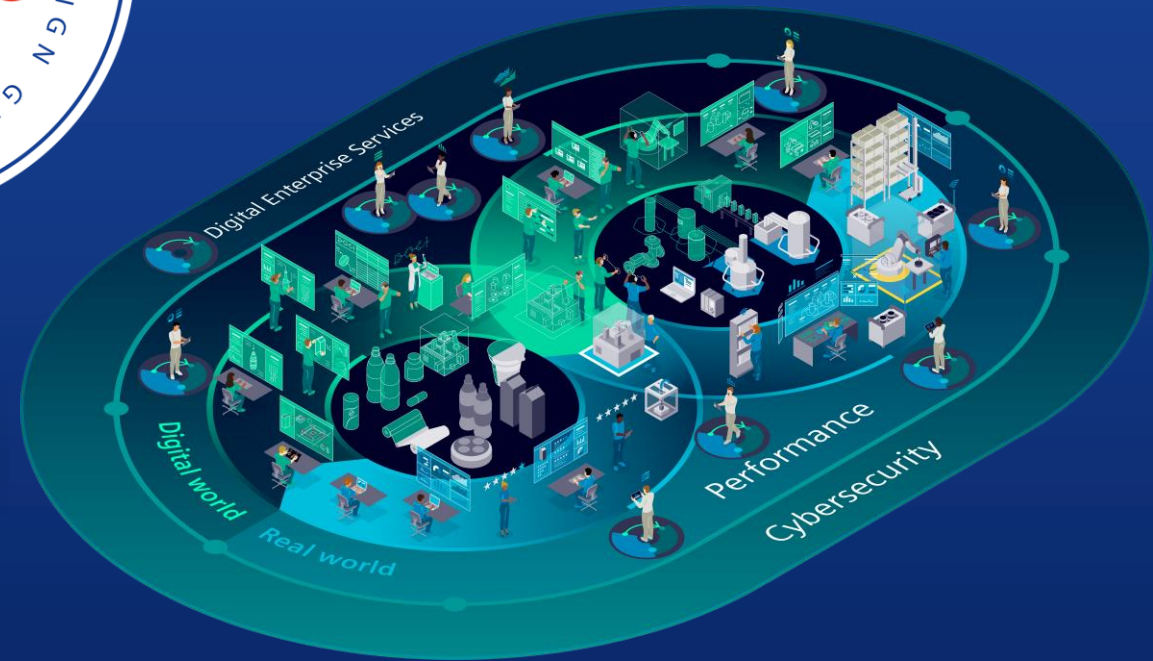


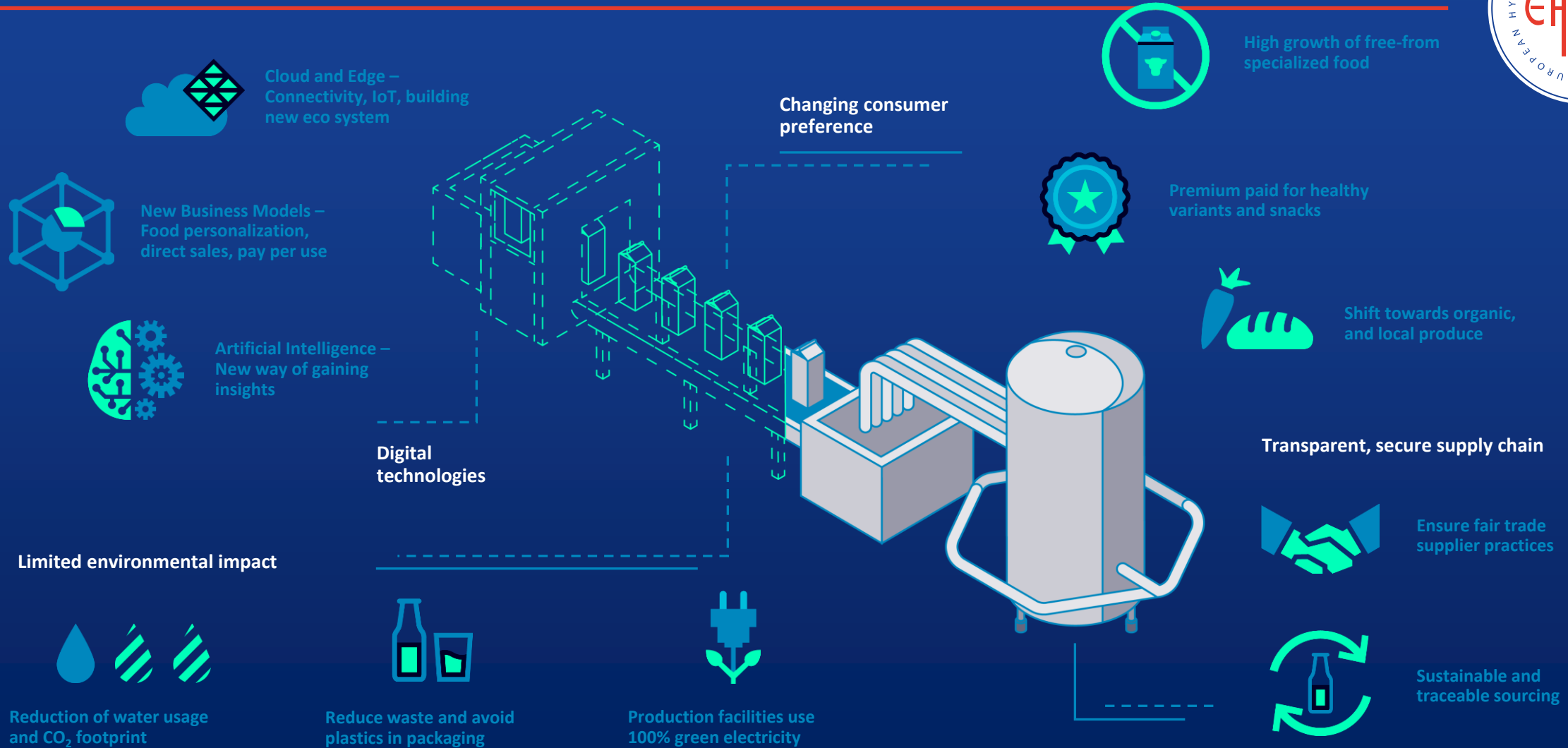
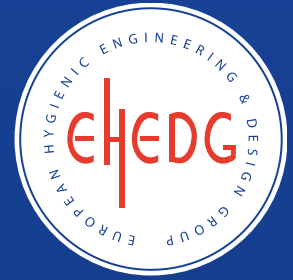


