

Europe's Industry 4.0 Partnership Factories of the Future



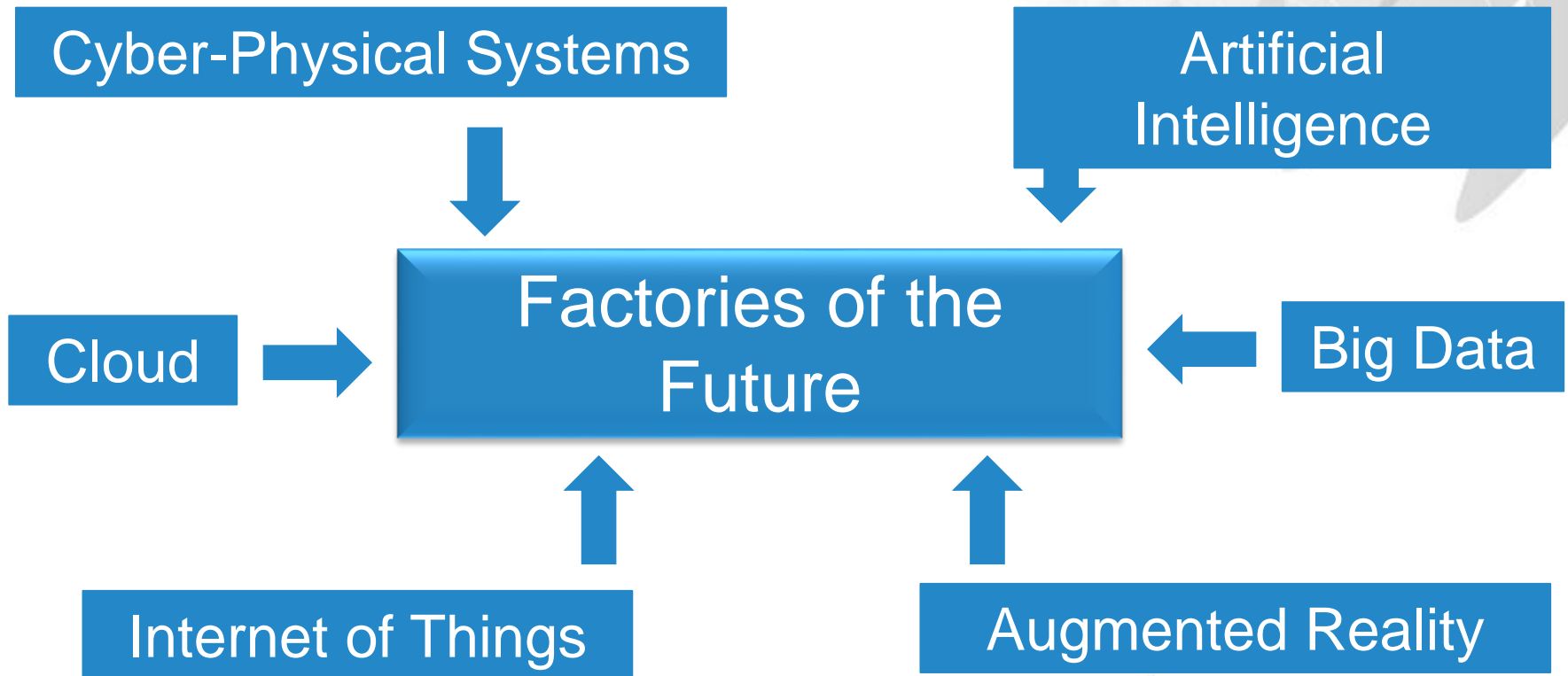
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Factories of the Future

Digital Issues

- Selection of digital issues impacting on & being addressed in 'Factories of the Future'



