



Industry Information Live

Webinarer med inspiration, viden og værdi



Spar tid og penge med Virtual Commissioning

Værter

Søren Jakobsen
Technology Specialist



Ulf Lindhard
Moderator



Carsten Bro

Digitalization Sales Specialist



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Agenda

- Hvorfor Virtual Commissioning?
- Siemens Digital Twin koncept
- Integration af robotter
- Eksempler på use cases
- Bonusinfo
- Q&A
- Næste webinar



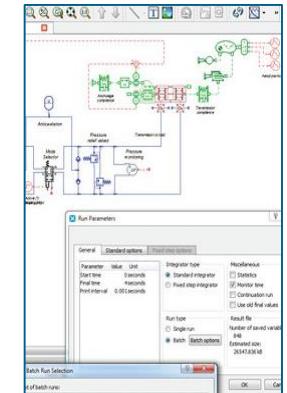
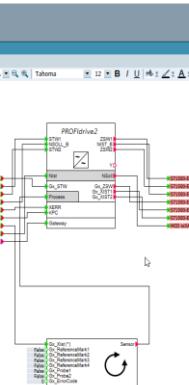
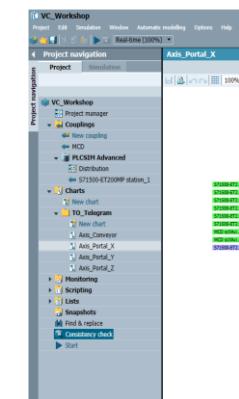
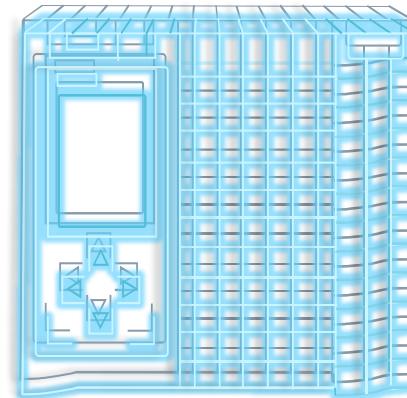
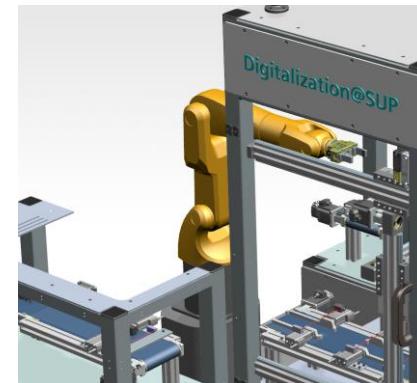
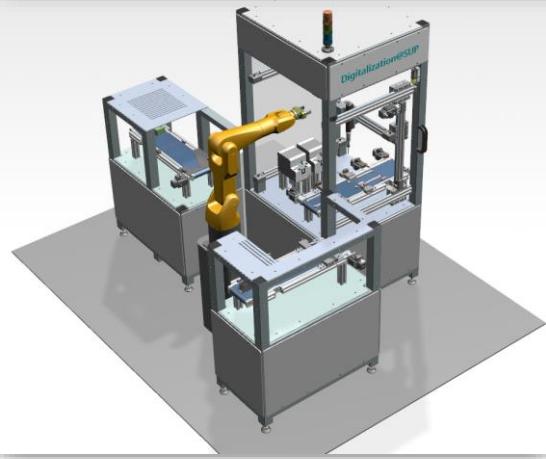
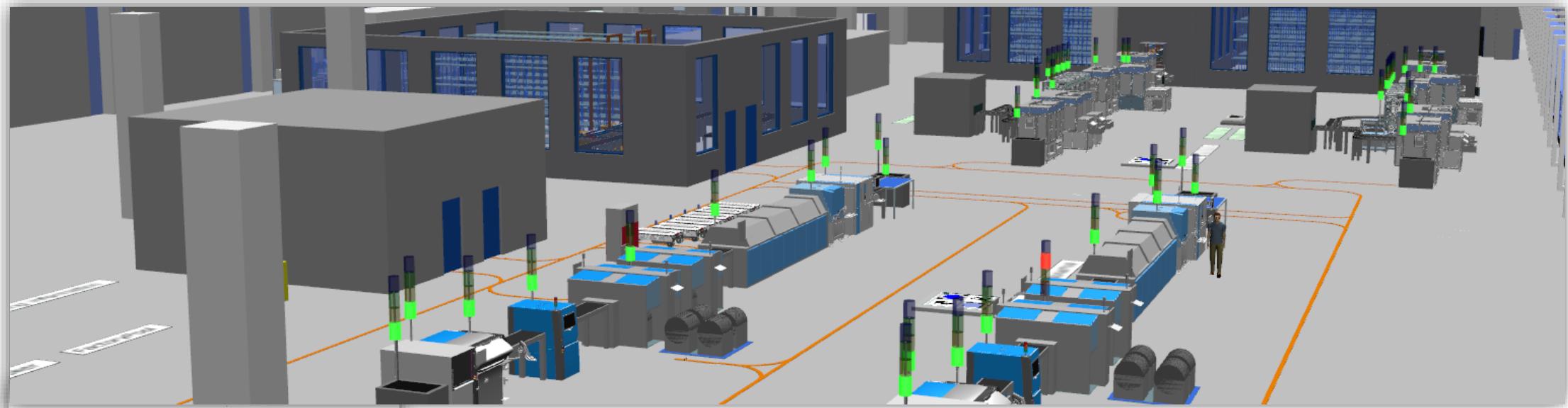
Agenda

