

Industry 4.0: state of play in France

Prof Annemarie KOKOSY

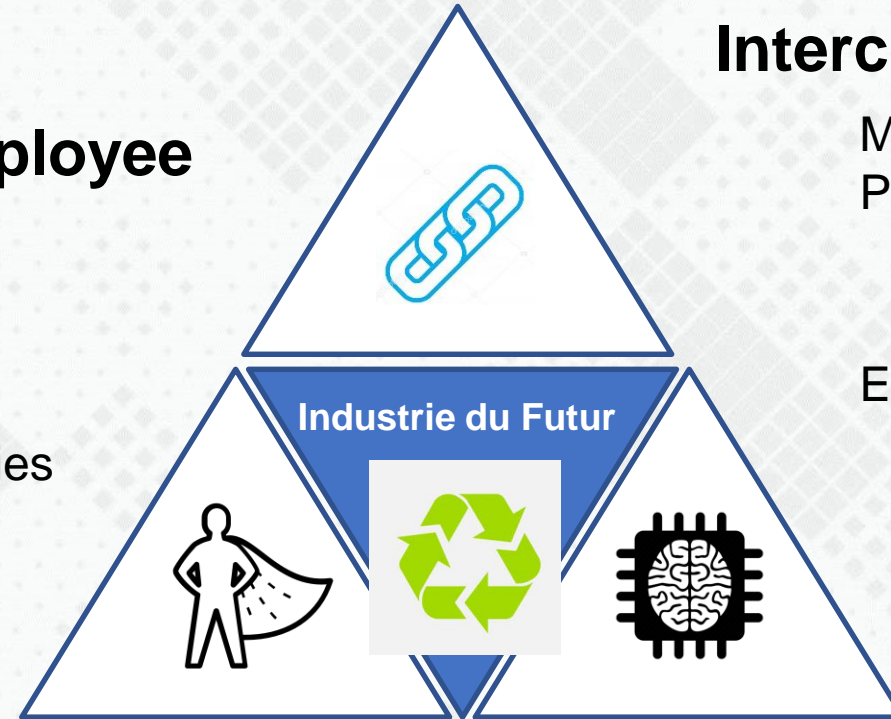
Head of Research and Innovation

Augmented Employee

- Technologies
- Life Long Learning
- Management Support
- Knowledge and Innovation Communities



Workplace Well-being
Enhanced Empowerment
Engagement
Agility



Interconnexion

Machines, logiciels

Primary stakeholders

- Employees, management
- Partners suppliers and distributors
- Customers

Ecosystem

- large companies, SMEs, ETIs, suppliers of technology, *start-ups*, academia, research centers, learning centers, investors, gouvernement, ...

