THE WAY TO
FACTORY OF THE FUTURE 4.0

MADE DIFFERENT
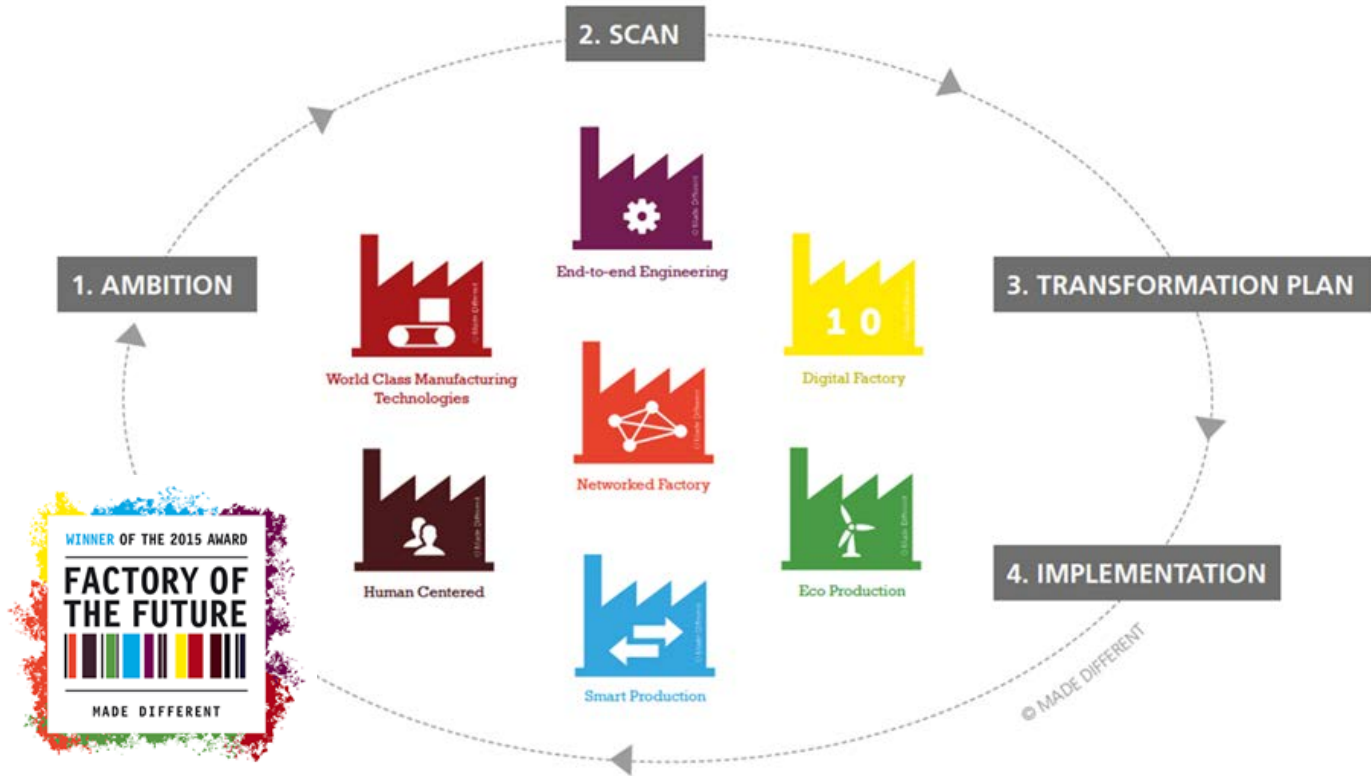
ENABLING FACTORIES OF THE FUTURE
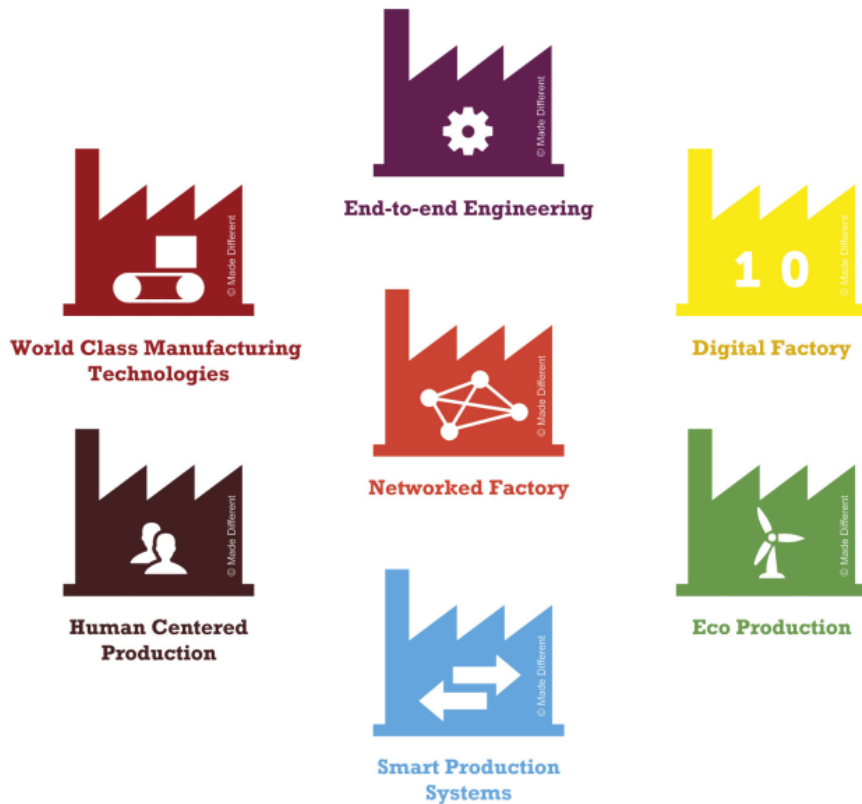
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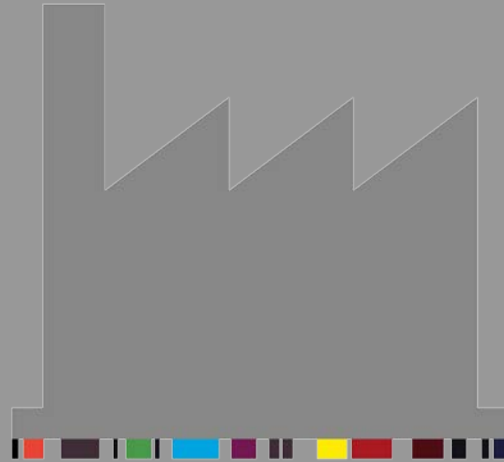
How to create a **sustainable future**
for **production companies**
in Belgium, given the context of
high costs & **global competition** ?