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- Siemens Digital Twin koncept
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Virtual Commissioning with Digital twin

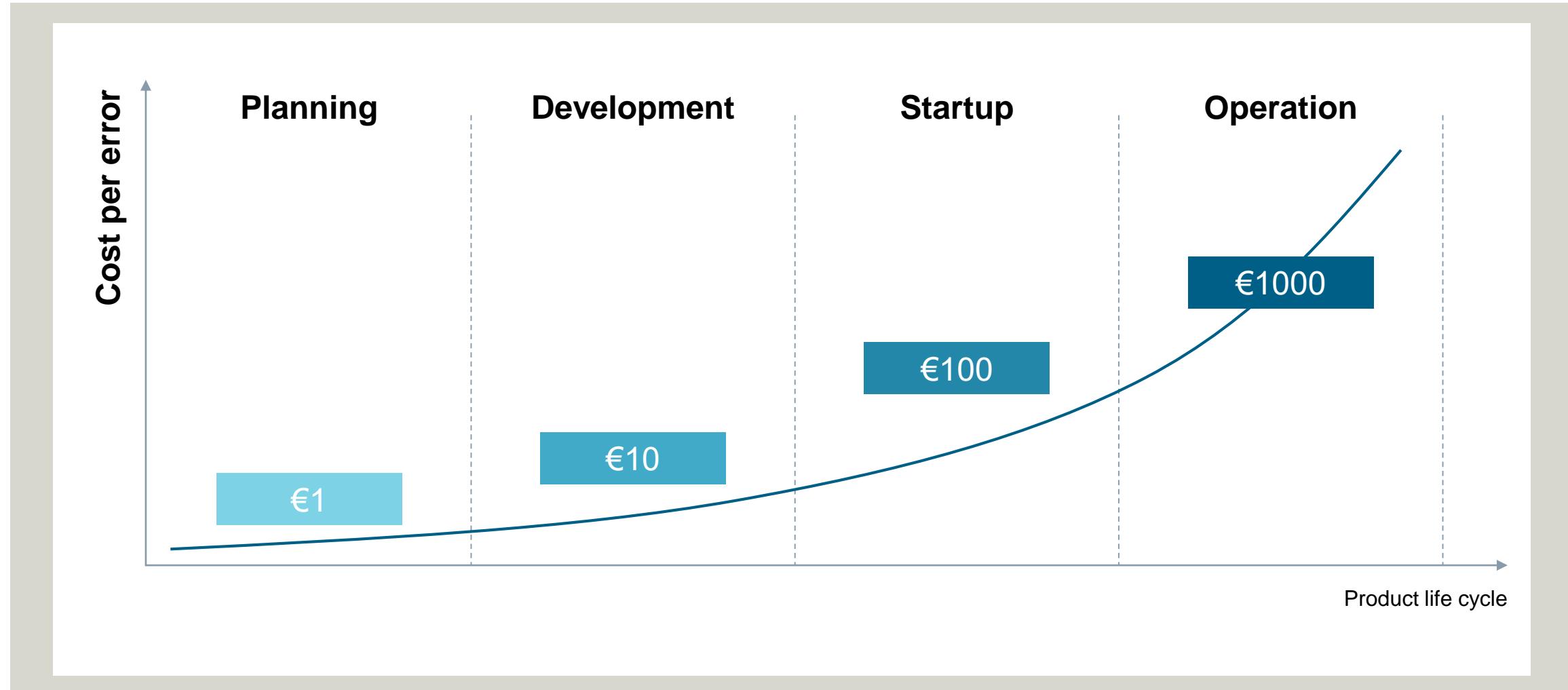
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Why Virtual Commissioning?