Intelligent Objects

Reconfigurables

Self Learning and reconfiguration

Interact with human in natural way



Propose a new
EXPERIENCE
for and with the
CUSTOMERS

Study case: Automotive industry – Stage 1

Manufacturing

Sales

Drive



Associated Press file

Study case: Automotive industry – Stage 2

Sales

Choice of Options
Choice of color



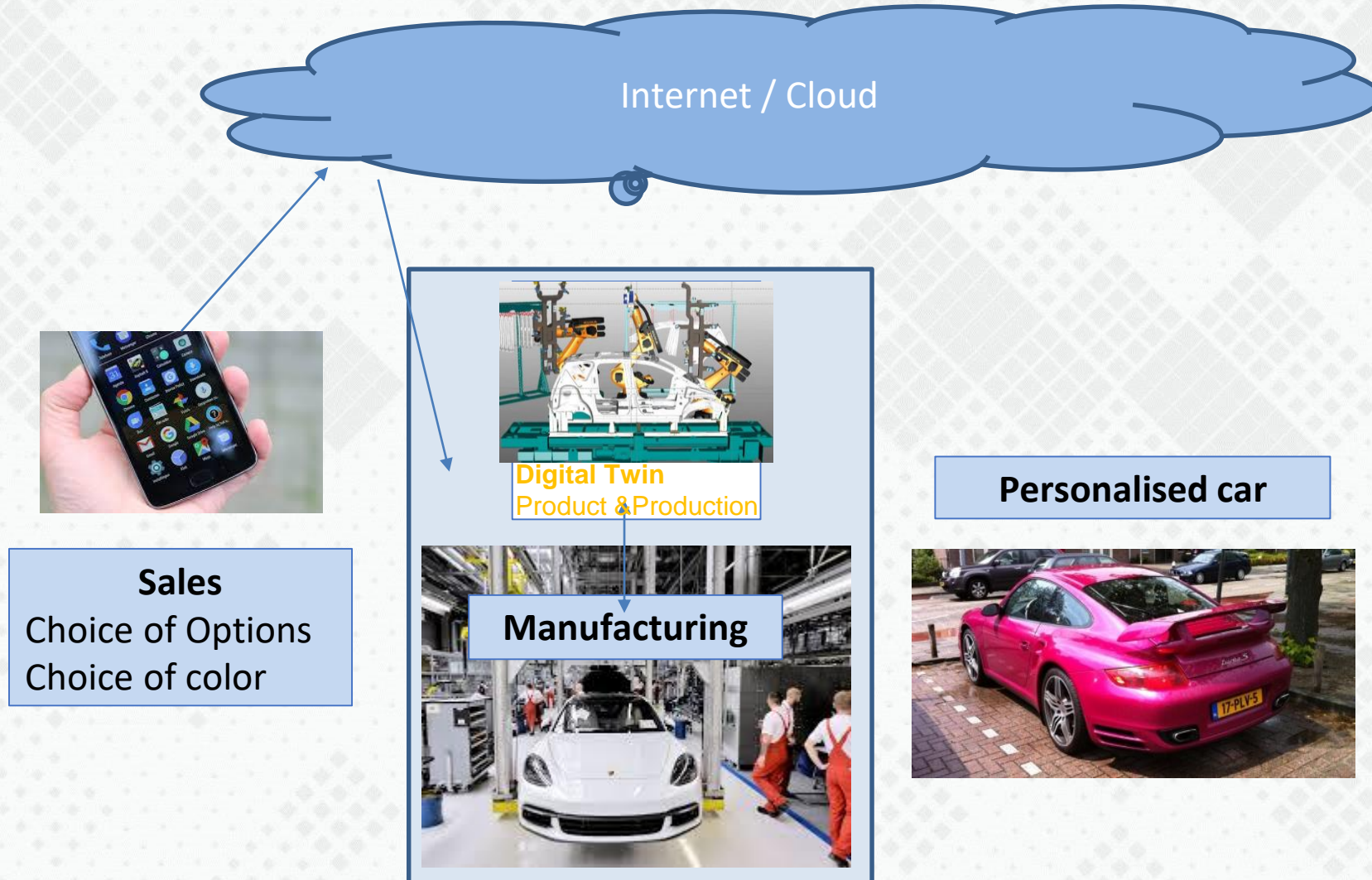
Manufacturing



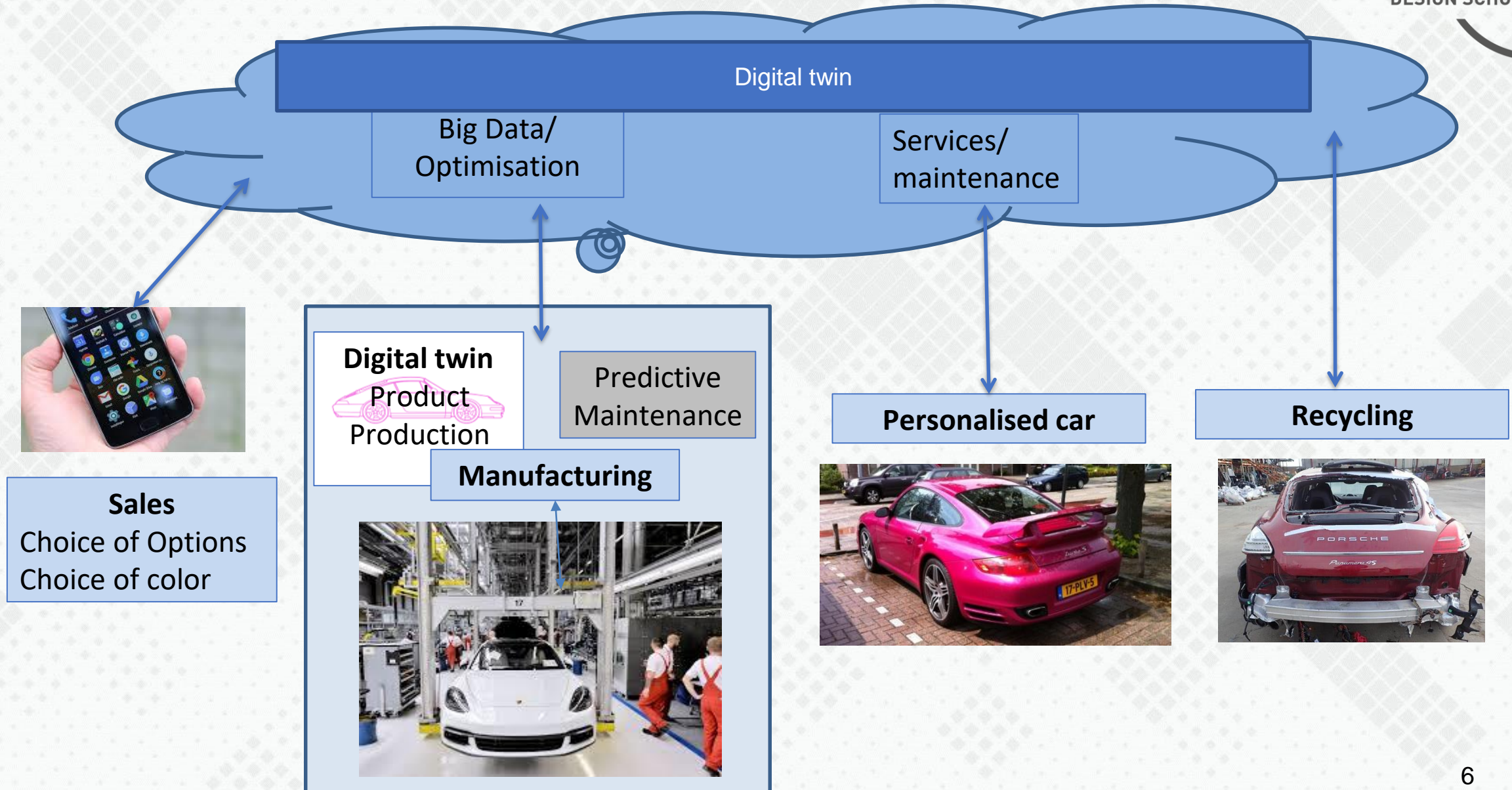
Personalised car



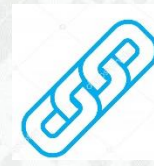
Study case: Automotive industry – Stage 3



