

The logo for IoTWeek, with 'IoT' in a stylized font where the 'I' is blue, 'o' is orange, and 'T' is white, followed by 'Week' in white. The background is a dark, blurred image of a large conference hall with rows of empty seats and a stage in the distance. On the right side, there are several large, colorful, abstract geometric shapes in orange, teal, and blue.

IoTWeek

Dublin — June 20-23, 2022

Industrial IoT Platforms and Industrial Cases for Circular Manufacturing

Sergio Gusmeroli (Politecnico di Milano), June 22nd 2022

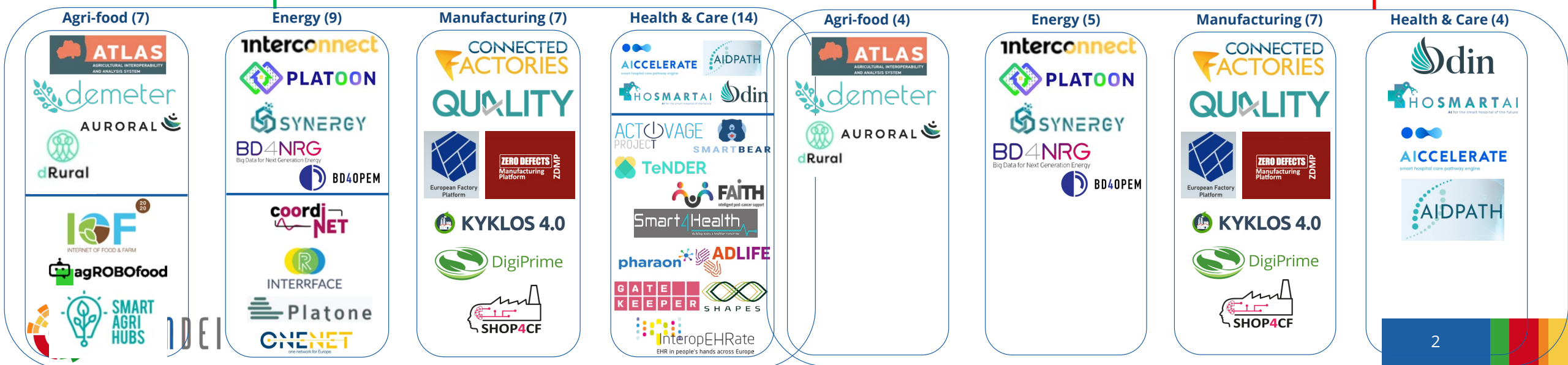
GLOBAL VISION:

IoT TODAY AND BEYOND

IoTForum

OPEN DEI Ecosystem: **4** domains, **20** inner circle, **16+** outer circle

	2019												2020												2021												2022														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep						
MANUFACTURING						DT-ICT-07-2018 Agile Networks EPFF QU4LITY ZDMP																																													
						DT-ICT-07-2019 3 Sustainable Circular Economy KYKLOS digiPRIME Human Factors SHOP4CF																																													
						DT-ICT-07-2019 1 CSA CONNECTED FACTORIES II																																													
AGRIFOOD						DT-ICT-08-2019 DEMETER																																													
						DT-ICT-08-2019- ATLAS																																													
						DT-ICT-09 RURAL ECONOMIES dRURAL AURORAL																																													
						IoF2020 LSP																																													
						SAHs																																													
						AgRoboFood																																													
ENERGY						DT-ICT-10 Smart Homes and Grids INTERCONNECT																																													
						DT-ICT-11 BIG DATA FOR ENERGY BD4OPEM SYNERGY PLATOON BD4NRG																																													
						BRIDGE Cluster (Plus other projects)																																													
HEALTH&CARE						DT-ICT-12 SMART HOSPITAL of the FUTURE AICellerate, HosmartAI, AIDPATH, ODIN																																													
						ACTIVAGE LSP																																													
						SMART4Health InteropEHRate Pharaon Shape Gatekeeper Adlife																																													