Error correction becomes more and more costly

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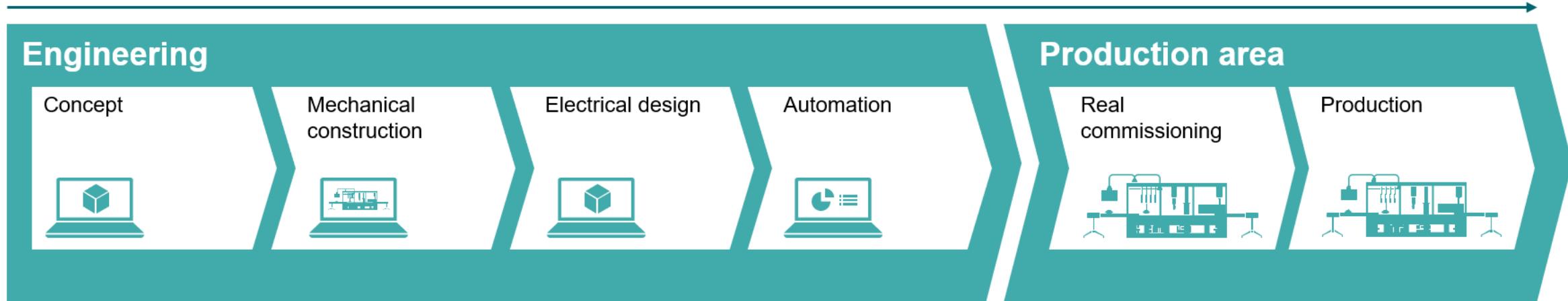


Why Virtual Commissioning?

