THE WAY TO FACTORY OF THE FUTURE 4.0
How to create a **sustainable future** for **production companies** in Belgium, given the context of **high costs & global competition**?
... through support within 7 integrated transformation themes.
7 integrated transformations

- End-to-end Engineering
- Digital Factory
- World Class Manufacturing Technologies
- Networked Factory
- Human Centered Production
- Eco Production
- Smart Production Systems
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Given the "wage-handicap", our companies cannot afford manufacturing with machinery that is outdated compared with that of competitors.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.
Employees are a significant asset for anchoring production locally. Employee involvement in the future development of their company is crucial.
Digital Factory

**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
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.
End-to-End Engineering

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
Networked Factory

Linking companies throughout the entire industrial value chain

Partnership Driven Innovation

Corporate venturing

Co-creation practices & Digital co-creation tools

...
Eco Production

De- & remanufacturing

Energy usage optimization

Material usage decrease

Circular economy

...