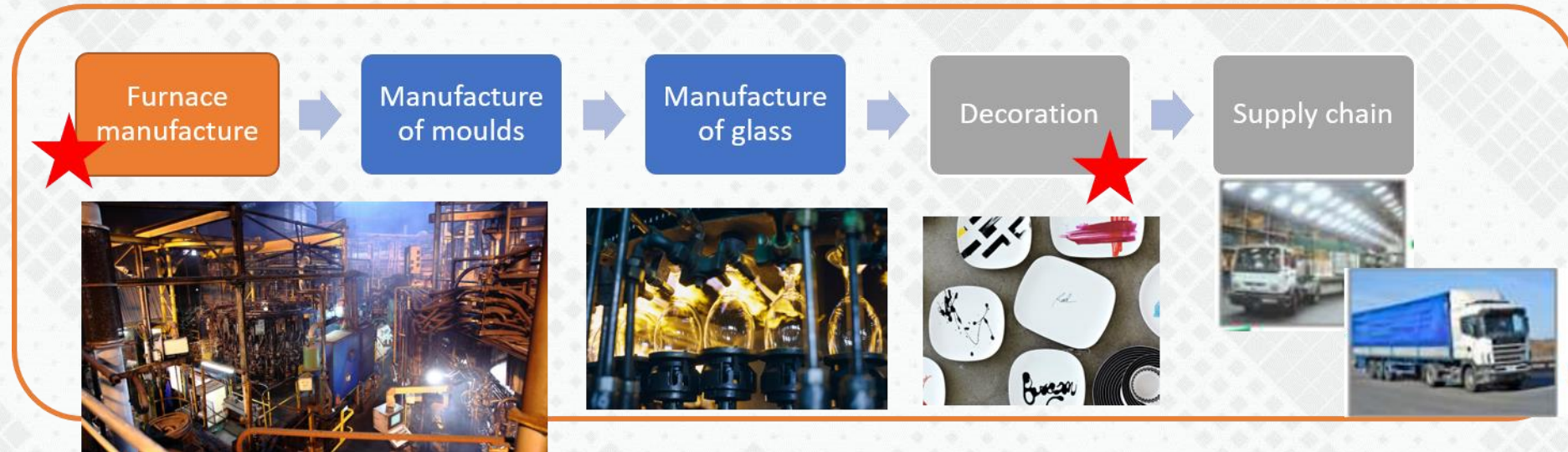
Study case: Automotive Industry – Stage 4



Reconfiguration of the value chain



Study case – tableware manufacturing



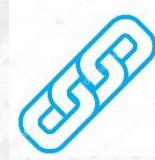
Customers



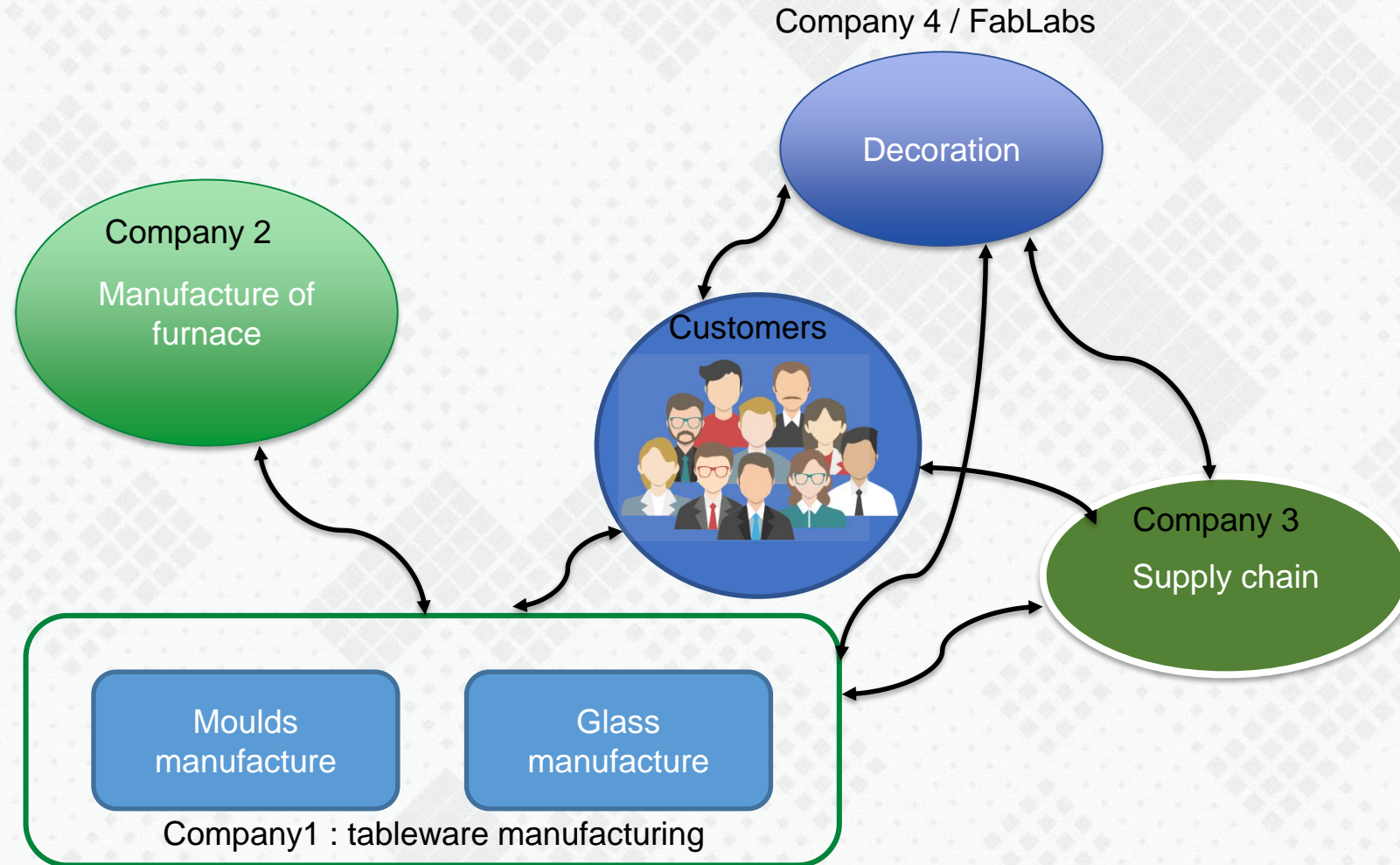
- Our value vs unique know-how in the manufacturing process
- The place of customer in the value chain
- Which interaction with the stakeholders and the ecosystem?