Virtual Commissioning in parallel

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Time-to-market



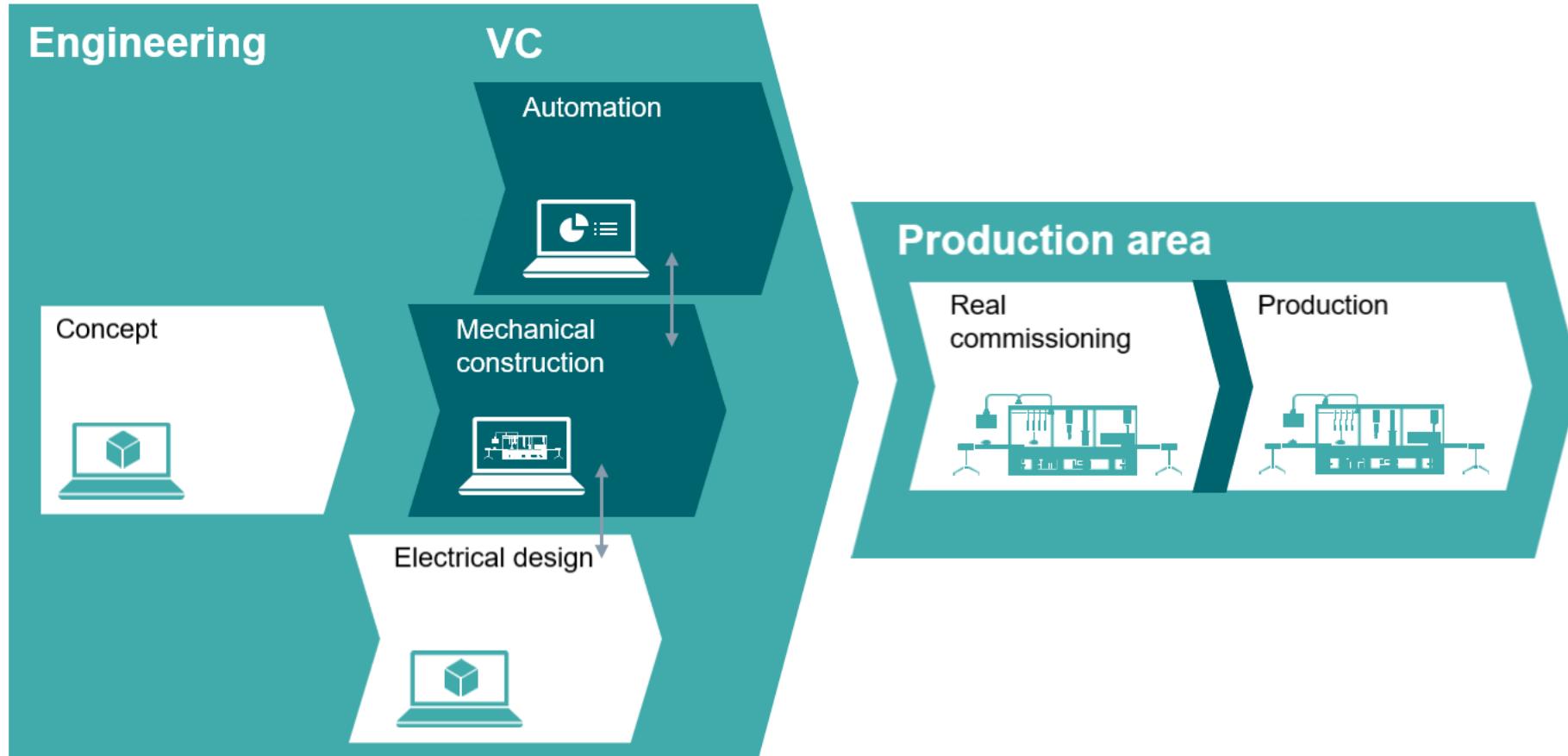
Why Virtual Commissioning?

Virtual Commissioning in parallel

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Time-to-market

+ Shorter time-to-market



Why Virtual Commissioning?