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7 integrated transformations

End-to-end Engineering

World Class Manufacturing Technologies

Networked Factory

1 0

Digital Factory

Human Centered Production

Eco Production

Smart Production Systems

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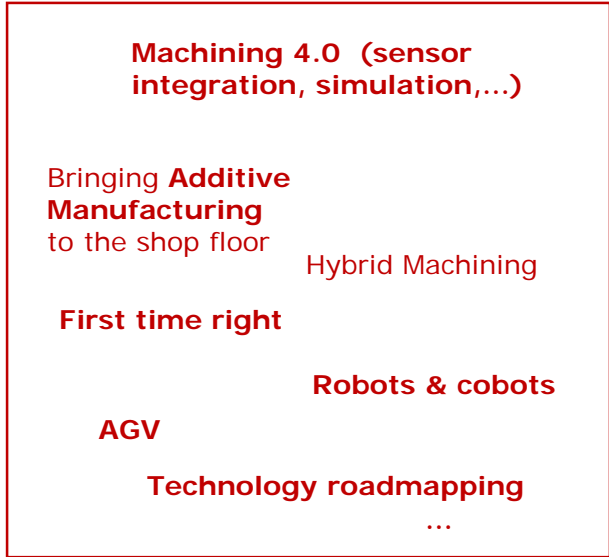
This transformation is based on deploying **state-of-the-art production devices.**

Given the "wage-handicap", our companies cannot afford manufacturing with machinery that is outdated compared with that of competitors. Benchmark companies develop their own devices for key aspects in production, and thus boast machinery that is unique in the world.

Machining 4.0 (sensor integration, simulation,...)

Bringing **Additive Manufacturing** to the shop floor

Hybrid Machining

First time right

Robots & cobots

AGV

Technology roadmapping

...

Human Centered Production

Employees are a significant asset for anchoring production locally. Employee involvement in the future development of their company is crucial

Supporting operators in their tasks

Cross training and involvement of operators

Innovative Labour Organization

Self-organizing methods

...

Transparent Factory : Monitor and visualize production

Create bridges between production modules

Connected factories

Machining 4.0 (sensor integration, simulation,...)

