



Strategy Paper 2021+

Further development of the Shared Action Plan by the Trilateral Cooperation between France, Italy and Germany (2017)

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Background

The trilateral cooperation between Alliance Industrie du Futur, the National Plan “Transition 4.0” (former Impresa 4.0), and Plattform Industrie 4.0 was formed in 2017 and aims to support the digitalisation processes in the European manufacturing sector. The trilateral cooperation is focused on three core topics: standardisation, SME integration and testbeds, and political support. Together they **successfully moved the digitalisation of European manufacturing processes forward**.

Since 2017, France, Italy and Germany have developed the concepts of smart manufacturing further and new initiatives and projects have been founded in Europe to drive digitalisation. Thus, the **purpose of this paper is to reflect on past achievements and to define the way forward for the trilateral cooperation**. This means to discuss topics of future strategic importance (Which activities should be continued? What is of future importance?) and to define how the topics can be integrated in the work streams of the trilateral cooperation.

Objectives of the trilateral cooperation for future progress

- ▶ The trilateral cooperation acts in accordance with European values and aims to integrate these values in the digitalisation of the manufacturing sector.
- ▶ Together France, Italy and Germany aim to shape open, digital ecosystems that integrate the needs of small and medium sized enterprises, foster sustainability and boost the European manufacturing sector.
- ▶ To achieve this, the Trilateral Cooperation between France, Italy and Germany speaks with one voice within Europe, it raises awareness for strategic issues and acts as a multiplier towards Italian, French and German networks as well as in European collaborations.

Achievements

The Steering Committee of the Trilateral Cooperation acknowledges the major achievements and the continuous work of the three working groups thus far.

WG 1: Standardisation and reference architectures

- ▶ Agreement on relevant standards for interoperable and secure manufacturing at ISO, IEC and OPC Foundation.
- ▶ With support of WG1 members, the Asset Administration Shell (AAS) became the relevant standard for digital twin in industrial applications at IEC (IEC 63278).
- ▶ First standards for application of AAS concept for digital representation of information have been initiated – e.g. IEC/TS 61406 for identification link for digital product passport based on DIN SPEC 91406. This standard will support the sustainability goals of the EU Commission.
- ▶ Support of ISO/SMCC (Smart Manufacturing Coordination Committee) and IEC/SyC SM (System Committee Smart Manufacturing).



- ▶ Trilateral Cooperation gives joint impulse for CEN-CLC-ETSI Coordination Group Smart Manufacturing. Contact has been established between Gaia-X and CEN-CLC-ETSI Coordination Group Smart Manufacturing.
- ▶ Synchronized work with working group 2 to directly transfer latest updates from standardization to testbeds.

WG 2 – Engagement of SMEs and testbeds

- ▶ Shared numerous use case examples and made them public, e.g. Industrie 4.0 online maps (France and Germany).
- ▶ Shared best practices on Digital Maturity assessment tools.
- ▶ Synchronized work with working group 1 to directly transfer findings from testing into standardisation.
- ▶ Supported the implementation of the EU-funded program EIT Manufacturing and collaborates trilaterally in the EIT Manufacturing project **CanvAAS** to operationalize the Asset Administration Shell.
- ▶ Contributed to EU-Workshop series “**Manufacturing Data Spaces**” in context of the Digital Europe programme.

WG 3 – Policy support

- ▶ Established close ties with the European Commission in order to coordinate joint efforts and canalize the needs of the respective manufacturing sectors
- ▶ Published joint position paper “Recommendations of the Trilateral Cooperation between France, Italy and Germany on Digitalising the European Manufacturing Industry” in February 2020
- ▶ Organized a dialogue event on digitalizing manufacturing in Europe in September 2020 with participation by the European Commission and about 100 European experts

Areas of future interest

France, Italy and Germany identify the following topics to be of high relevance for future progress in building European digital ecosystems for the manufacturing sector:

1. Gaia-X: A federated data infrastructure for Europe; focussing on how Gaia-X can benefit the manufacturing sector
2. IPCEI on Next Generation Cloud Infrastructure and Services (IPCEI-CIS) as a key enabler to support the sovereign use of data in future digital ecosystems
3. Roll-out of smart manufacturing solutions in user industries e.g. through project Caterna-X in the automotive sector
4. Contribution of smart manufacturing solutions for a sustainable and resilient economy
5. AI and data economy



Integrating the future interests into the work of the Trilateral Cooperation

In alignment with the defined topics of future interest, the current scope of the three working groups will continue and be complemented by new aspects as follows.