Digitalisation & Manufacturing

- 'Digitalisation' affects multiple aspects of manufacturing such as:
 - Process quality – monitoring and control
 - Interconnectivity of machines
 - Plant management
 - Data processing
 - Apps for workers
 - Training
- Advanced manufacturing cannot evolve without digitalisation
- Equally innovations in digitalisation will be driven by the demands of advanced manufacturing
- Manufacturing companies becoming much more involved in developing digital services & ICT-enabled technologies to meet their particular needs



Strategic Roadmap

- Covering 2014-2020
- Developed by EFFRA & through broad public consultation
- Identifies megatrends which drive structural changes in manufacturing sectors
- Establishes research priorities which will allow industry to meet these challenges
- Priorities focus on development, application & integration of enablers & technologies
- 'Factories of the Future' call topics based upon research priorities = industry relevant
- Not static: we are developing the Roadmap further



From 2020 roadmap to Factories 4.0 & Beyond

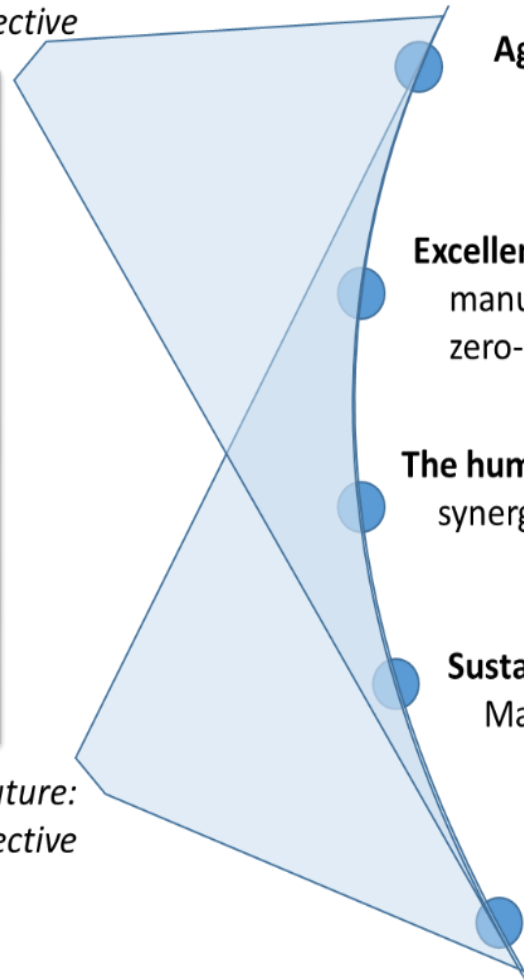
Building on the vision of the FoF 2020 roadmap and public consultation in 2016

→ Key priorities for FoF 18-19-20

*Vision of the factories of the future:
the challenge perspective*



*Vision of the factories of the future:
the technology perspective*



Agile value networks: Lot-size one - distributed manufacturing

Excellence in manufacturing: Advanced manufacturing processes and services for zero-defect processes and products

The human factor: Human competences in synergy with technological assets

Sustainable value networks: Manufacturing in a circular economy

Interoperable digital manufacturing platforms: connecting manufacturing services



DIMECC



PRODUKTION2030

MADE
Manufacturing Academy of Denmark

CATAPULT
High Value Manufacturing



MADE DIFFERENT
FACTORIES OF THE FUTURE

FLANDERS
MAKE
MANUFACTURING INNOVATION NETWORK



IPAR 4.0
NATIONAL TECHNOLOGY PLATFORM

INDUSTRIE 4.0
ÖSTERREICH

i4.0
INDÚSTRIA 4.0



**fabbrica
intelligente**

Industry 4.0

Innovation policy today

- **Urgent need to support PPPs / eco-systems**
- **Collaborative approach / co-creation (open innovation)**

Considered as outdated today (observation):

- support to pure technologies
- single companies/selected group

Europe is doing well so far

There are limits to innovation policy:

You can only help “empowering” the market; otherwise:

Risk of taking the wrong decisions;

Risk of doing damage to the market is too high.

Government actions need to stay pre-competitive





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