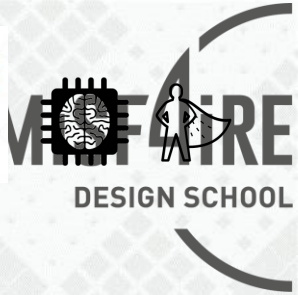
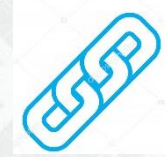
Reconfiguration of the value chain



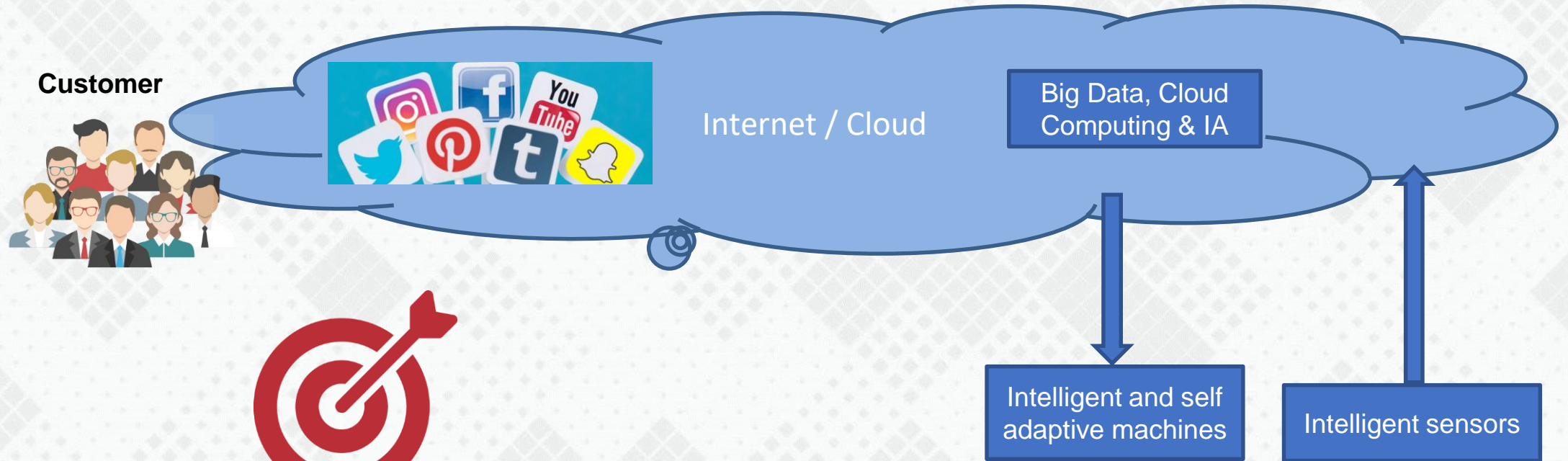
Study case – tableware manufacturing



Indirect interaction with customers



Study case – personal care and hygiene products



Product improvement
Satisfy the customer needs
Identify new trends
Improve the brand image