Hygiene 4.0

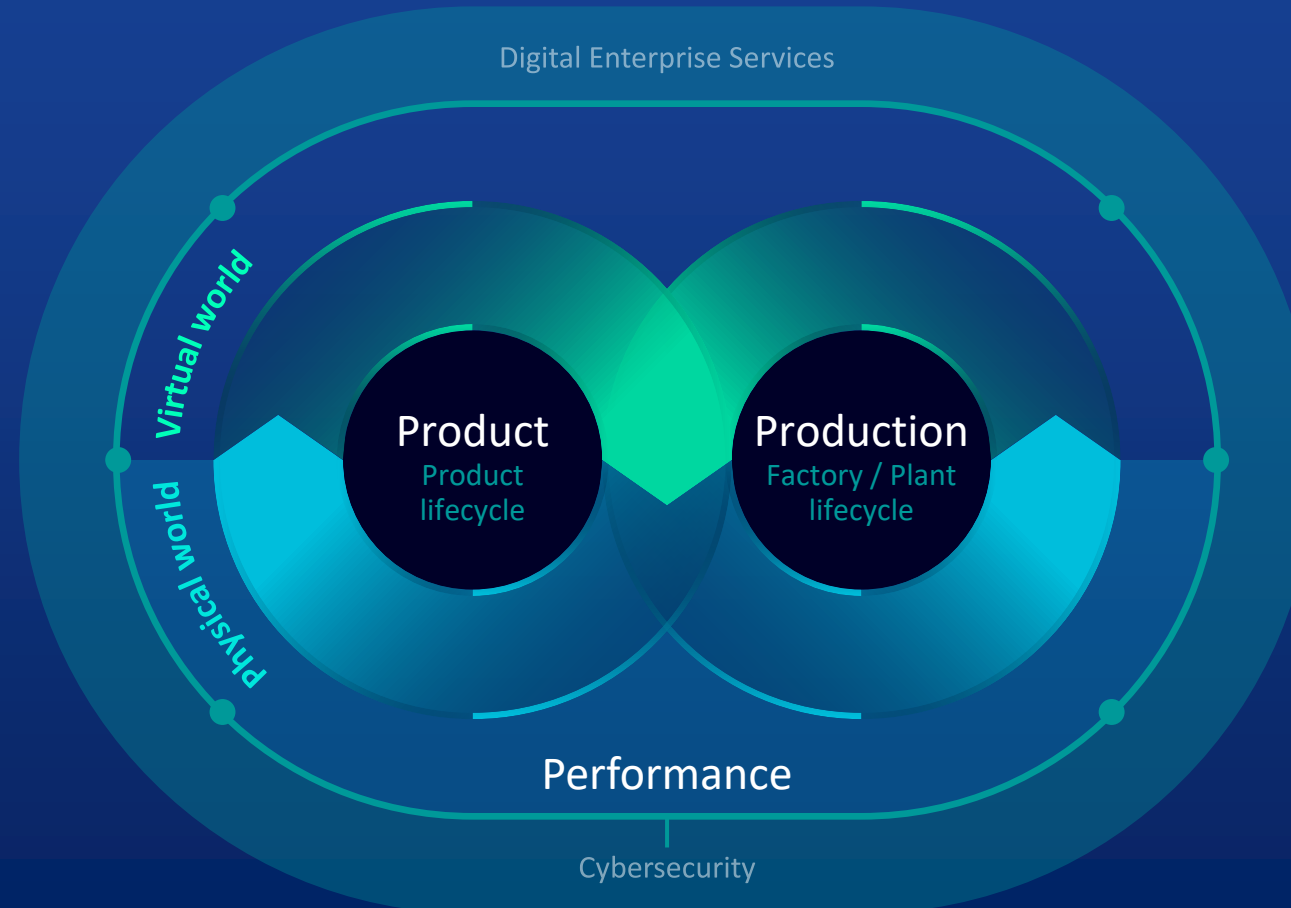
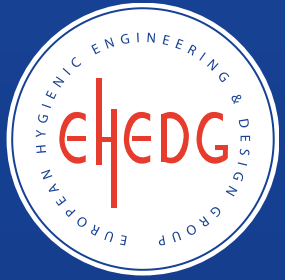