The OPEN DEI ecosystem: 35+ Ecosystem Projects (incl. 2 LSPs)

Agri-food (7)



Energy (9)



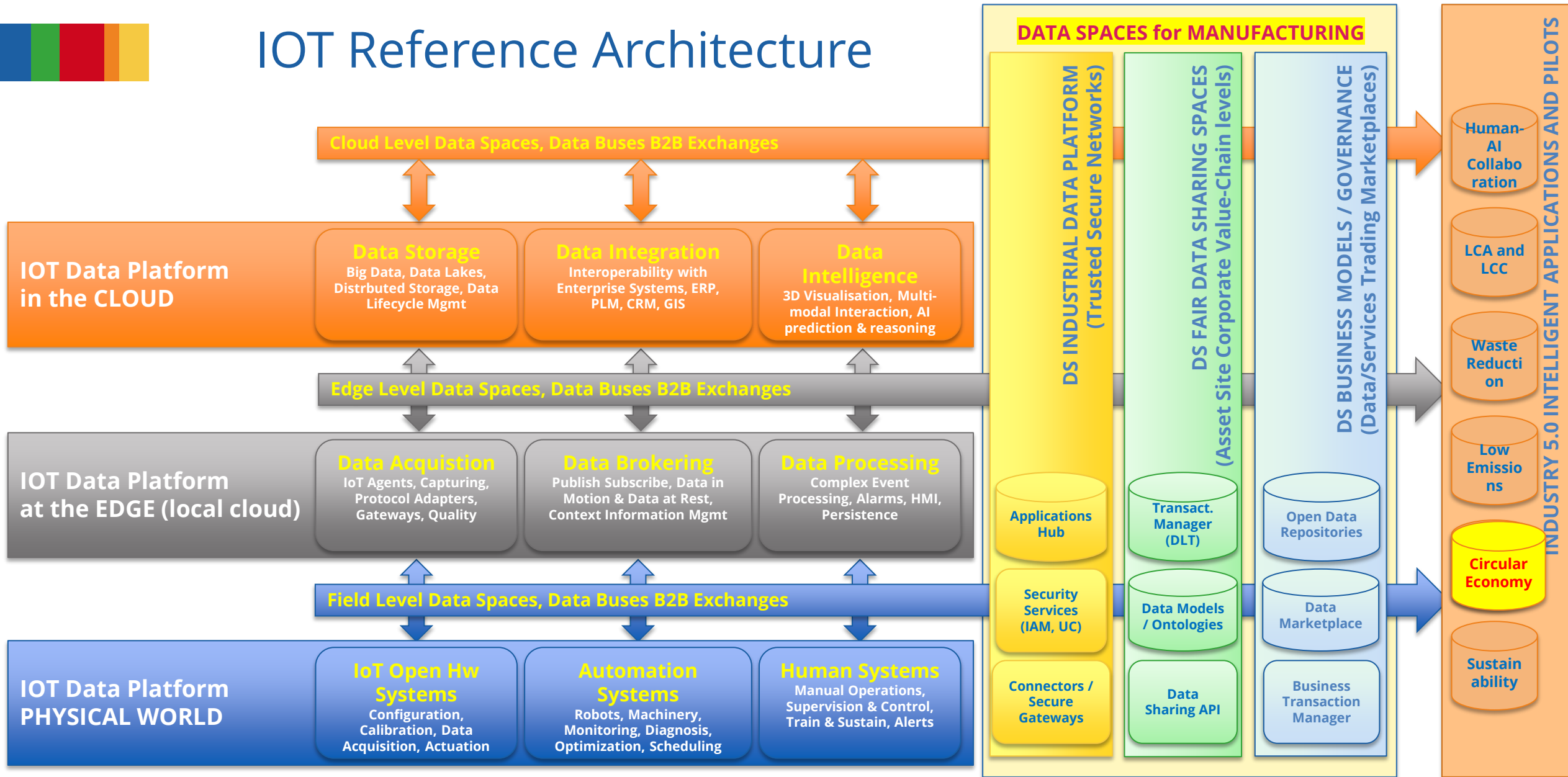
Manufacturing (7)