WG 1: Standardisation and reference architectures

Working Group 1 will especially focus on the defined action items below:

- ▶ Synchronize national efforts in standardisation and secure the transfer into international standardisation processes, especially for ISO, IEC and relevant consortia.
- ▶ Coordinated approach of France, Italy, and Germany to CEN-CLC-ETSI Coordination Group Smart Manufacturing to
 - define a European standardisation strategy,
 - implement a cooperation between European regulation and standardisation to support EU strategies for data economy, sovereignty and sustainability.
Examples include the referencing of European standards (ideally based on international standards) using the new legislative framework (NLF) for
 - industrial cloud services according to European values,
 - digital product passports and battery passports.
- ▶ Support building manufacturing data spaces on a European level, e.g. contributing to the European Strategy for Data and Gaia-X
 - WG1 welcomes the creation of the Gaia-X European Association for Data and Cloud, AISBL.
 - We believe this is the right organization to leverage the efforts already made to organize the free market of industrial data in Europe, develop this promising new business area and let all European citizens and small and medium sized companies benefit from new datacentric services.
 - As the Trilateral Cooperation has been working for 5 years on coordinating smart manufacturing roadmaps on standardisation, small and medium sized business adoption and public policies, we intend to participate actively in the definition and the governance of smart manufacturing data spaces that will be identified by the industry.
 - Our members are preparing to participate in Gaia-X workshops and events and represent the voice of our many members.
- ▶ Advancing the Asset Administration Shell to foster interoperability and networked systems, especially by broadening know-how to define sub-models as a future engineering skill.
- ▶ Share a framework in standardisation for qualification of skills and competencies for professionals and experts in standardisation – in close cooperation with WG 2
- ▶ Together with WG 2 transfer the coordinated approach of standardisation and pilot projects to a European level at the Digital Innovation Hubs (DIH)



WG 2: Engagement of SMEs and testbeds

Working Group 2 acknowledges the importance of the listed areas of future interest. Their aim is to ensure the link to SME activities as this remains to be the working group's focus. Future action items will be:

- ▶ Continue promoting a pan-European network of test-infrastructures, competence centres and digital innovation hubs to help SMEs find easier access to new digital solutions for manufacturing.
- ▶ Elaborate scenarios for AI and robotics and thereby network with initiatives linked to Horizon 2020 (e.g. AI, Data and Robotics Partnership) and the European Digital Innovation Hubs (EDIHs).
- ▶ Support building manufacturing data spaces on a European level, e.g. contributing to the European Strategy for Data, IPCEI-CIS and Gaia-X.

WG 3: Policy support

Working Group 3 will especially focus on the defined action items below:

- ▶ Overall, coordinate joint positions of the three countries towards the EU, and thereby
 - demonstrate political support for the project Gaia-X and support European network structures to enable pan-European collaboration,
 - make the contribution of smart manufacturing to a sustainable and resilient economy,
 - support the aims of IPCEI-CIS and highlight potential benefits for selected industries of France, Italy and Germany, e.g. the automotive industry, involving relevant national parties who support this project.
- ▶ Screen European regulations relevant for industry and identify major challenges.
- ▶ Connect with pan-European initiatives, e.g. the European Big Data Value Forum or EFFRA, and European member states to synchronize positions and efforts on smart manufacturing.



About

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 Transition 4.0

The National Plan “Transition 4.0” (former 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. “Transition 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 labour force and through the strengthening of the national competence centres and innovation hubs, and investing in digital infrastructure for connectivity.

For further information: → <https://www.mise.gov.it/index.php/it/transizione40>

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