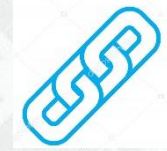


Conception : ©Annemarie Kokosy

Direct interaction with customers

Study case – 3D printers Dagoma

- **Direct interaction with customers from the product design & tests**



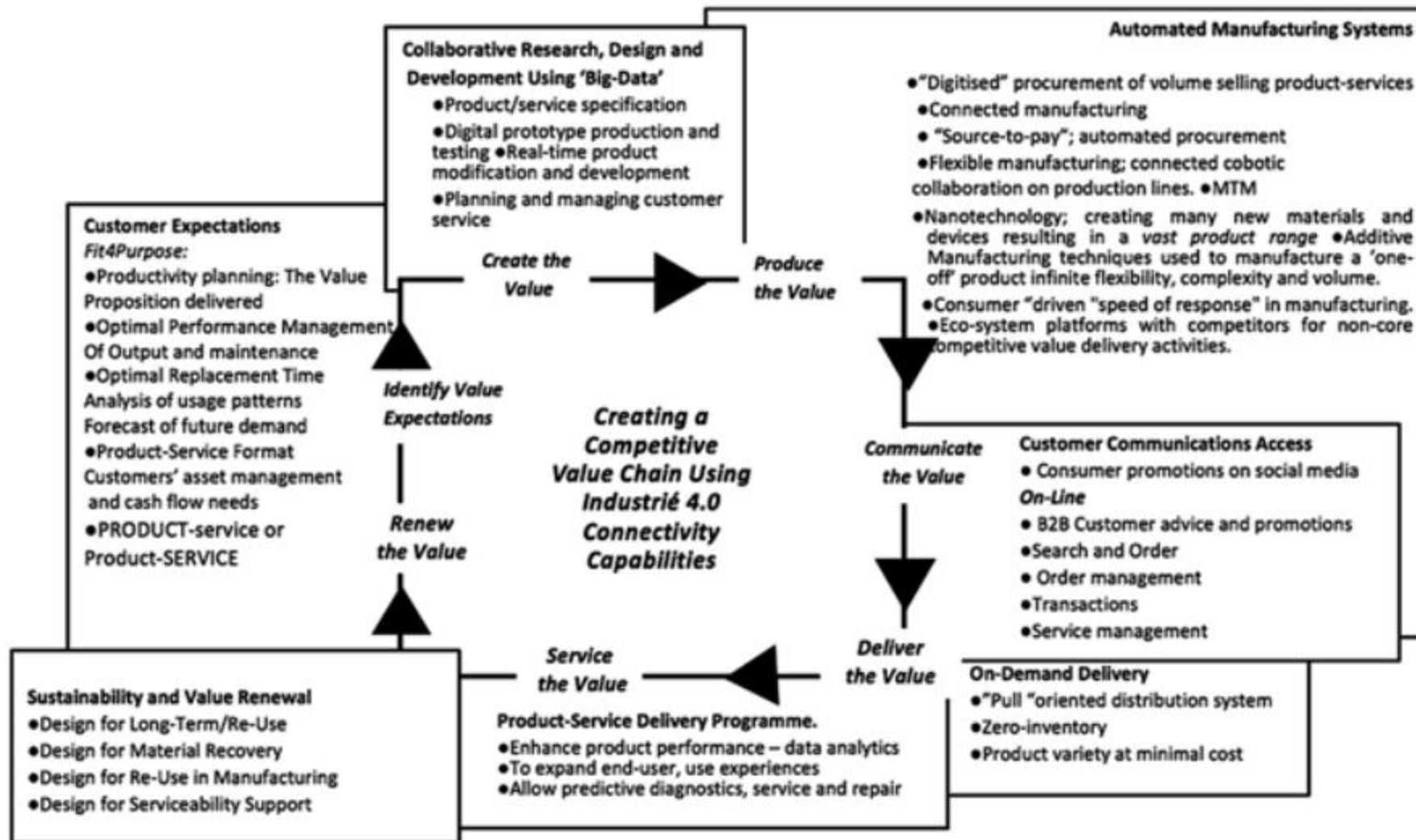
DAGOMA

Alliance
INDUSTRIE
DU FUTUR

Vitrines
Industrie du Futur



Connected Value Chain Approach



Industry 4.0 in France



- **Coordination: Alliance Industrie du Futur, created in 2015**



Development and integration of future technologies and their standardization



Transformation of SMEs, ETIs and sectors in the territories



Developing tomorrow's skills



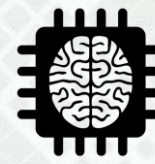
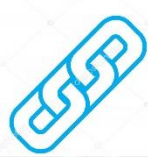
Communication



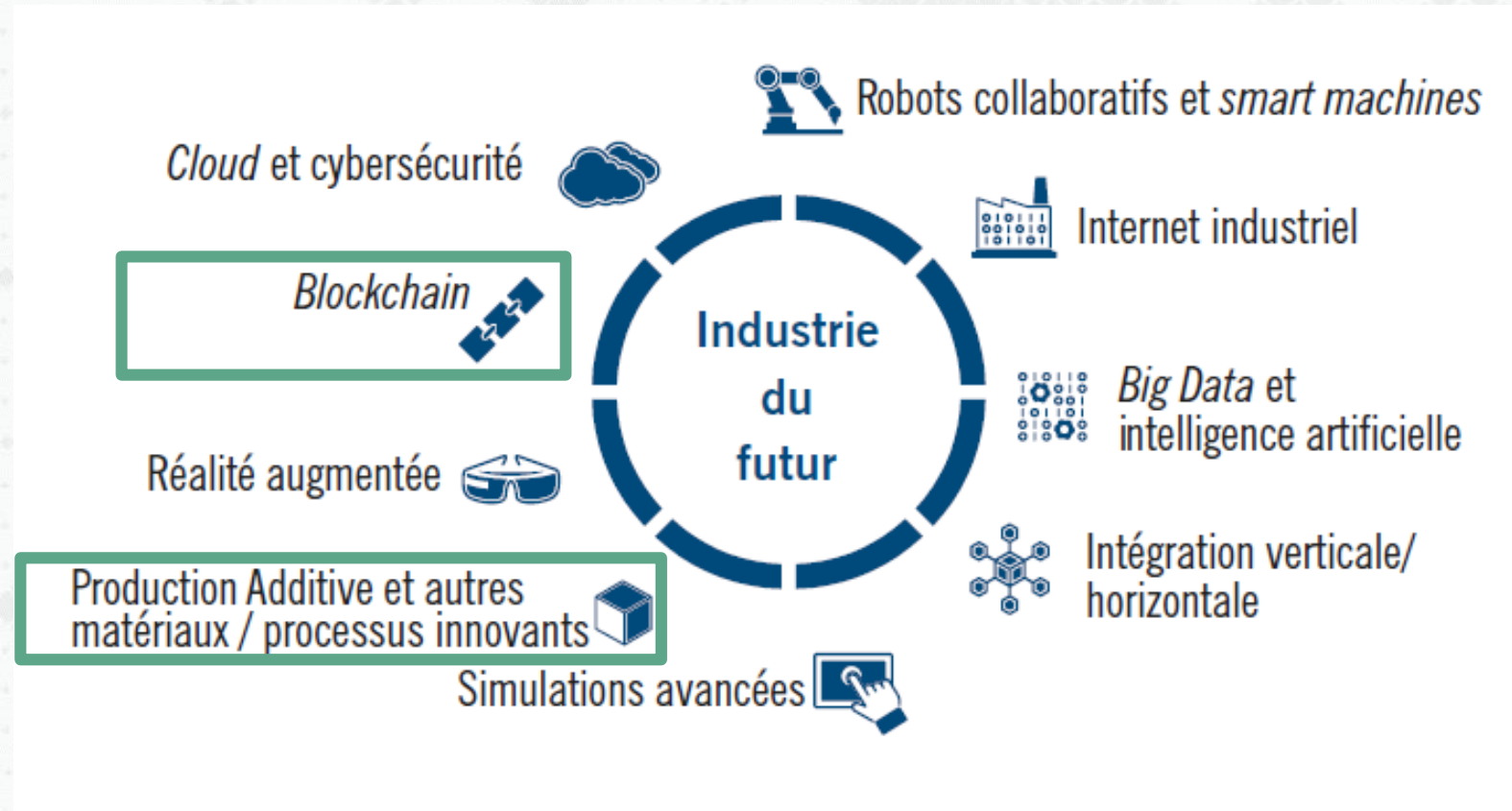
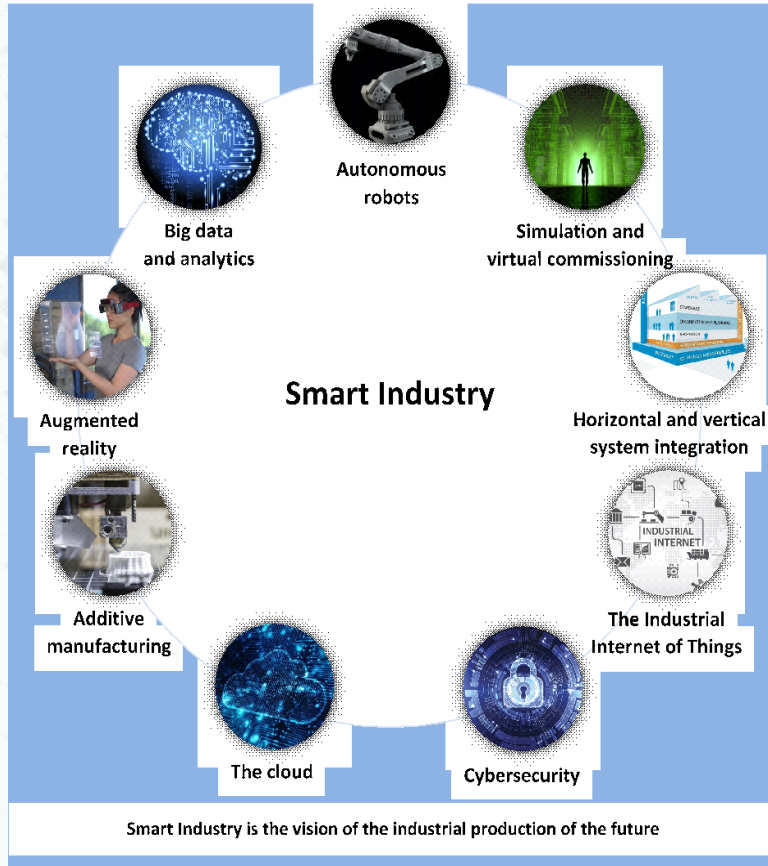
Transversal actions

