



IoT for the Sensing Enterprise: challenges and achievements

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Trimming the fat on terminology



When we refer to smart, connected manufacturing as Industry 4.0, several other commonly known terms may point to the same phenomenon.

These include:

- Industrial Internet
- Connected Enterprise
- SMART Manufacturing
- Smart Factory
- Manufacturing 4.0
- Internet of Everything
- Internet of Things for Manufacturing

IoT is like plastics in the 40s



- We are developing the first mass product right now by evolving technologies born 20 years ago.
- Everybody talks about how plastics will change the world and their potentiality
- Everybody struggles to find a unified value chain for plastics
- In few years, plastics will disappear from the attention of media
- There will be millions of specialized variants of plastics, and specialized companies
- Everything will integrate at least a plastic component, and we won't notice anymore

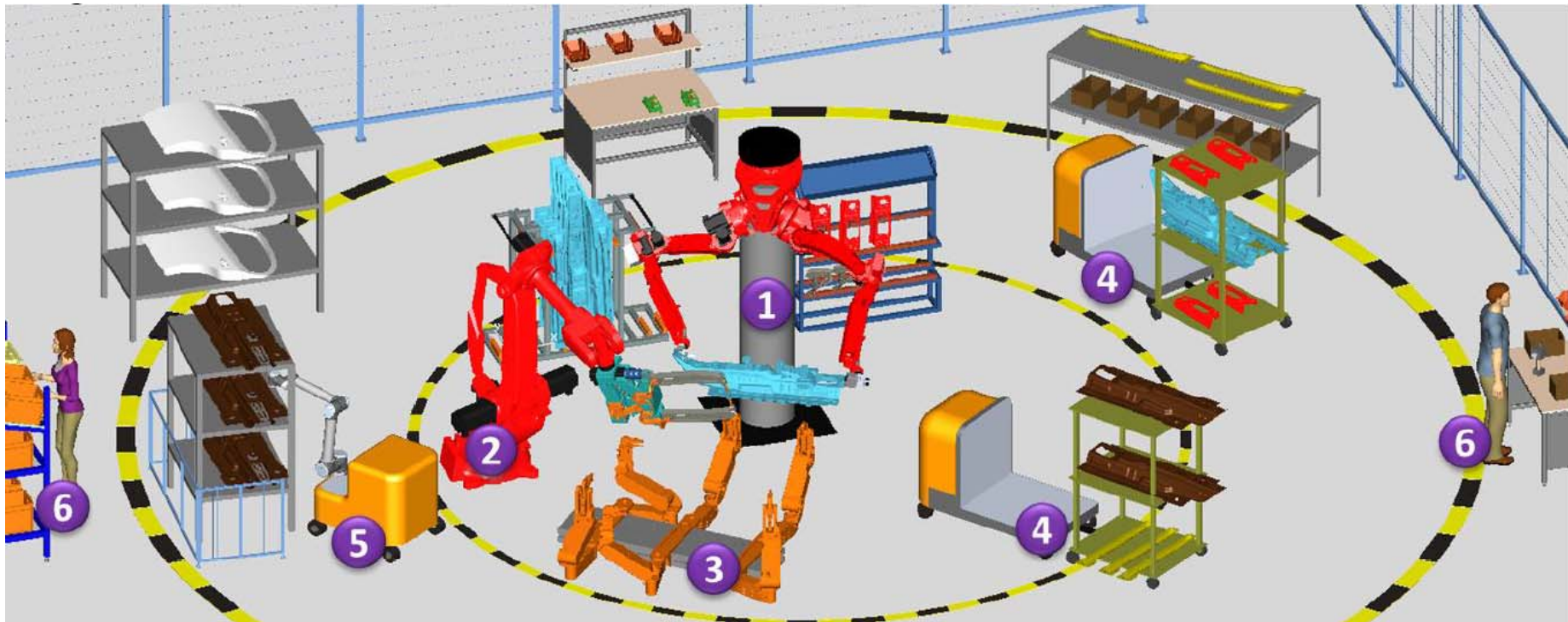


...but IoT will generate more data than plastics....

Where are the data?



