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 #DigitiseEU

# Towards Industry 4.0: Upcoming Opportunities for the Process Industry in H2020



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# From the SPIRE Vision document



- In the field of process control, digital technologies (through **data collection, data storage and extraction of new information** for use within and across companies) help provide detailed insights into resource availability (energy, water, primary and secondary resources etc.), use and quality, up to the level of each individual user.
- They will further contribute to optimise production yield, enhance resource flexibility and accelerate synergies between sectors and with energy suppliers, through the development of **platforms**, databases, and advanced near real-time decision support systems.
- A cross-sectorial approach offers unique opportunities to properly address legitimate and common concerns regarding **cyber security**.
- The **full traceability of value chains**, as a crucial instrument to deploy **circular business models** at scale and to serve society's and customers' growing demand for product- related information.

**X** *A place or opportunity for public discussion*

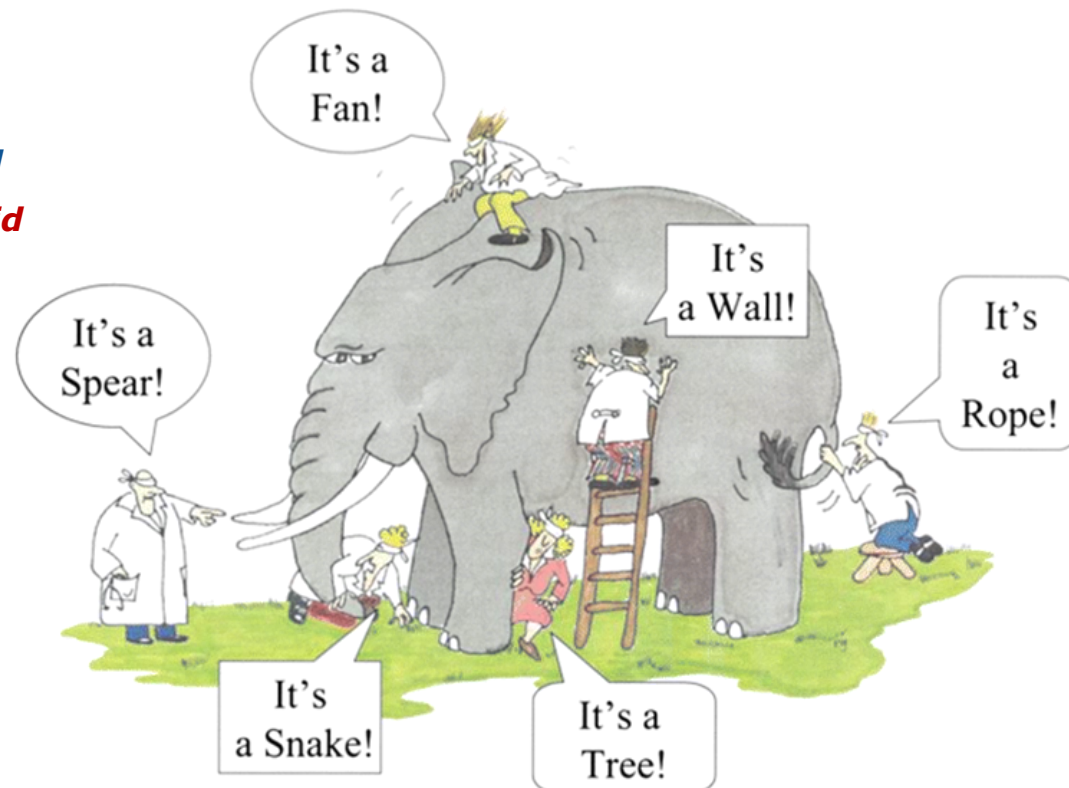
*e.g. European Platform of National Initiatives;  
Plattform Industrie 4.0*