Sectors
International

Industry 4.0: Technologies



Nine Technologies Are Transforming Industrial Production



Industry 4.0: How ready is your business?

• Acatech Industrie 4.0 Maturity Index

4 structural areas : ressources, information systems, organizational structure, culture

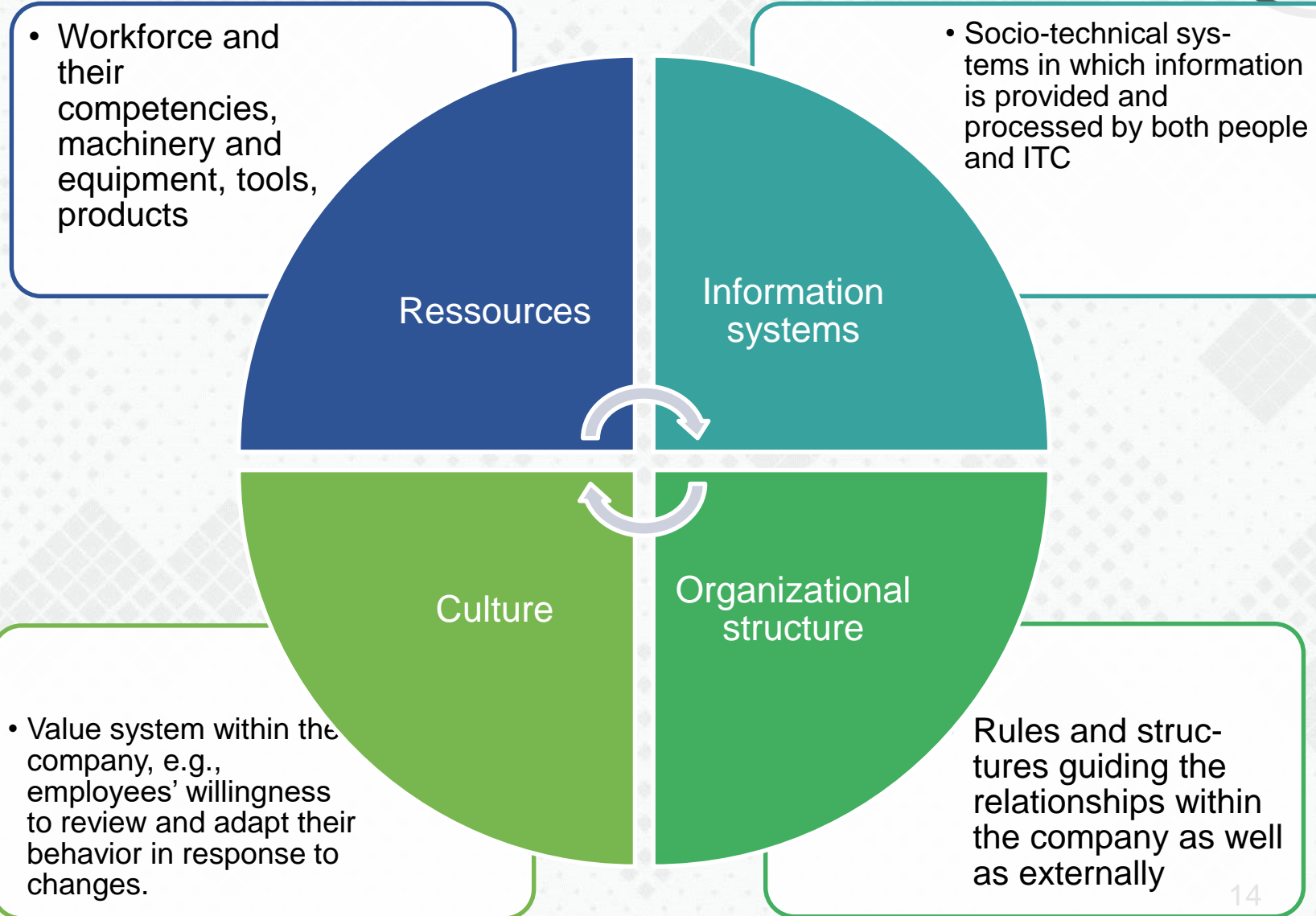
5 functional areas: development, production, logistics, services, marketing, and sales