How IoT and new technologies change the hygienic Food & Beverage production

Market trends pushes companies towards digitalization

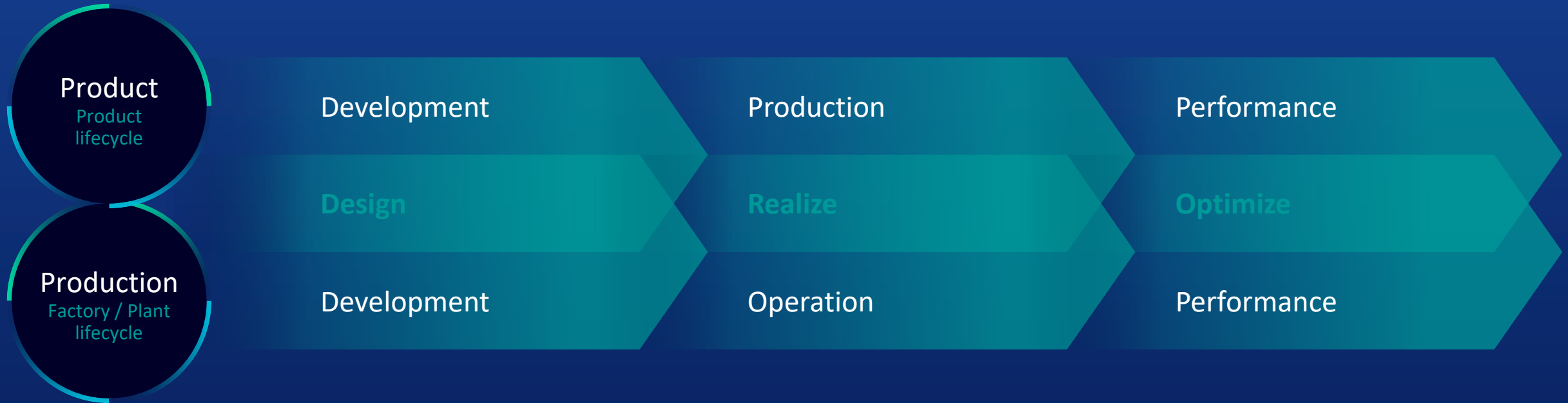


Digital Enterprise supports product and production lifecycle



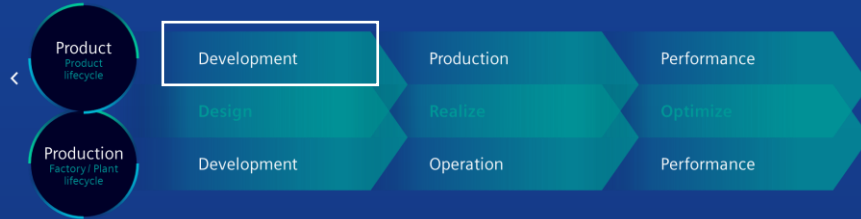
Digitalization applies to different phases of the lifecycle

Design – realize - optimize

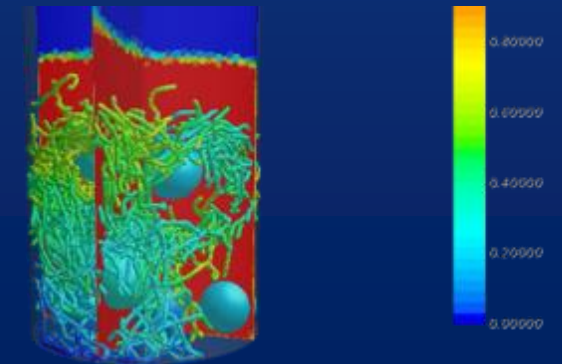
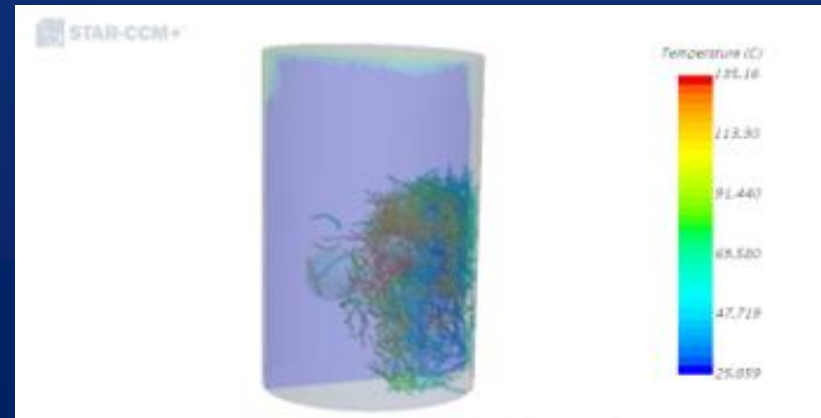


Product & process optimization

Improving the sterilization process of food products

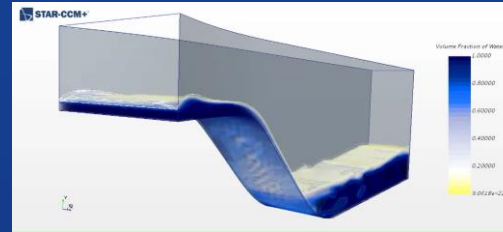
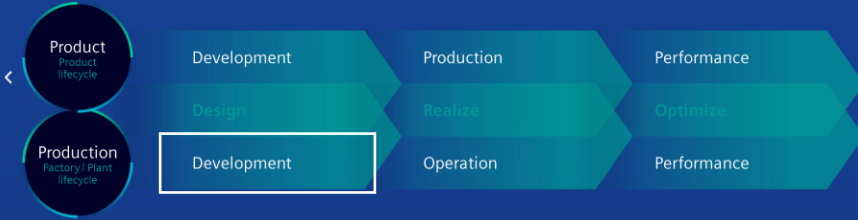
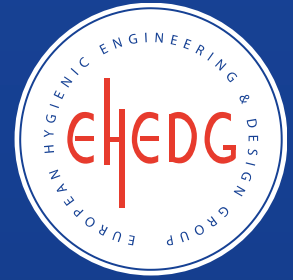


Usage of CFD simulation to develop the sterilization process for a new product, reducing development time, increasing process efficiency and minimizing quality losses