Additional values

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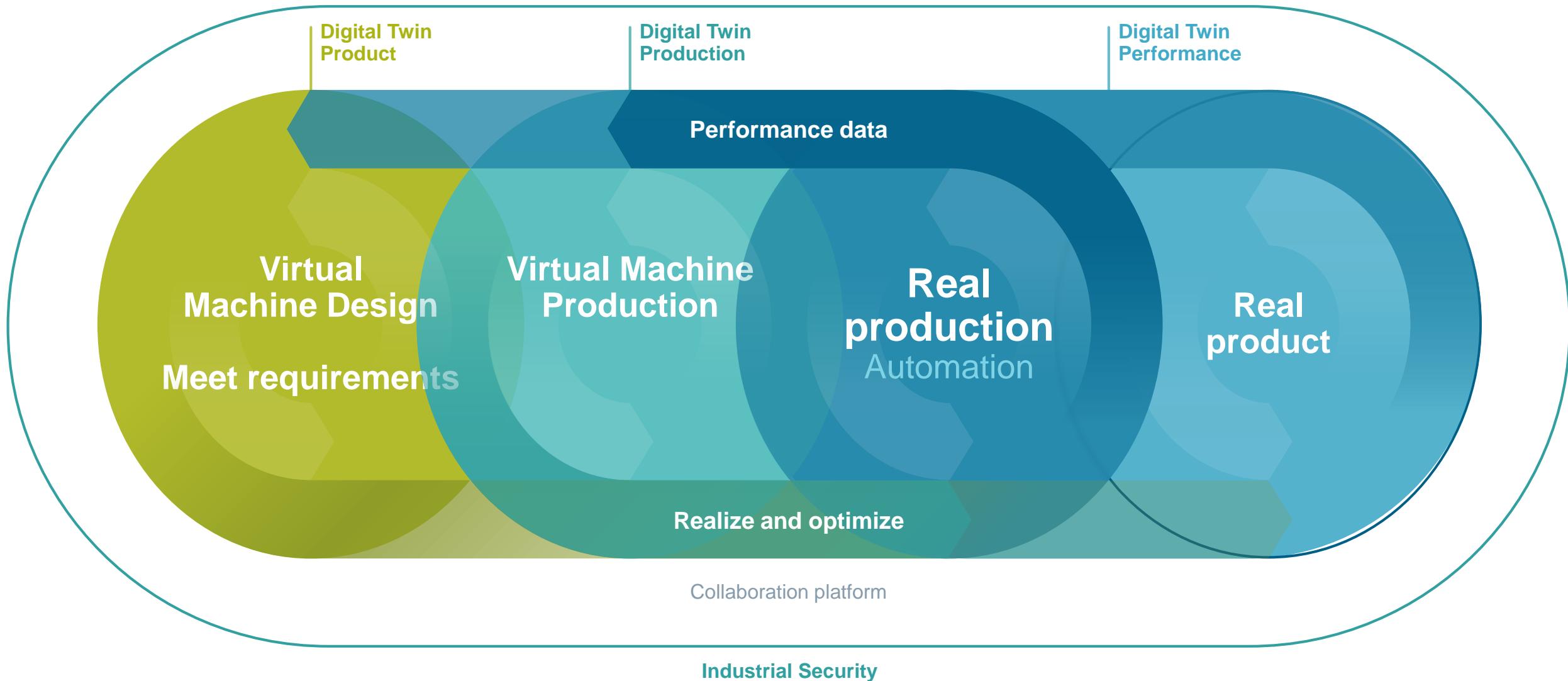


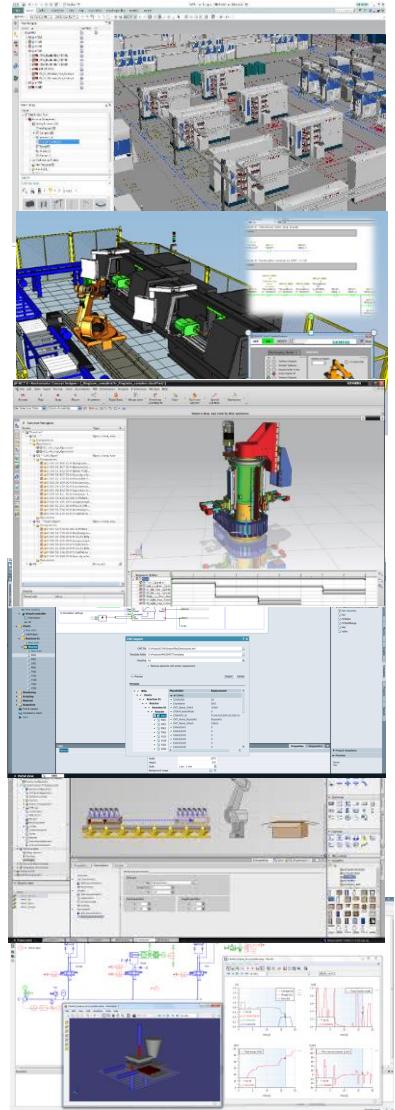
- Marketing/Sales
- Fast prototyping
- VAT test
- Efficiency
- Operator feedback
- Operator training