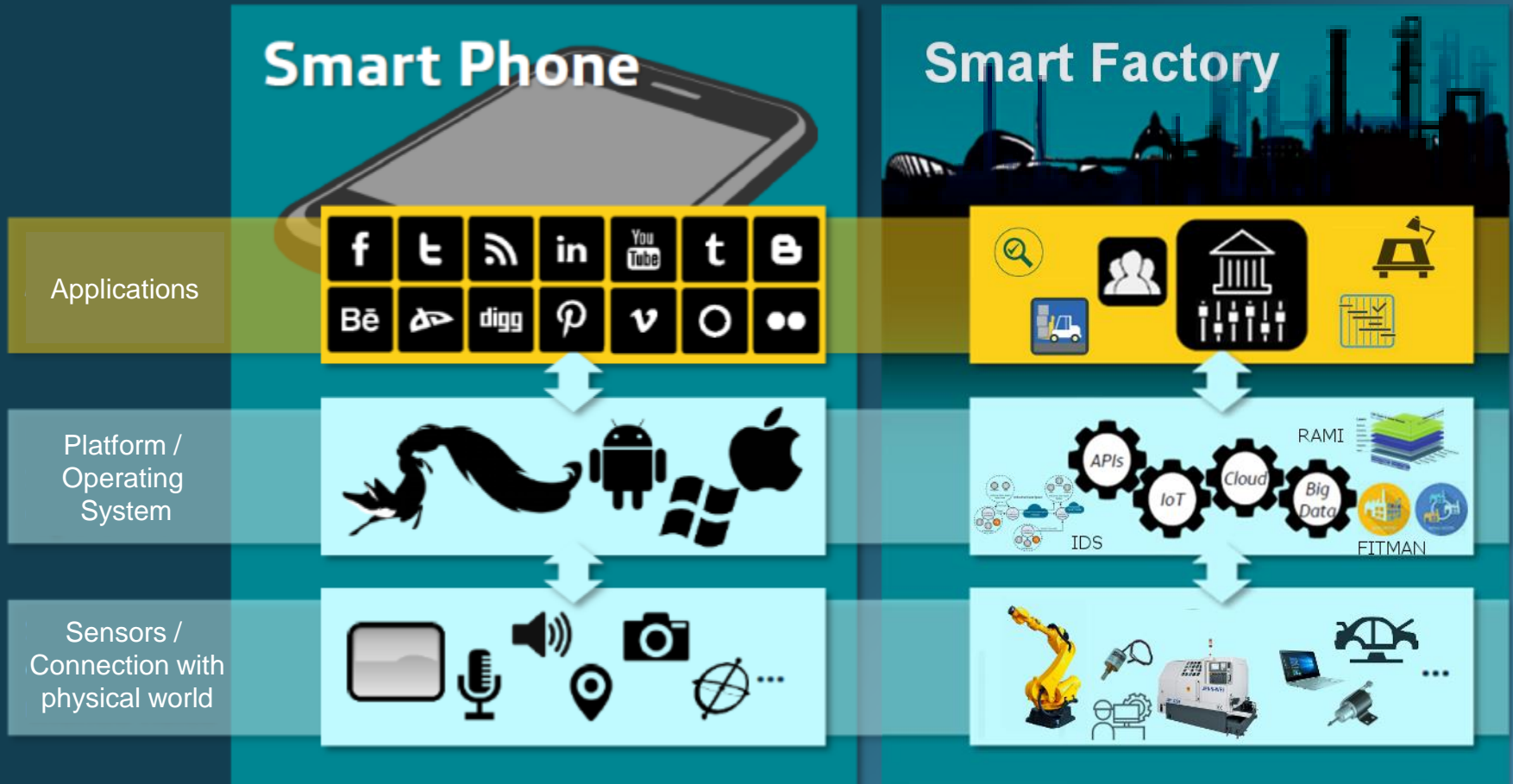
**✓** *An **operating system** that **integrates** different technologies and various applications and services*