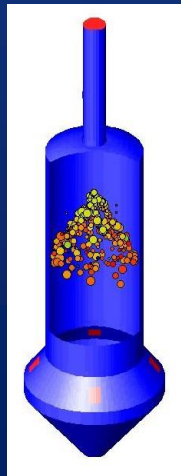
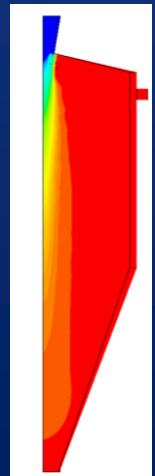
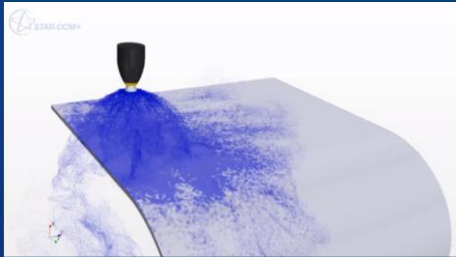
Production design & optimization

Fluid simulation to optimize geometry design and material selection



Fluid simulation

to identify dead area, gaps and crevices during the construction phase

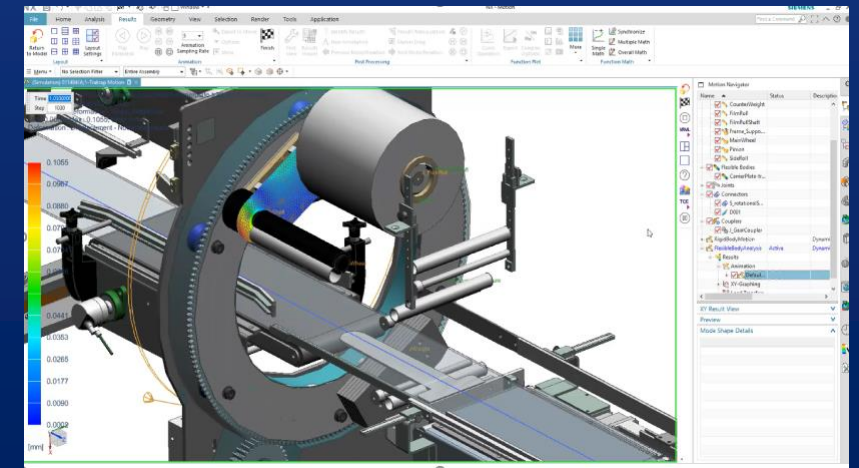


Thermal simulation

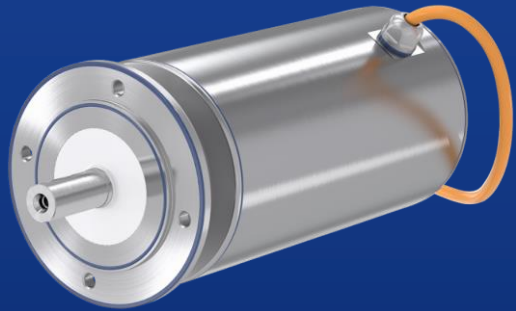
Avoid over heating heat-sensitive materials