Agenda

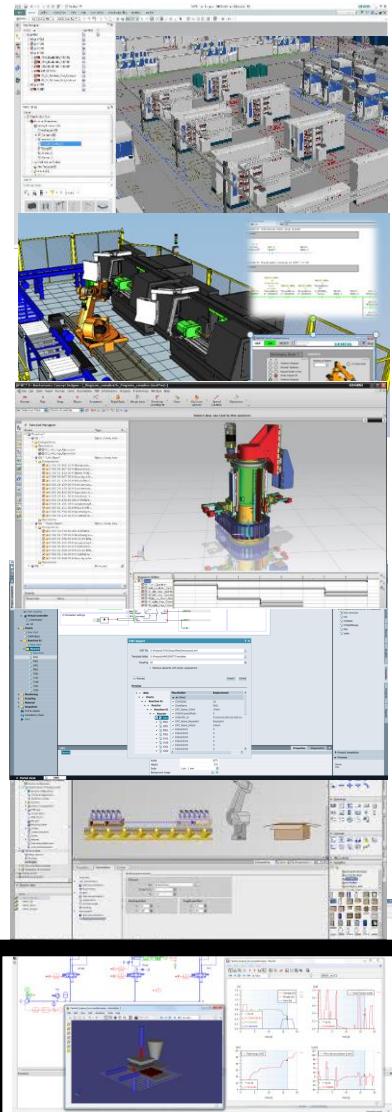
- Hvorfor Virtual Commissioning?
- **Siemens Digital Twin koncept**
- Integration af robotter
- Eksempler på use cases
- Bonusinfo
- Q&A
- Næste webinar







- Production line
- Robotic cell
- Mechanics
- Component & Periphery
- Automation
- Component physics