The Sensing Enterprise

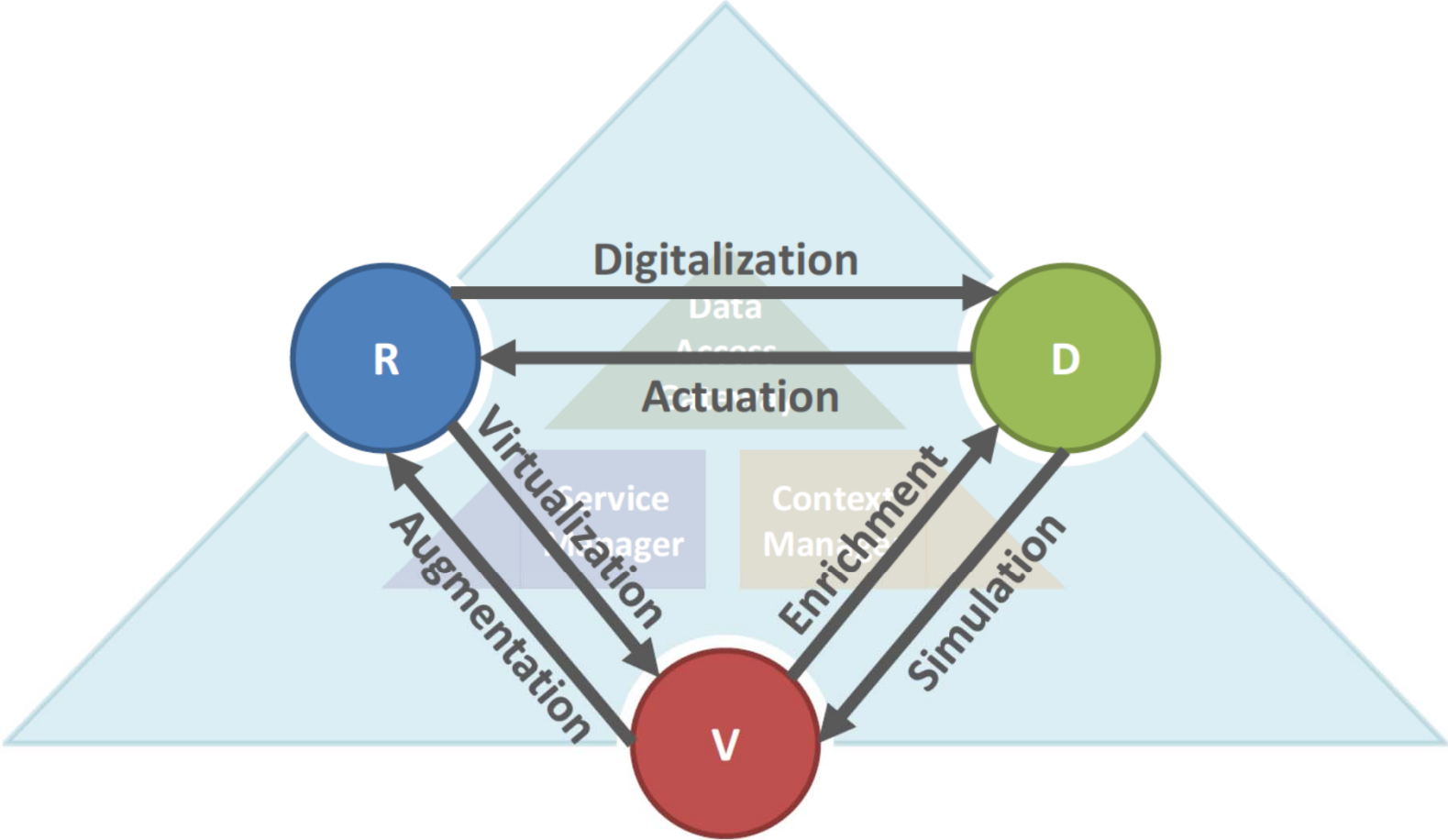
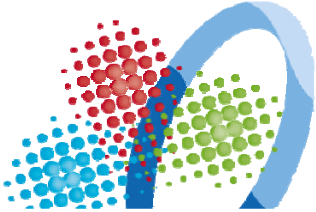