Procedure in 3 phases

Phase 1: Review of current situation

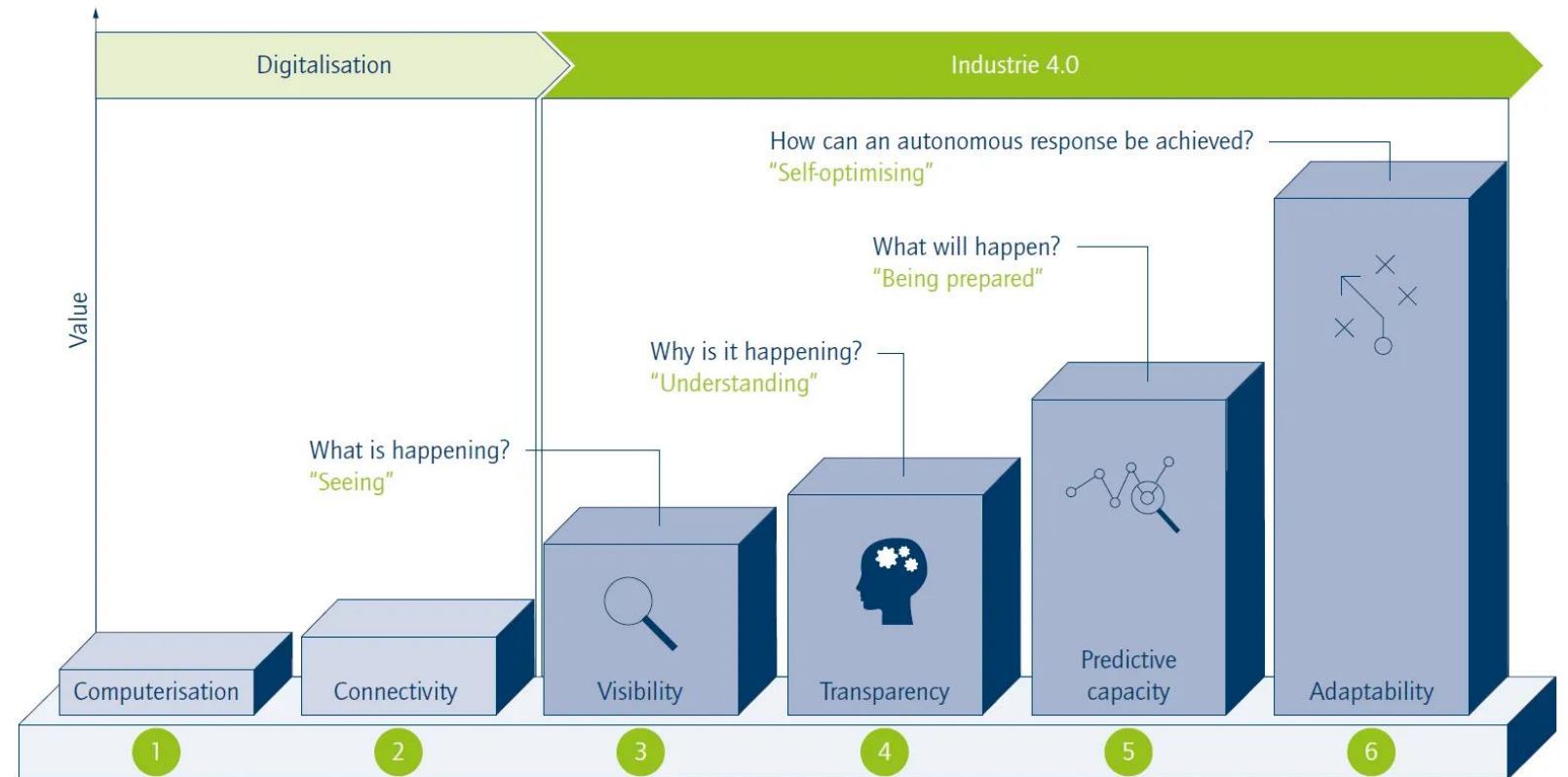
Phase 2: Target definition

Phase 3: Roadmap



Industry 4.0: How ready is your business?

- **Acatech Industrie 4.0 Maturity Index**

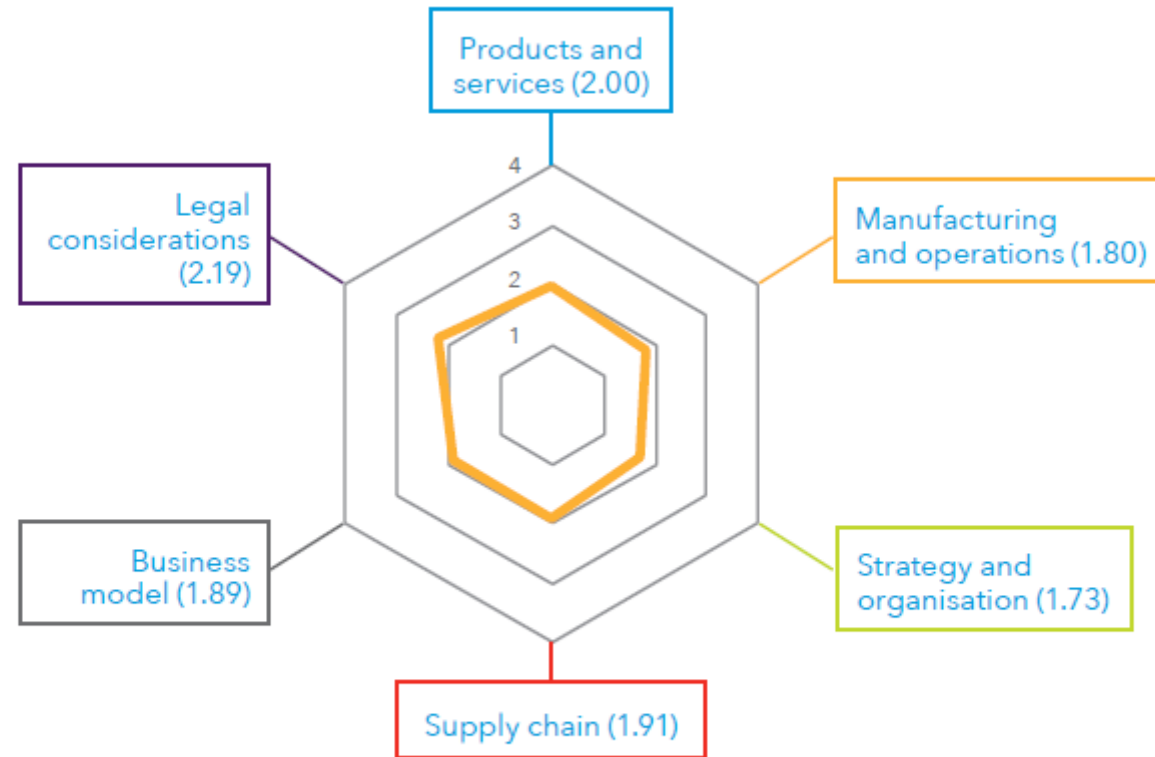


Acatech Industrie 4.0 Maturity Index,
Ad Ultima Group's partner, RWTH
Aachen University, 2018

Figure 5: Stages in the Industrie 4.0 development path (source: FIR e. V. at RWTH Aachen University)

Industry 4.0: How ready is your business?