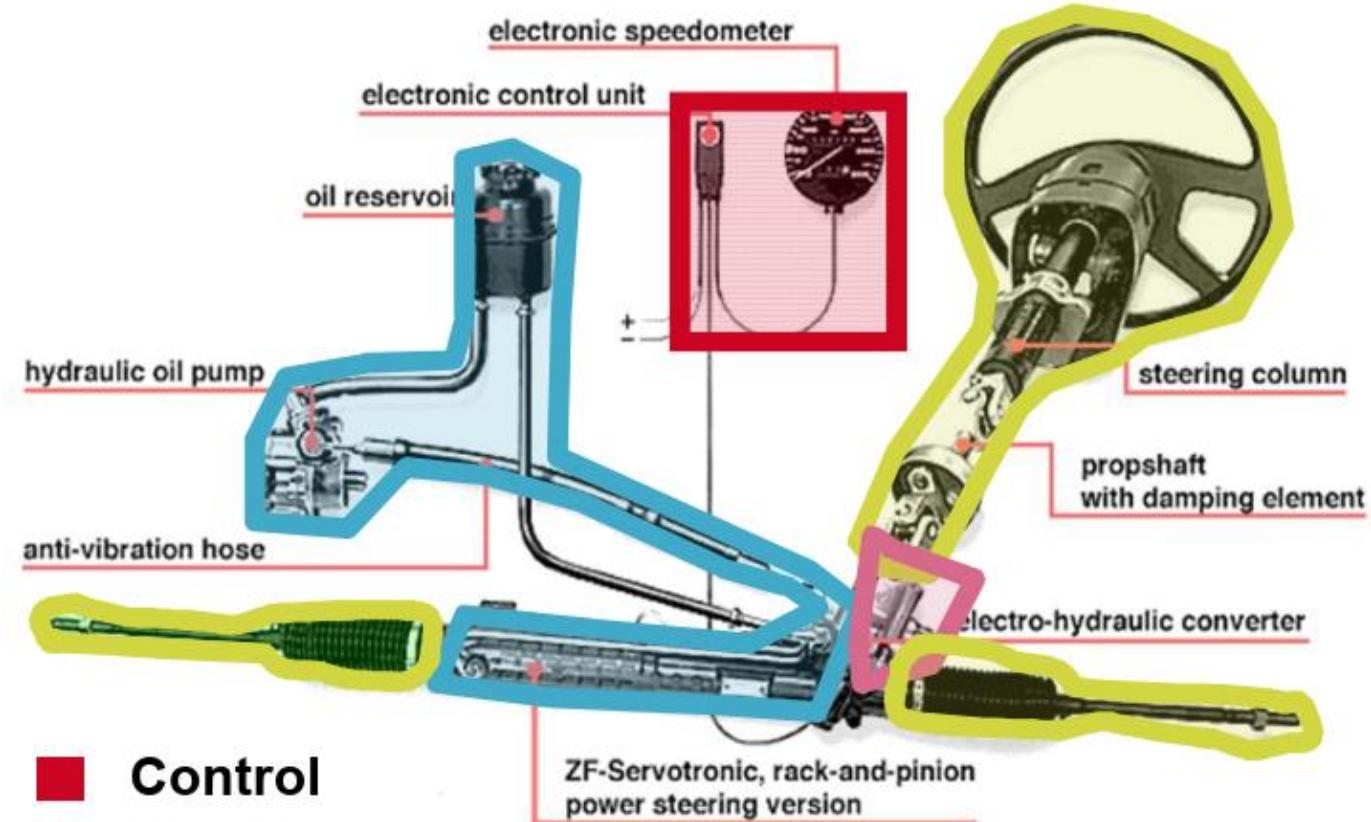


- Production line
- Robotic cell
- Mechanics
- Component & Periphery
- Automation
- Component physics

Simulation at every level

Amesim

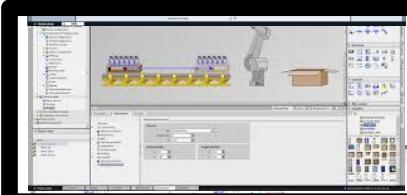
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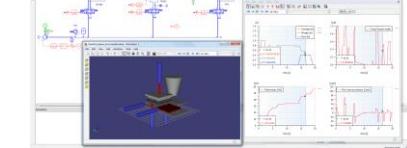
- Control
- Electric
- Hydraulic / Pneumatic
- Mechanic
- Thermal