Automotive Engine production flexible cell in FCA

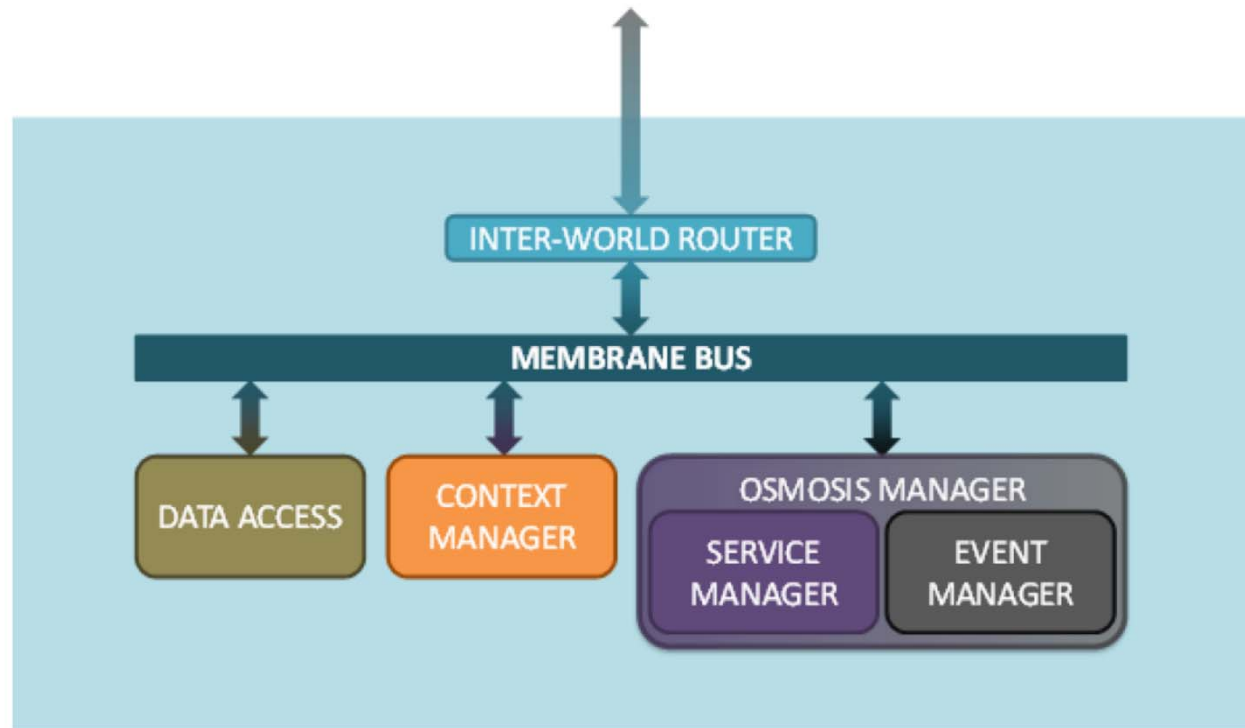


Inherent within manufacturing is the process of **information** creation, communication, and action. While its output is a physical object, manufacturing inevitably begins and ends with information: a design is created via drawing, design software, or the scanning of a physical object, creating **data**, down to the end-user usage patterns and sales

OSMOSE concept



OSMOSE Liquid Stargate



IoT for the Sensing Enterprise: challenges and achievements



- ***Implementing the Sensing Enterprise: IoT-driven Enterprise Systems in next generation EU Industries*** (**Fenareti Lamphataki / Sergio Gusmeroli** FutureEnterprise project and Sensing Enterprise Cluster)
- ***The sensing-liquid enterprise industrial applications in OSMOSE*** (**Michele Sesana** TXT e-Solutions SPA)
- ***Make proactive enterprise real – the ProaSense approach*** (**Nenad Stojanovic** NISSATECH)
- ***INTERACT*** (**Kosmas Alexopoulos** UNI PATRAS)

From Sensing Enterprises to next generation Enterprise Systems in the IoT era



- Sensing, Liquid, Proactive, Predictive, Interacting, Connected Enterprises / Factories of the Future:
how can IoT rejuvenate EU enterprises and become a distinctive competitive advantage for them?
What about small and medium enterprises?

From Sensing Enterprises to next generation Enterprise Systems in the IoT era



- Open IoT Platforms are now available through several sources (e.g. FIWARE, OpenPlatforms.eu, EFFRA Innovation Portal): what is their impact on the market currently dominated by Big Enterprise Systems Solution Providers?

From Sensing Enterprises to next generation Enterprise Systems in the IoT era



- Are the factories ready to become “digital”?
Where to start from to drive this transformation?
- How far are current manufacturing practices from the Sensing Enterprise concepts?

From Sensing Enterprises to next generation Enterprise Systems in the IoT era



- The Sensing Enterprise has blurred boundaries and it positively exchanges data with suppliers, partners, distributors and so on.
- Is that a security threat for the traditional trade secrets' protection infrastructure?
- How can we reassure customers that industry hacking is not a danger for them?