Health & Care (14)



IOT Reference Architecture



Industrial IOT Data Spaces in Manufacturing

Deploying the strategy through 4 Pillars



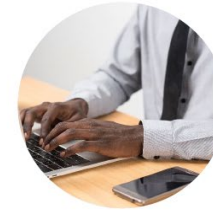
A cross-sectoral governance framework for data access and use

including a legislative framework for the governance of European data spaces and other cross-sectoral measures for data access and use



Enablers

Total investments of € 4-6 billion in a High Impact Project on European data spaces and federated cloud infrastructures



Competences

Empowering individuals, investing in digital skills & data literacy and in dedicated capacity building for SMEs.



Rollout of common European data spaces

in crucial economic sectors and domains of public interest, looking at data governance and practical arrangements.

International Aspects



Data Sharing and Reuse

Data Sharing obstacles

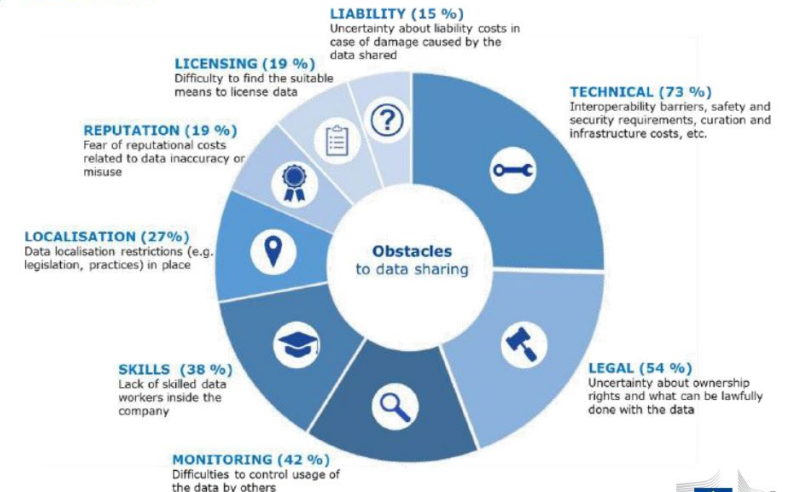
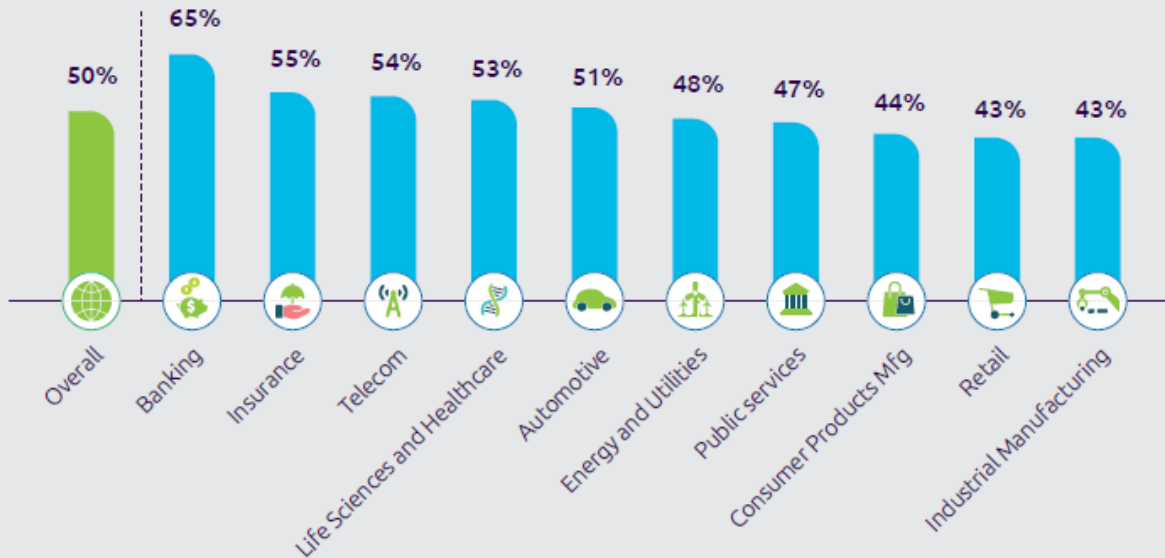


