The European Commission should monitor the effective implementation of codes of conduct for data porting based on

the principles of transparency and interoperability in order to contribute to a competitive data economy.

- The planned ePrivacy Regulation should be brought into line with the GDPR and hence with the needs of industry and its area of application. In order to avoid negative consequences for M2M communications, artificial intelligence and Industry 4.0's cloud servers, it should be limited to the transmission layer and exclude the application layer.

Security and Trust

Collaboration is based on trust and must be safe and secure. In our globally connected world, digital transactions require new ways of establishing security and trust.

- Harmonised and transparent security standards and certification schemes should be established. On the one hand, enterprises must be able to hold themselves to security standards. On the other hand, the market access of enterprises which do not fulfil these standards should be curtailed. This will strengthen the Digital Single Market.
- Harmonised and transparent standards and certification schemes in accordance with EU Regulations n.1025/2012 and n.765/2008 should be established. Coordination activities within CEN, CENELEC and ETSI in Europe, as well as ISO and IEC at a global level, provide the framework for sharing trilateral technical solutions in the context of standardisation.
- Companies must be able to have confidence in data autonomy, data protection, digital identities, general contract law, the flexible use of general business terms and the protection of trade secrets in networked structures in a secure IT environment. An innovation-friendly and reliable legal data policy framework is therefore necessary. Template contracts for the implementation of Industry 4.0 applications, as well as the results of the Platform's legal testbed can offer an important stimulus here.

Research and Transfer

The cornerstone of the successful digital transformation of industry is an outstanding research and innovation eco-system. New business models and the strength of Europe's innovation capacity are ultimately induced through research and its successful translation into innovation.

- Research in the area of industry and sustainability should be strengthened. Both the "blue sky" or "curiosity" research as well as applied research, with focus on the so-called Key-Enabling Technologies (KETs) up to first deployment in real application areas, are needed in a balanced relationship. The potential of ICT, automation and AI for the intelligent production and manufacturing should be given increased attention and political and budgetary support. Similarly, the potential of ICT (including AI) in industrial applications and the way towards a circular economy should be researched further. This requires the transfer of future technologies into broader use.
- Access to funding support for small to medium-sized enterprises should be made easier. SMEs should be supported in their investment in workers' training and upskilling. Administrative hurdles need to be removed, while organisational support and transparency about the complexity of the application process should be provided. Funding and approval rates need to be increased and positive examples made more visible.
- Special attention should be paid to the involvement of start-ups in the development and application of AI technology. In this respect, facilities at the regional level should be better aligned with European and national strategies.
- Standardization should play an active role in boosting innovation and technology transfer, bridging the gap from research to market. Standardization needs should be anticipated in synergy with innovation ecosystems' stakeholders.
- We encourage the creation of a European Centre for AI with a focus on skills development and technology transfer.

Skills

Skills are crucial for a successful digital transformation. We therefore propose a European skills strategy in the following areas:

- Education and training systems need to be capable of anticipating and providing the required knowledge and skills for emerging technologies. Hence, education systems should be redefined in order to develop appropriate skills for the future.
- STEM careers should be promoted for the coming generations and a European Curriculum in AI should be developed.

- Collaboration between education and training, research and the business sector should be enhanced while industry is granted an active role in training and life-long learning for workers (e. g. vocational training, work-based learning / dual systems and the promotion of sector-specific training initiatives).
- SMEs should be supported in the up-skilling and reskilling of workers.
- Fab labs focusing on additive techniques, hardware and software, as well as AI labs, should be created in secondary schools in order to promote entrepreneurship and innovation.

- We encourage the European Commission to embark on global discussions on education and vocational training. European industry needs to fully exploit the potential lying within the energy, climate and digital transitions and, for that matter, must be able to respond appropriately to future changes in the labour market (artificial intelligence, robotised production facilities, autonomous and electric vehicles).

About

The Trilateral Cooperation: The trilateral cooperation between Plattform Industrie 4.0, Alliance Industrie du Futur and Piano Impresa 4.0 was formed in 2017 and aims to work with existing digitalisation processes in the spirit of the European ideal. The trilateral cooperation is focused on three core topics: standardisation, SME integration and political support. The cooperation has developed a joint plan of action and published joint publications, e.g. a Common Position on Data Ownership.

Plattform Industrie 4.0: Plattform Industrie 4.0 is the central network for the advancement of the digital transformation towards Industrie 4.0. In close cooperation with politics, industry, science, associations and trade unions, it develops and coordinates information and networking services in order to make Industrie 4.0 solutions better known among companies and to deploy them on site. As one of the largest international and national networks, it supports companies – particularly medium-sized companies – in implementing Industrie 4.0. It provides companies with ideas and incentives through examples of company practices from across Germany and other countries, as well as concrete recommendations for action and test environments. The platform's numerous examples of international cooperation underscore its leading role in international discussions on Industrie 4.0. For further information:
→ **www.plattform-i40.de**

The National Plan "Impresa 4.0": The National Plan "Impresa 4.0" aims at spurring competitiveness throughout the whole entrepreneurial fabric. Technology neutrality is a key tenet of the Enterprise 4.0 plan: investment is encouraged with particular emphasis on innovation. The plan results from a multi-governance and multi-stakeholder approach with the continuous involvement of business associations, universities etc. in the governance of the plan. "Impresa 4.0" fosters a wide array of measures with the aim of raising the technological level of Italian manufacturing, by promoting investment by firms (especially SMEs), improving the skills of the labor force and through the strengthening of the national physical and digital infrastructure. For further information:
→ **www.mise.gov.it/index.php/it/industria40**

Alliance Industrie du Futur: The Industry of the Future Alliance ("Alliance Industrie du Futur") brings together and sets in motion the skills and energies of professional organisations, scientific and academic key players, businesses and local authorities, particularly in the French regions, to ensure the deployment of the Industry of the Future plan. It organises and coordinates national initiatives, projects and work, striving for the modernisation and transformation of industry in France, particularly through the provision of digital services. To this end, it relies on the input of dedicated working groups. Its actions are relayed across the regions by regional platforms, using the networks of Alliance members and local authorities to support SMEs / MSBs in the field. For further information:
→ **www.industrie-dufutur.org**