An Industry 4 readiness assessment tool, University of Warwick,
Crimson & Co, Pinsent Masons, october 2017



Readiness levels: Level 1 - Beginner • Level 2 - Intermediate • Level 3 - Experienced • Level 4 - Expert

Industrie du Futur: How ready is your business?

- **I2DF© Index (June 2019)**

6 Competitiveness levers

29 Topics

80 Technological macro-bricks

Industry 4.0: How ready is your business?

- **AIF Index** <http://www.referentiel-idf.org/cetim/fr-FR>

Competitiveness levers



Connected Objects & Industrial Internet

Connected, controlled and optimized factories and production lines

Advanced production technologies

Connected Products
Connection technologies
Infrastructure to exchange data

Virtualization for production
system optimization
Real time data processing
Management of industrial
transactions
Digital product and process
engineering
Product control

New & Intelligent Materials
Innovative manufacturing processes
Eco-responsible processes
Advanced robotic and intelligent machines
Automation and industrial robots
Intelligent components
Remote monitoring
Digital command-control systems

TOPICS

Industry 4.0: How ready is your business?

- **AIF Index** <http://www.referentiel-idf.org/cetim/fr-FR>

Competitiveness levers



**New approach to people
at work, innovative
organisation and
management**



**Integrated
customer/supplier
relationships**



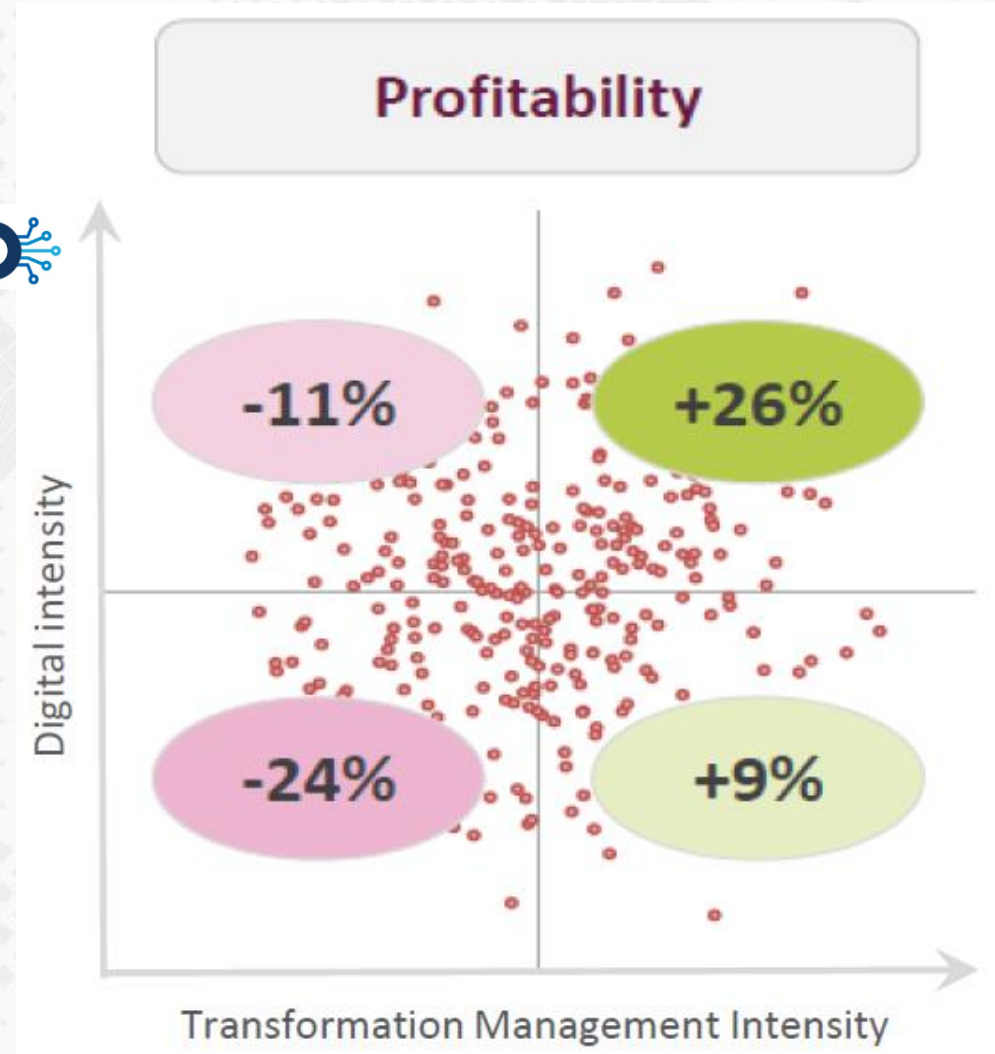
**New economic and
societal models, strategy
and alliances**

Mobile and social applications
Quality of life at work
Physical support
Cognitive assistance
Leading change

Digitalization of the value chain
Innovation and collaborative
production
Product/Service Life Management

Community integration, common
goods
New business models
Extended and agile company
Strategic company
Intangible assets

Augmented employee by transformation management



Source: "The digital advantage: how digital leaders outperform their peers in every industry" report by MIT Sloan Center for Digital Business (CDB) and Capgemini Consulting



Thanks for your attention !



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