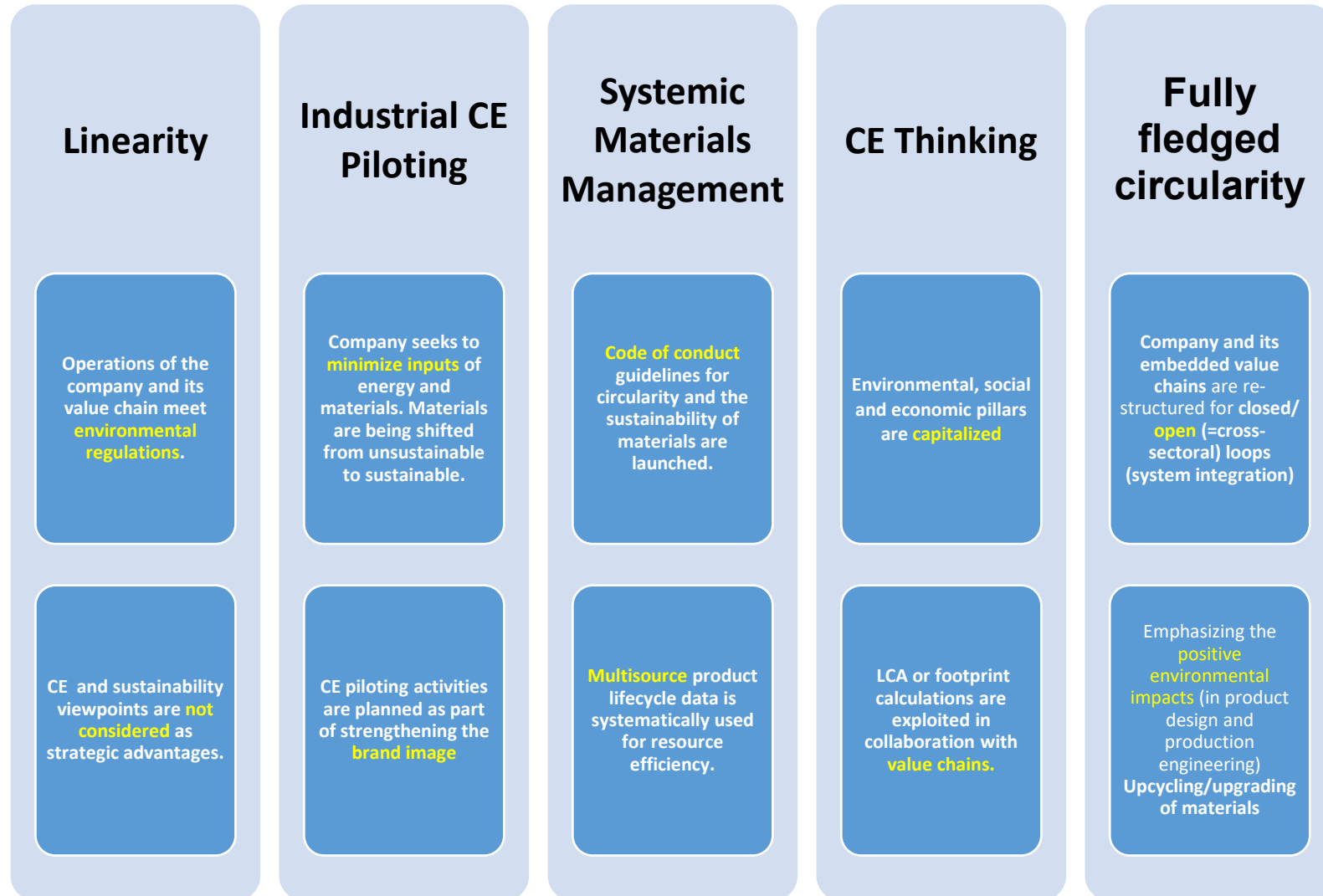
Figure 4 Banking, insurance, and telecom sectors lead in data-driven decision making