Digital operator support

Fast Response

Data Innovation in production

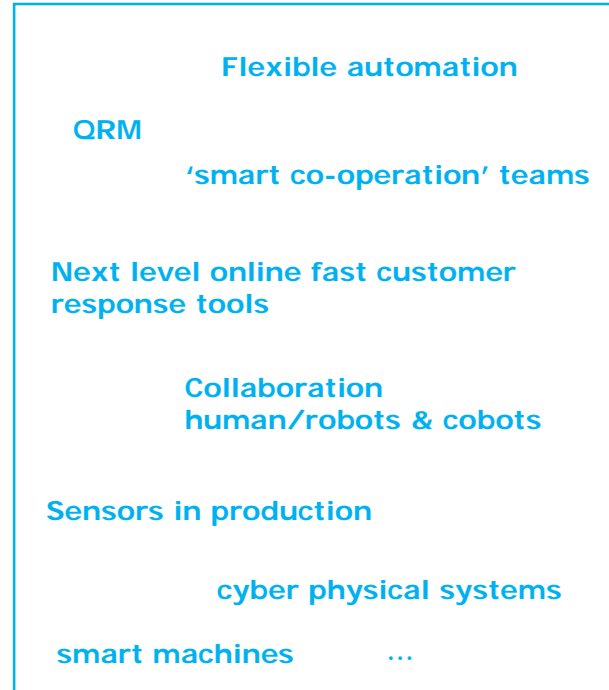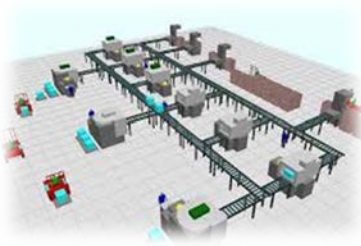**Intelligently use production data, incl. predict and prevent problems**

... Cloud, security, compliance

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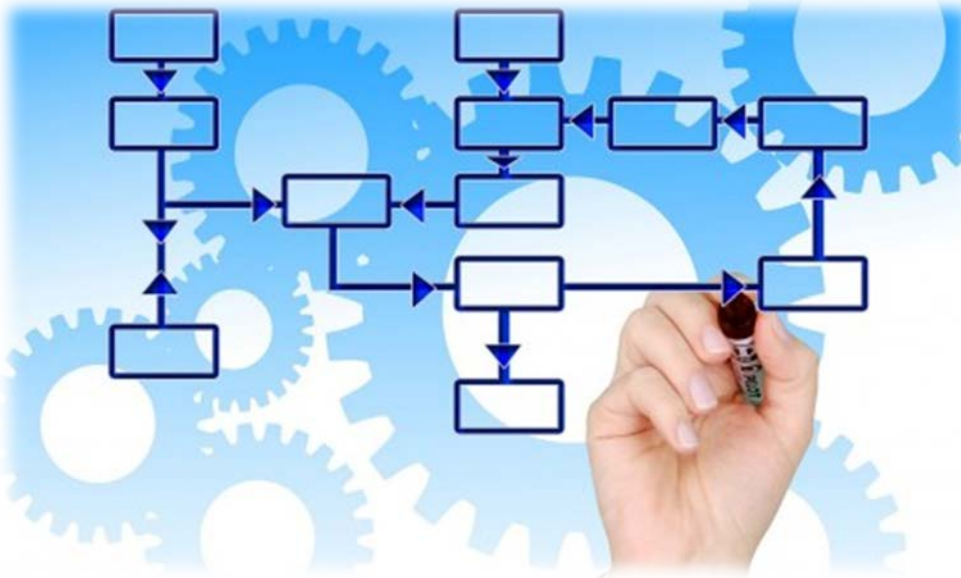CREATED BY: sirris driving industry by technology .AGORIA

Smart Production Systems

Our manufacturing companies have to be able to respond to rapidly changing market demand, with a production with **single batches** as an ultimate approach. For this purpose it is necessary to "retune" their **production systems to more flexible, self-learning and adaptive systems.**

This requires both **organisational and technical breakthroughs.** Cyber Physical Systems are the building blocks, providing the connection between the various production components and making a production system smart.

Flexible automation

QRM

'smart co-operation' teams

Next level online fast customer response tools

Collaboration human/robots & cobots

Sensors in production

cyber physical systems

smart machines ...

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Advanced engineering tools, like :
- Product visualization techniques
- modeling,
- simulation,
- augmented reality,
- Web platforms and technologies

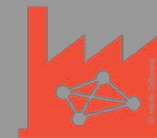**Design for hyper personalization**

Engineering for Additive

Design for assembly

Lean Product development

Simulating adaptive production systems

Fast response

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Linking companies throughout the entire industrial value chain

Partnership Driven Innovation

Corporate venturing

Co-creation practices & Digital co-creation tools

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De- & remanufacturing

Energy usage optimization

Material usage decrease

Circular economy

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