Simulation of equipment

Select the optimal hygienic complied material under certain stress

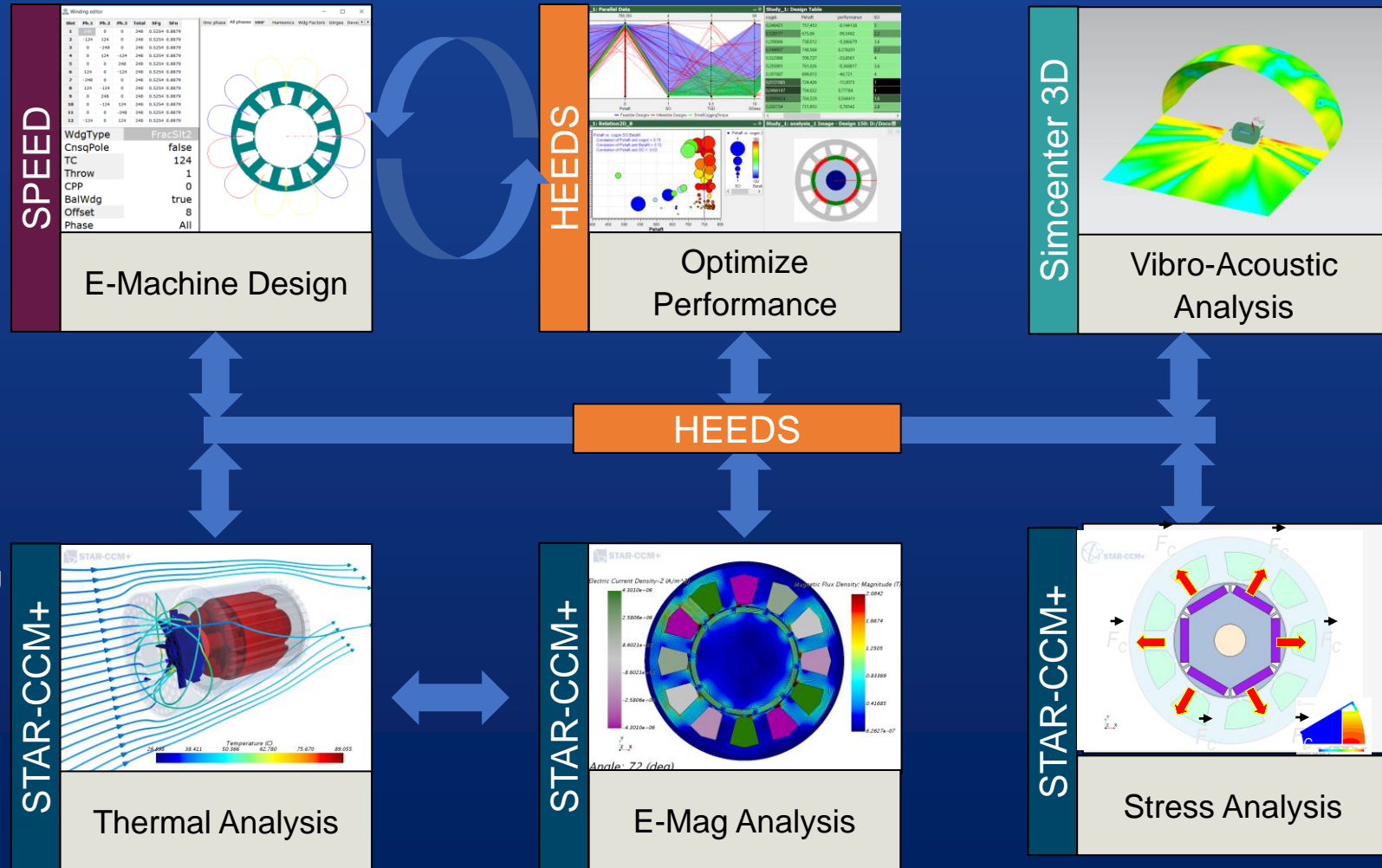


How Siemens apply simulation for hygienic design of SIMOTICS S-1FS2



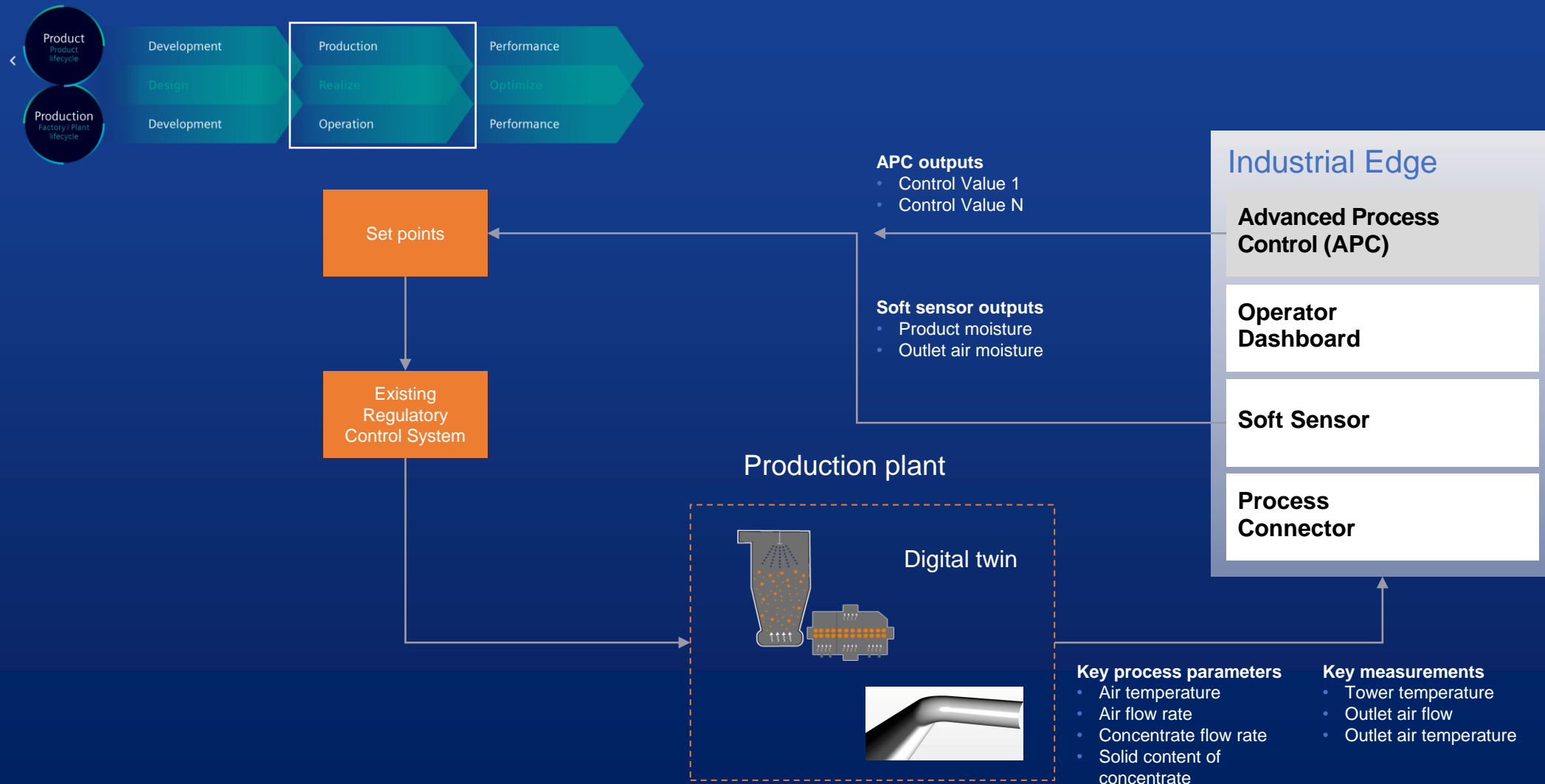
SIMOTICS S-1FS2

- Specific F&B-Design (EHEDG Certified)
- Smooth surface / housing (food grade stainless steel, no edges etc.)
- Suitable for Cleaning without Dismantling