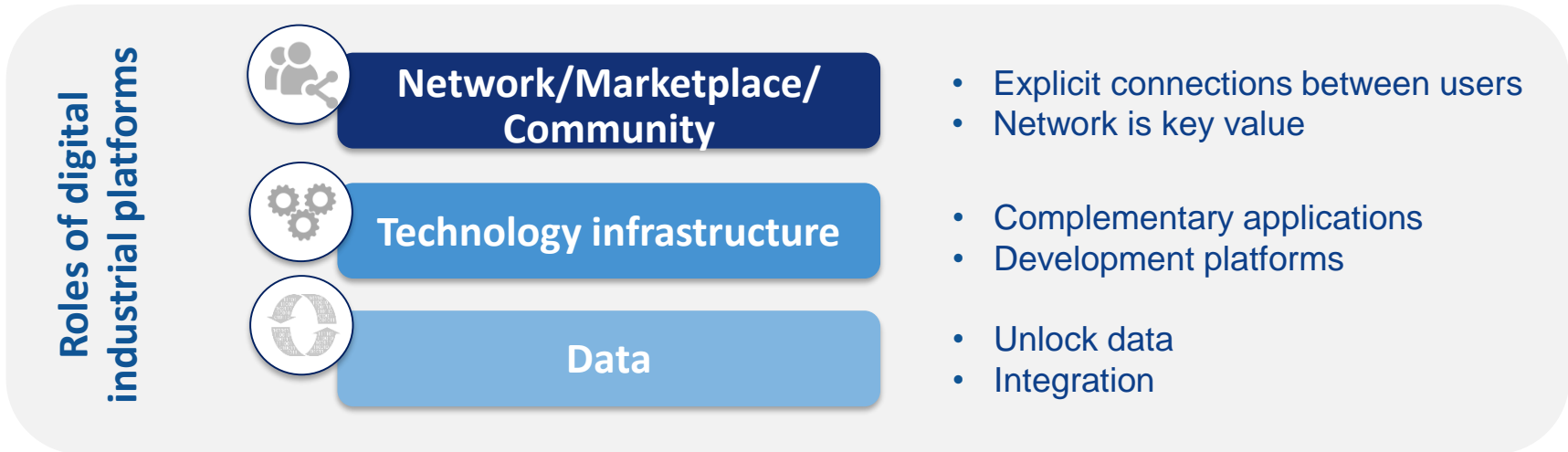
**X** *Online platforms  
in the consumer world*

*e.g. Facebook, Nest, Android*

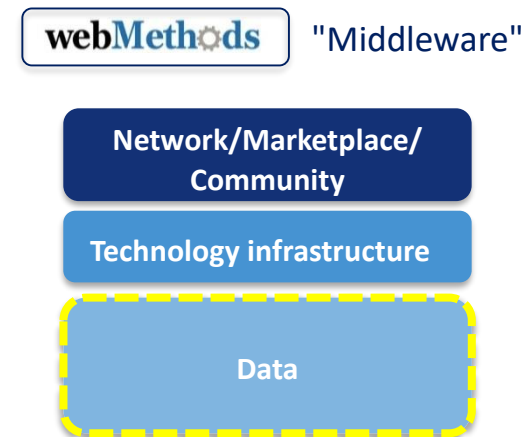
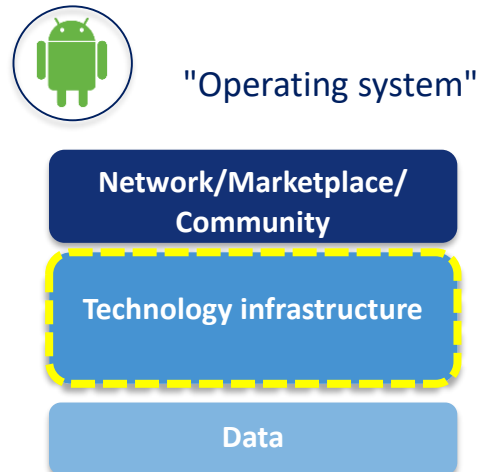
**✓** *Industrial platforms  
in the **business** world*