Decision making in our organization is completely data-driven



Source: Capgemini Research Institute, Data-powered enterprises survey, August 2020, N=1,004 organizations.

Circular Economy for Manufacturing pathway

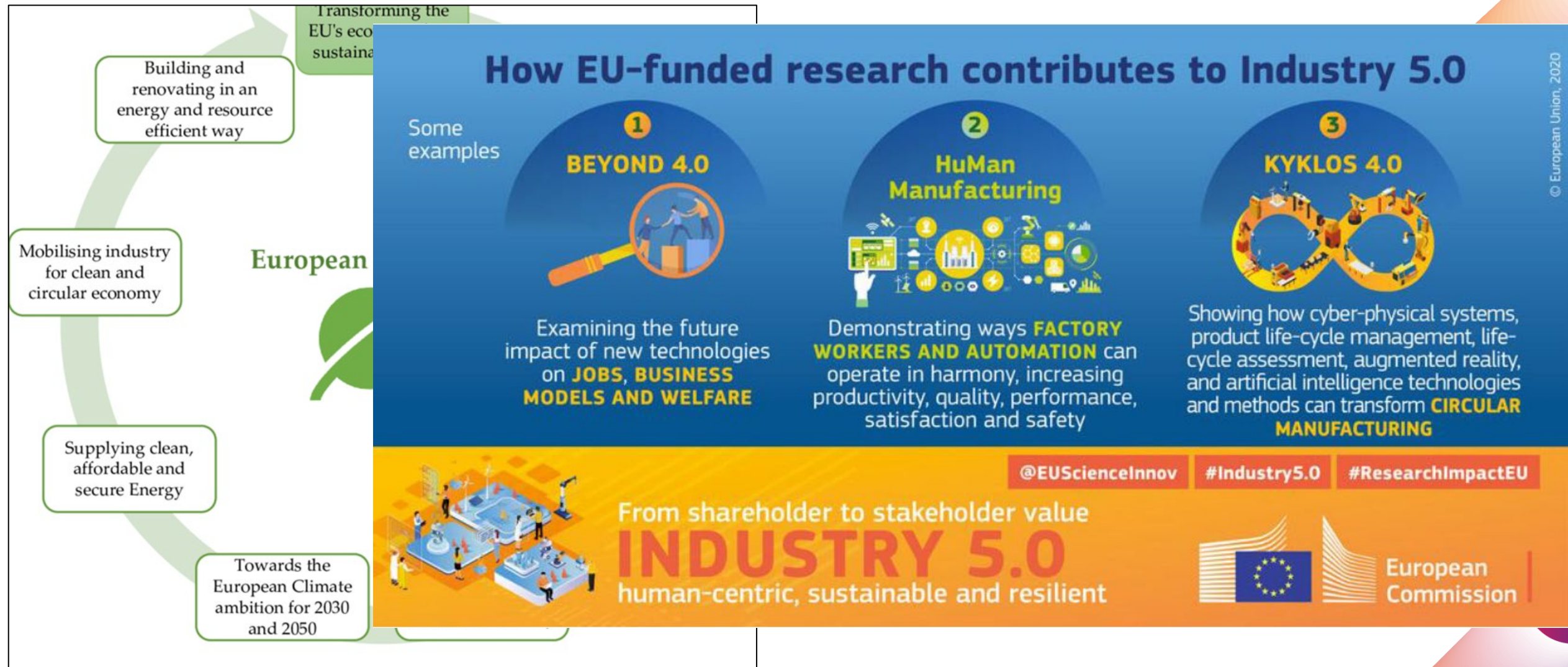


Industry 5.0 paradigm: Circularity



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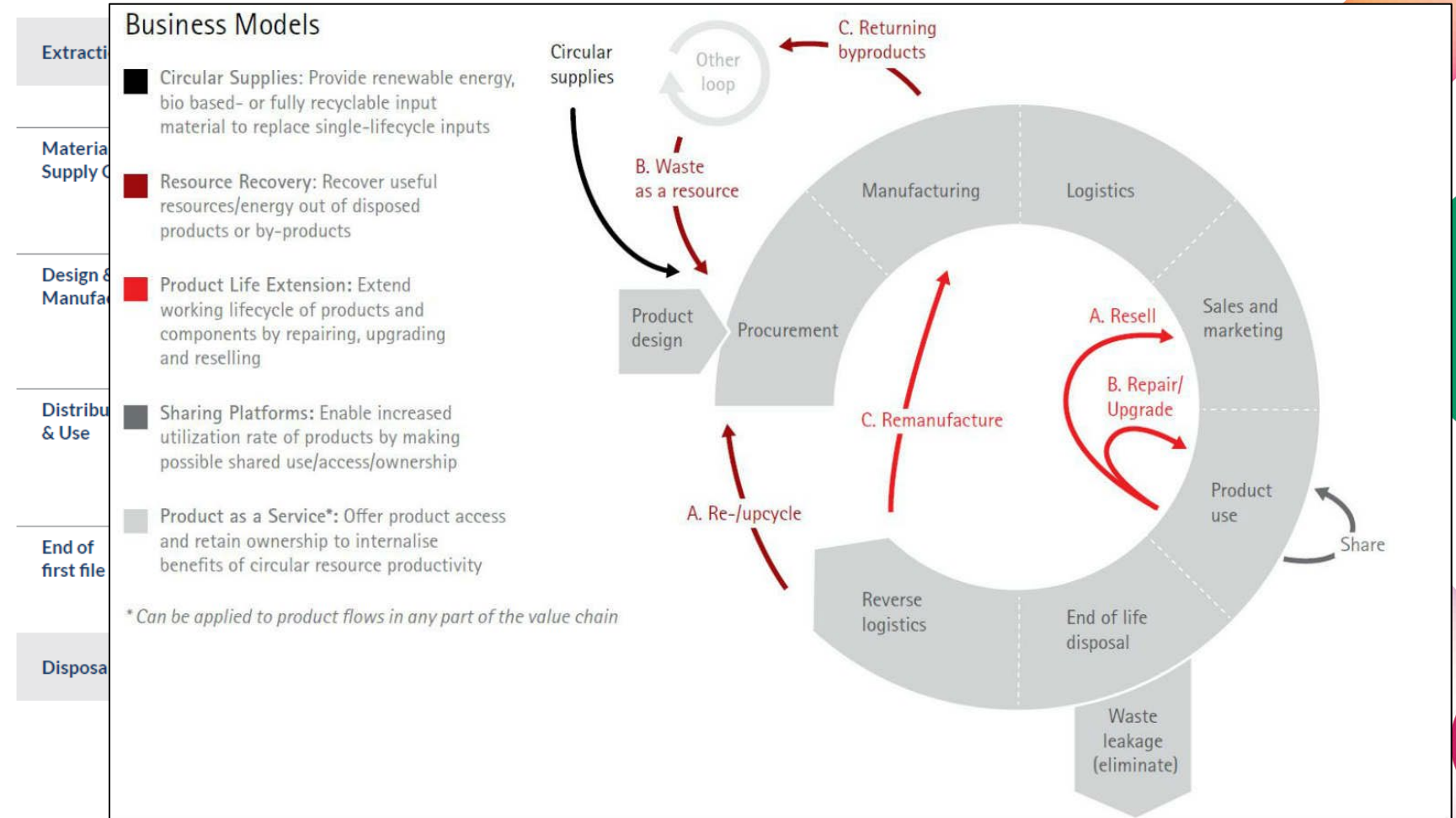
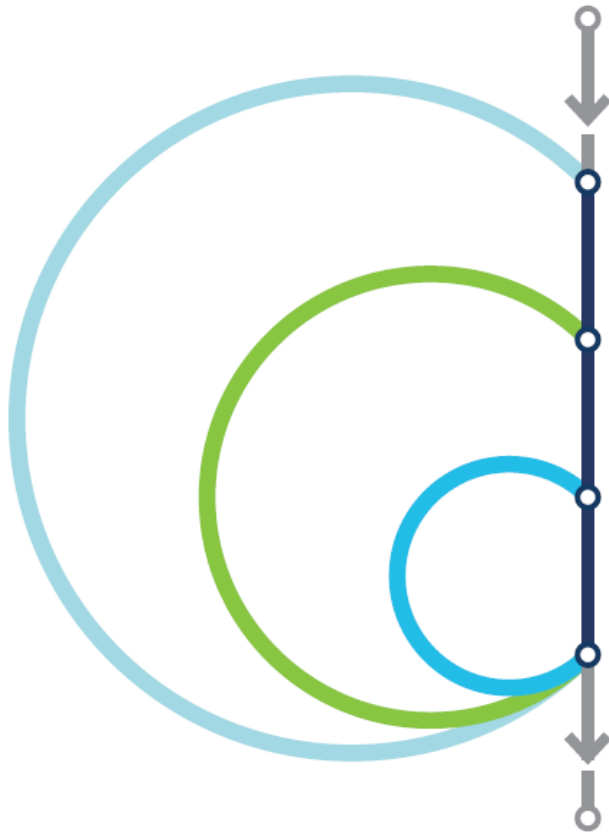
Twin Transition in Manufacturing