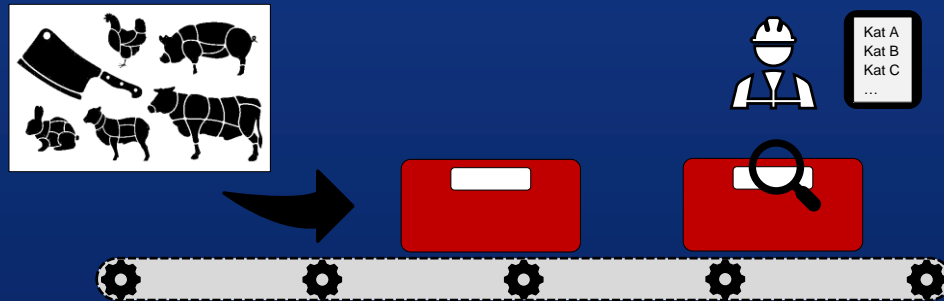
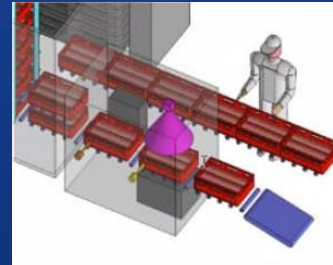
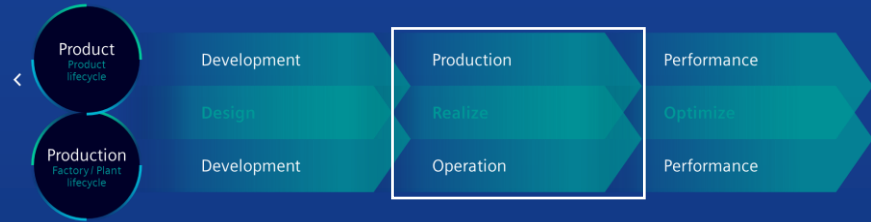
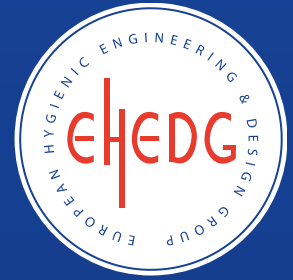
Close Loop Analytics

Executable Digital Twin for optimized manufacturing process



Food Quality Control throughout production

Using Image recognition & AI for food classification and quality control

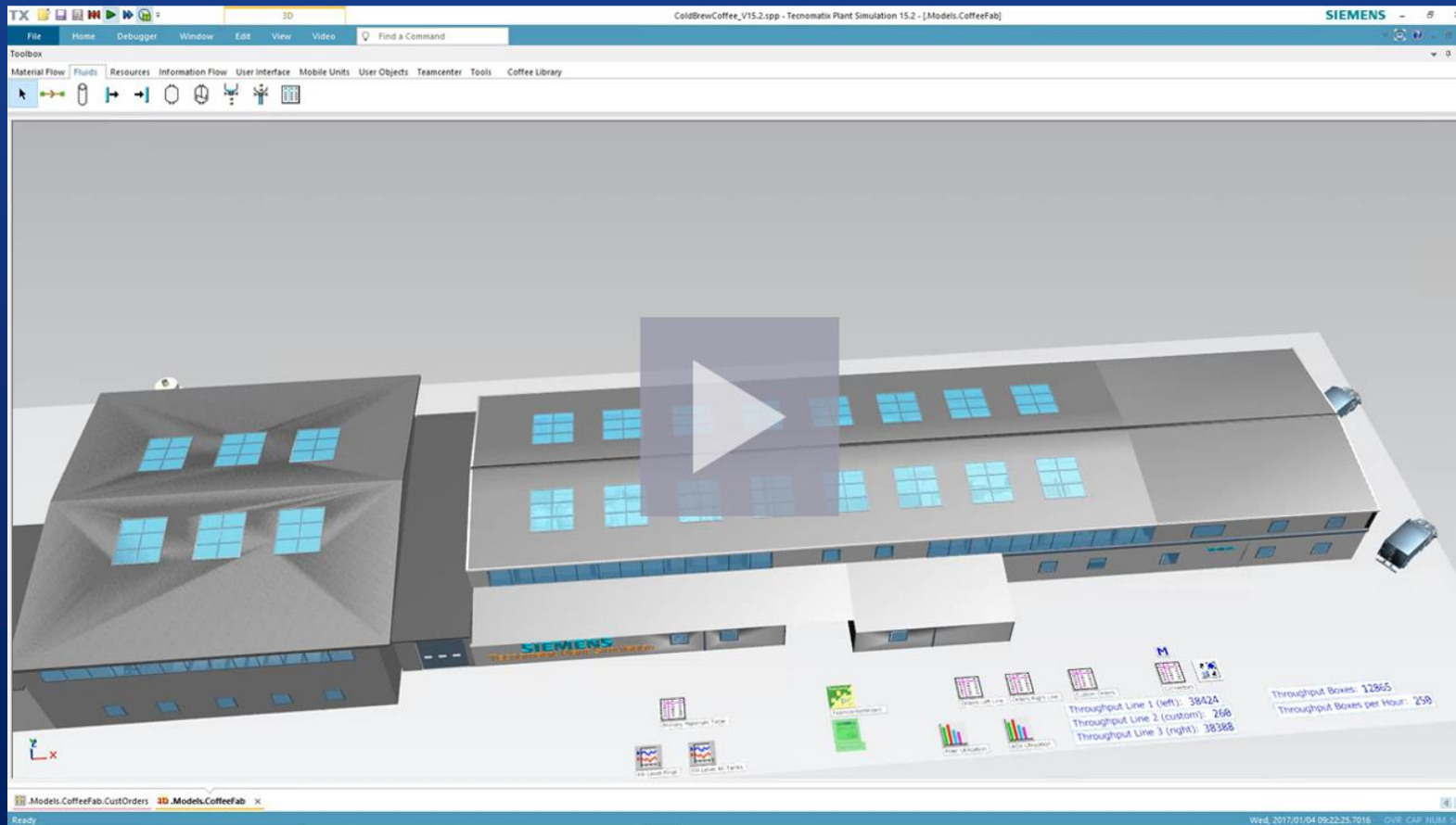
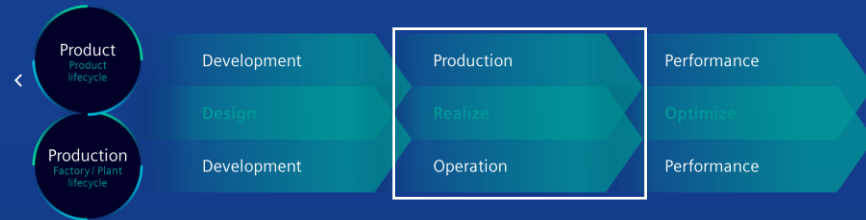