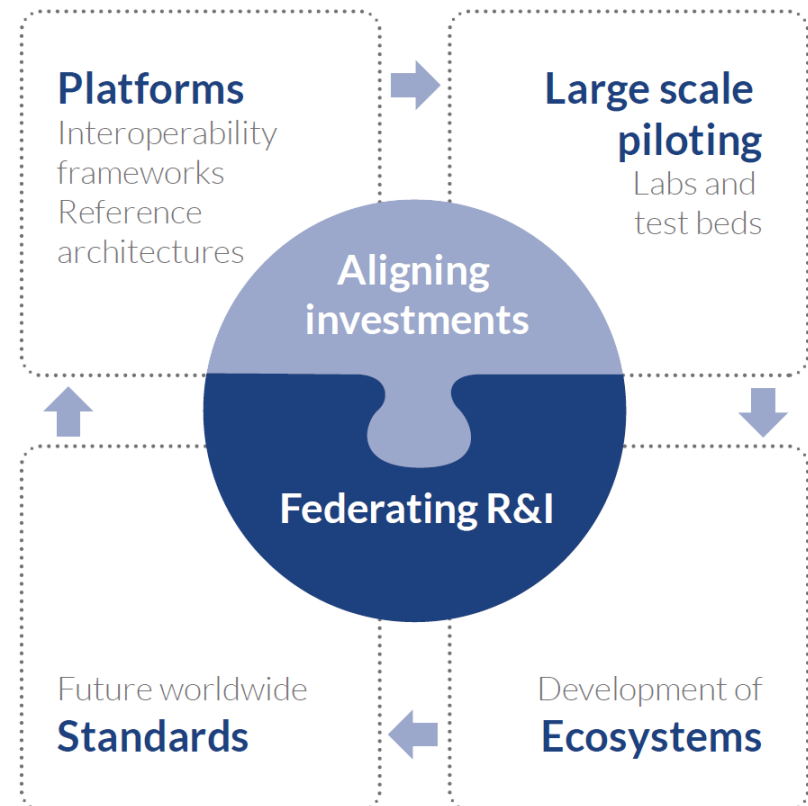
Examples of how different platforms fill in roles in different ways and to varying degrees



EU actors join forces along common interests  
Future global standards & platforms driven by interests of EU actors

### Focus investments on:

- Integration of key digital technologies
- Digital industrial platforms, reference architectures, ...
- Reference implementations, large-scale piloting, experimentation environment
- Ecosystem building and standardisation





### DT-ICT-07-2018-2019: Digital Manufacturing Platforms

- 2018: Agile Value Networks: Lot-size One
- 2018: Zero-defect Processes and Products
- 2019: Machines & Human Competences
- 2019: Sustainable Value Networks

2018: 48 M€  
2019: 47 M€



### DT-ICT-08-2019: Agricultural Digital Integration Platforms 30 M€

### DT-ICT-09-2020: Digital Service Platforms for Rural Economies 30 M€



### DT-ICT-12-2020: Smart Hospital of the Future 25 M€

### DT-TDS-01-2019: Smart and Healthy Living at Home 60 M€



### DT-ICT-10-2018-2019: Interoperable and Smart Homes and Grids 30 M€

### DT-ICT-11-2019: Big Data Solutions for Energy 30 M€

← **Cross-cutting issues, IoT, Big Data, Security...** →

DT-ICT-13-2019: Digital Platforms/Pilots Horizontal Activities, 4 M€  
Including Preparation of a digital industrial platform for the construction sector, 1 M€

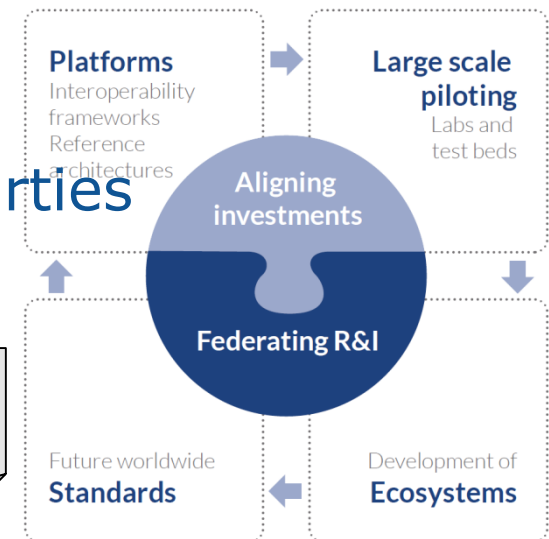




## Scope Innovation Actions:

- Develop platforms for connected smart production facilities
  - Driven by EU actors and safeguarding European interest
  - Two industrial sectors
- Target at least one 'grand challenge' \*:
  - Human factor: human competences and technological progress (2019)
  - Sustainable Value Networks: manufacturing in circular economy (2019)
- Reference implementations preferably in open-source
- Max 20% financial support to third parties (typically 50-150 k€)