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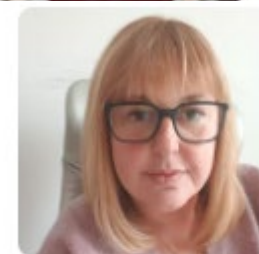
Circular Economy Diagram

(Source: Closed Loop Partners)²



AGENDA

- Industrial IoT Platforms and Industrial Cases for Circular Manufacturing **by Sergio Gusmeroli**
- Development of a digital twin to achieve enhanced processing efficiency and sustainability **by Denis Dowling**
- IoT for manufacturing repurposing of advanced textile solutions: a case study **by Alissa Zaccaria**
- Digitizing the Circular Chain with IoT and Digital Product Passports: a Cross-Sector approach **by John Soldatos**
- IoT as an enabler for Circular Manufacturing: self-symbiosis in Zinc Alloy production **by Alessandra Arezza**
- Cognitive Digital Twins for optimized manufacturing operations **by Kostas Kalaboukas**
- Panel Discussion: the role of IoT Platforms in Circular Manufacturing (**Modera** **Sergio Gusmeroli and Denis Dowling**)



Alessandra Arezza

Speaker

DGS S.p.A.

R&D Project Manager



Kostas Kalaboukas

Speaker

Gruppo Maggioli

Technology Transfer and New Business Development Manager



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Thank you!

Find more:

<https://www.opendei.eu/>

<https://www.effra.eu/connectedfactories>

<https://kyklos40project.eu/>

iotweek.org