Classical food classification
& quality control



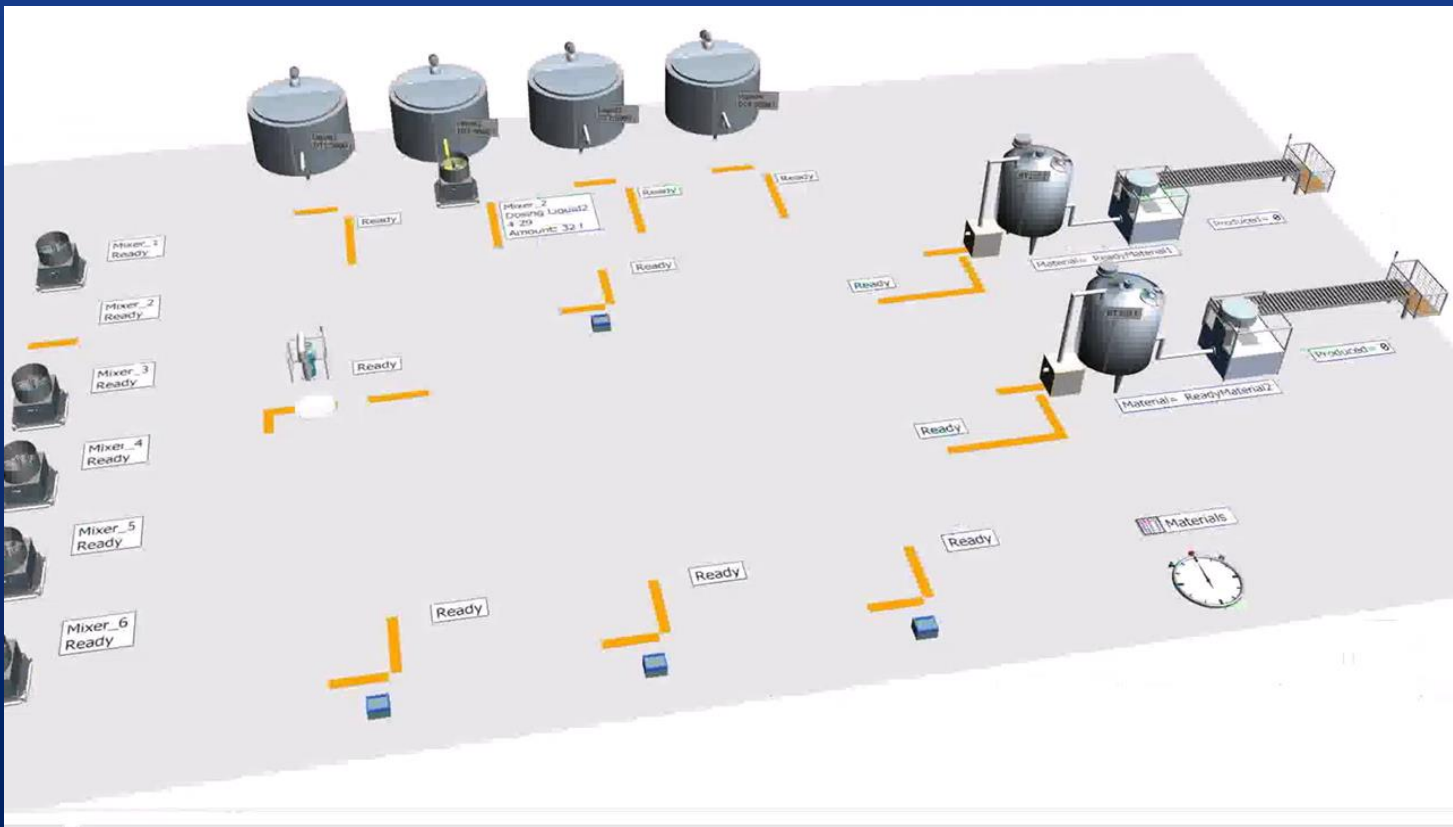
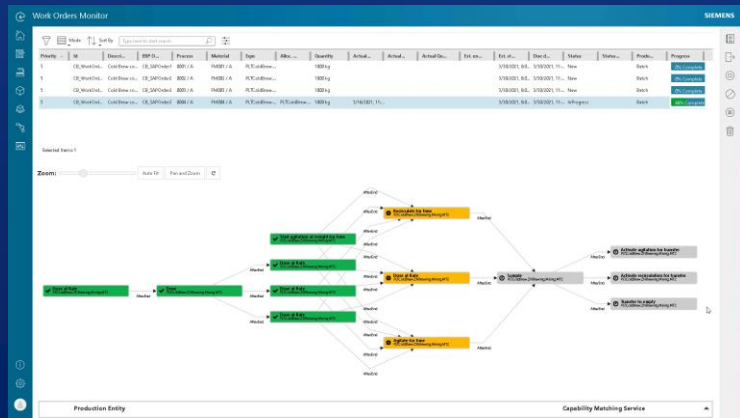
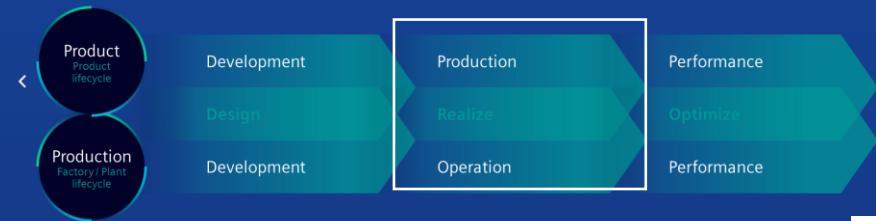
AI supported classification &
quality control

Production scheduling simulation: Optimized cleaning schedule and remain maximal productivity

