



The 'Digitisation of manufacturing' connects people, devices, machines and enterprises, and includes concepts such as 'Industrial Internet', 'digital manufacturing platforms' and the 'Internet of Things' (IoT).

Digitisation is transforming industry so dramatically that it is considered to be the 4th industrial revolution (Industry 4.0). The ConnectedFactories project establishes a structured overview of available and upcoming technological approaches and best practices. The project identifies present and future needs, as well as challenges, of the manufacturing industries. The project will explore pathways to the digital integration and interoperability of manufacturing systems and processes ("future visions").

Hence, ConnectedFactories will enhance the awareness among companies of the use of digital technologies in the manufacturing sector, and also equip them with knowledge to make informed decisions regarding technology and business model choices. It will reinforce the European manufacturing industries' position in the international scene. ConnectedFactories aims at leveraging on and enhancing the synergies among national and regional actors and initiatives, contributing to the drive forward to implement digital solutions in practice. ConnectedFactories also fosters collaboration on manufacturing issues across all relevant PPPs.

To achieve these objectives, ConnectedFactories documents the supply side of existing digital platforms for manufacturing and analyses the demand side by identifying challenges and requirements users have.

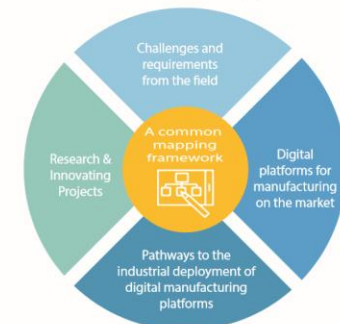
Furthermore, the contributions of research and innovation projects are identified and synergies among projects are stimulated. Using this information, future scenarios will be developed and tested in workshops

with end-users, to identify the different pathways that fit the specific manufacturing environments or value networks. A common digital mapping framework has been developed specifically to serve as a tool for this purpose.

The main goal of the 'digital mapping framework' is to have a solid approach for describing and analysing what is present on the market in terms of technologies that support the deployment of digital manufacturing platforms. The framework takes into account existing frameworks such as the Reference Architectural Model Industrie 4.0 (RAMI 4.0).

The mapping framework addresses questions such as:

- Which technologies and approaches are supporting the deployment of integrated digital manufacturing platforms?
- What are the services that they deliver?
- What are the standards that support these platforms?



The ConnectedFactories project uses this mapping framework for characterising available technologies and approaches that are on the market or on their way to the market. The same framework is being applied for the characterisation of R&D projects. In addition, it will support the structured description of challenges as well as the development of scenarios.

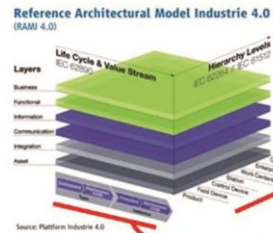
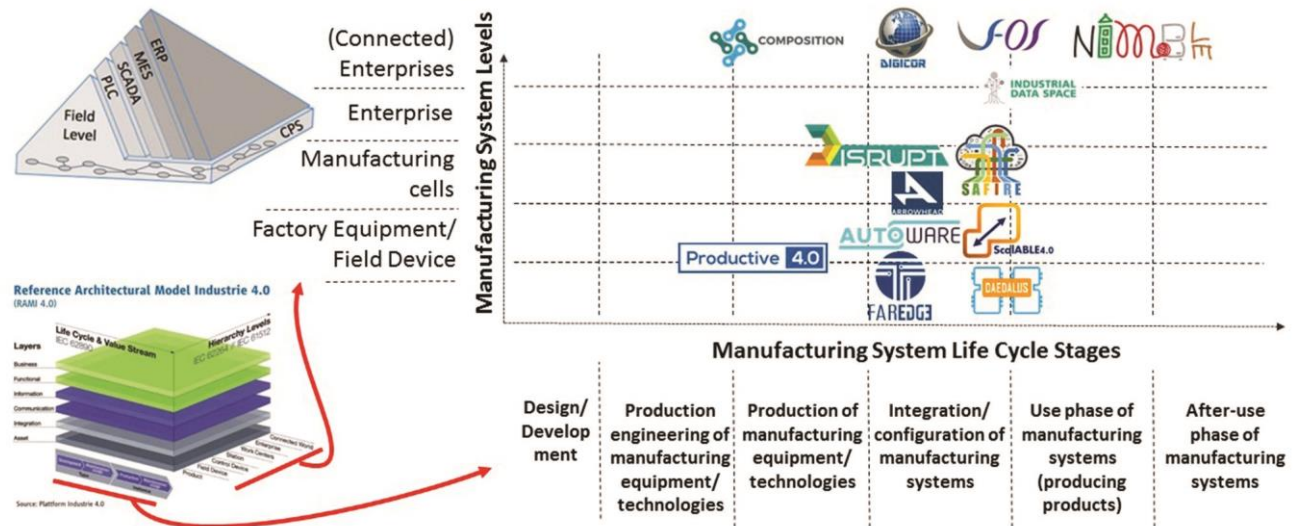


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Below is a graphical representation of two dimensions of the mapping framework and a number of projects and initiatives that are considered as very relevant for the mapping and clustering exercise. This includes projects funded under the FoF-11-2016 call topic on digital platforms, but also initiatives such as Industrial Data Space and projects funded under the ARTEMIS/ECSEL Joint Undertakings (Arrowhead and Productive4.0). The connections to RAMI 4.0 are clearly shown, with the vertical axis relating to the hierarchy levels, and the horizontal axis referring to the life cycle and value stream.

Manufacturing system perspective – levels: life cycle stages and levels



ConnectedFactories is co-financed by the European Commission under the Horizon 2020 Programme for Research and Innovation Grant Agreement No. 723777

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