TRL  
4-7



Open: 16 Oct 2018  
Close: 02 Apr 2019

IA: 47 M€, up to 16 M€ would be appropriate,  
at least one per 'grand challenge'

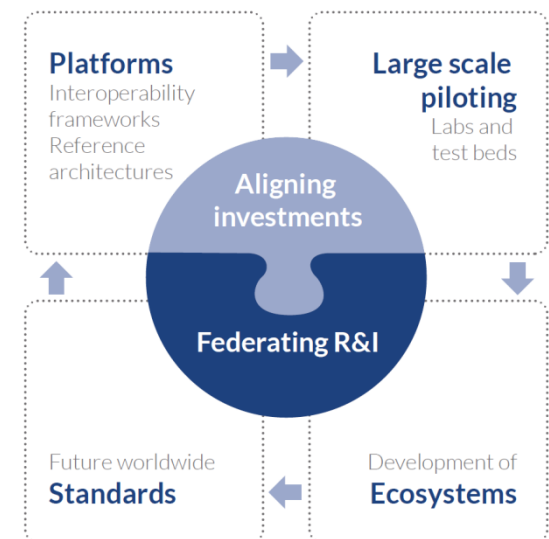
- **Innovation Actions** targeting large-scale pilot test-beds for big data application in the energy sector.
- The aim is to develop/pilot and deploy a reference architecture for large-scale multi-party data exchange, management & governance and real-time processing (including distributed/edge processing) in the energy sector.
- Translate this reference architecture into an open, modular data analytics toolbox for the safe and effective operation of grids and provision of innovative energy services.

**Info day on 5 October:**

<https://ec.europa.eu/inea/en/news-events/events/horizon-2020-energy-info-day>

*Open: 16 Oct 2018  
Close: 02 Apr 2019*

*IA: 30 M€, up to 10 M€ would  
be appropriate*



- Users and suppliers of Business-to-business (B2B) digital industrial platforms are invited to discuss user requirements, existing commercial and community-driven solutions, and the best ways to address the challenges they face.
- We are still looking for users who want to state requirements
- 15/16 October in Brussels
- Further information: <https://ec.europa.eu/digital-single-market/en/news/workshop-advanced-and-interoperable-digital-business-business-platforms-smart-factories-and>

- Proposals need to develop tools and services guaranteeing an adequate level of data security for **digital collaboration** between manufacturing environments and **value chains**.
- Solutions need to be **practically usable** in real manufacturing facilities, taking into account the operational requirements needed for factory usage in real-world conditions, including reliability and resilience.
- Issues of **threat detection** and implementation of countermeasures should be addressed, as well as evolution and real-time response when needed.
- Semi-**autonomous** or fully autonomous solutions, requiring little or no local supervision are encouraged.

*Open: 16 Oct 2018  
Close: 28 March 2019*

*RIA: 11 M€, up to 4-6 M€ would  
be appropriate*

- SPIRE 2050 Vision document sets very well the challenges facing the process industries and possible solutions
- Already now there are opportunities in H2020 to start addressing these
- Further opportunities will follow in Horizon Europe and Digital Europe Programme

- [ICT 2018: Imagine Digital - Connect Europe](#) 4-6 December, Vienna
- LEIT-ICT [Work Programme 2018-20](#) topic DT-ICT-07-2018-2019, DT-ICT-11-2019
- Digitising European Industry [WG2 report](#)
- Workshop "[Digital Manufacturing Platforms for Connected Smart Factories](#)"
  - Brussels, 19 Oct 2017
- [ConnectedFactories dissemination event](#)
  - Brussels, 5-6 Feb 2018
- Digitising European Industry  
<http://bit.ly/DigIndEU>  
<http://bit.ly/2yafter>  
[@DigIndEU](#)
- Idealist2018 - <http://www.ideal-ist.eu/>



# Thank you!

## Contacts



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