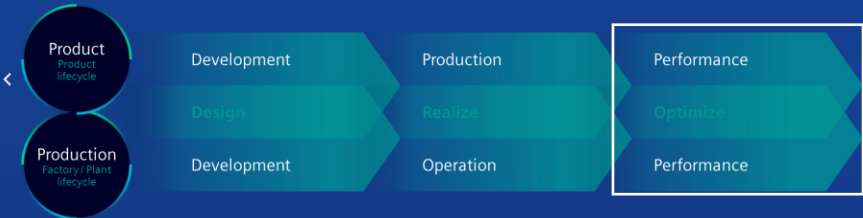
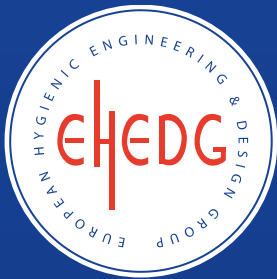


Visioning: Pipless production

For maximal flexibility



Product traceability to ensure trusted supply chain



Siemens Trusted Traceability

MindSphere

Home / Product Overview


Traceability Graph

Traceability Map

Product Summary


Product: ColdCoffeeCoconutRice - Serial number: ColdCoffeeCoconutRiceCan_8c77a1ae-47de-4ed9-830a-4ba9123bfdc1

SHOW DETAIL



Map

Satellite



Last known location: Hanover - Last known owner: Supermarket2

Ingredients:

Rice-Coconut base(water, 6.4% rice*, 1.2% coconut paste*, sunflower oil*, natural aromas, sea salt), 15% cold brew coffee* (water, coffee*), raw cane sugar*, acidity regulator: sodium citrates, stabilizer: carrageenan; *certified organic

ExpirationDate:

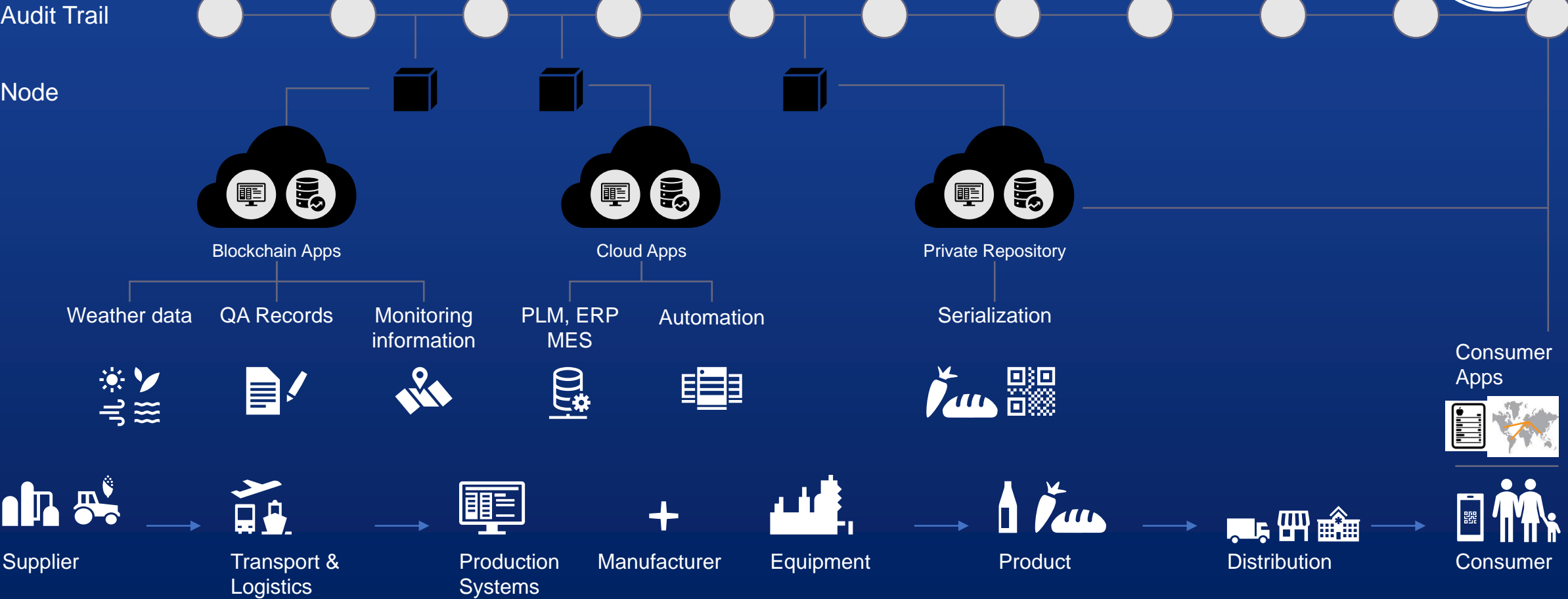
01/10/2020

Is this product legit?

ColdCoffeeCoconutRice

SHOW DETAIL

Trusted traceability from farm to fork to ensure food safety



How the digitalization offerings should look like in the future?

Interoperable

Flexible

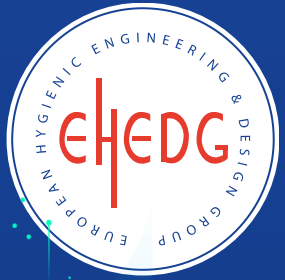
Open

As a service



Siemens Xcelerator at a glance

From individual OT and IT systems to a holistic IT & OT system landscape



Open business platform

Comprehensive, curated state-of-the-art **portfolio** of digital and IoT-enabled offerings

Growing and powerful **ecosystem**

A multi-sided **marketplace**

Benefits of the platform

Easy

From complexity



To easy implementation

Flexible

From single disciplines



To flexible solutions

Open

From individual workflows



To open ecosystems



Thank you

Amy Hong

Digitalization & Innovation Manager for F&B Industry

Siemens AG