- Production line
- Robotic cell
- Mechanics
- Component & Periphery



- Automation



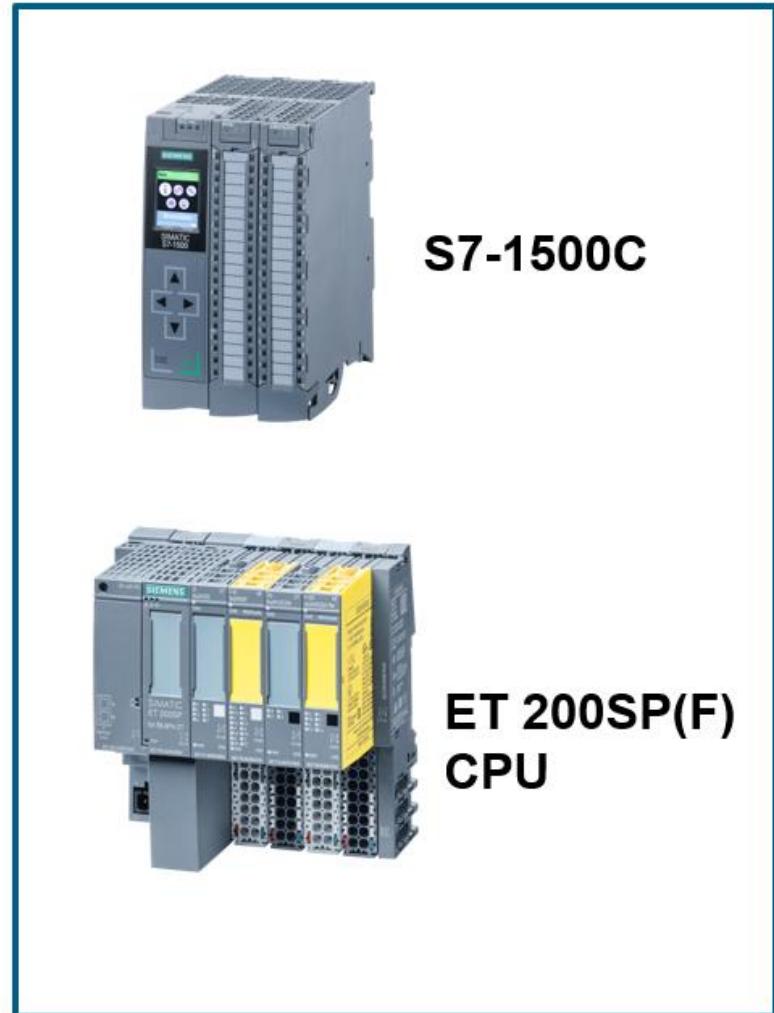
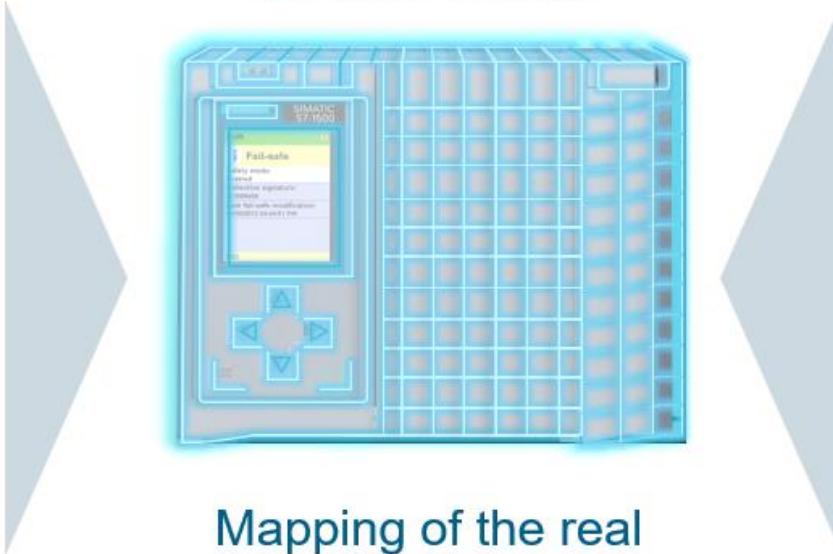
- Component physics

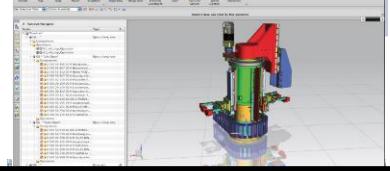
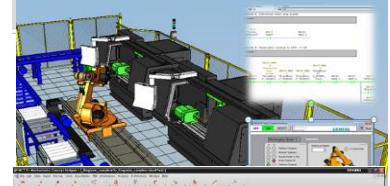
Amesim

Simulation at every level

PLC Sim Advance

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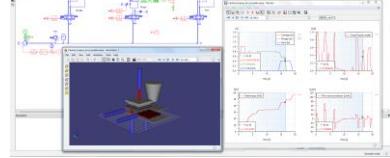
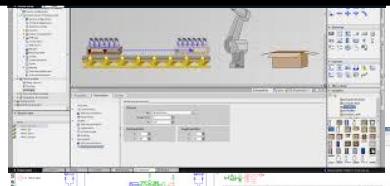
- Production line
- Robotic cell
- Mechanics
- Component & Periphery

• Automation

• Component physics

PLCSim Adv

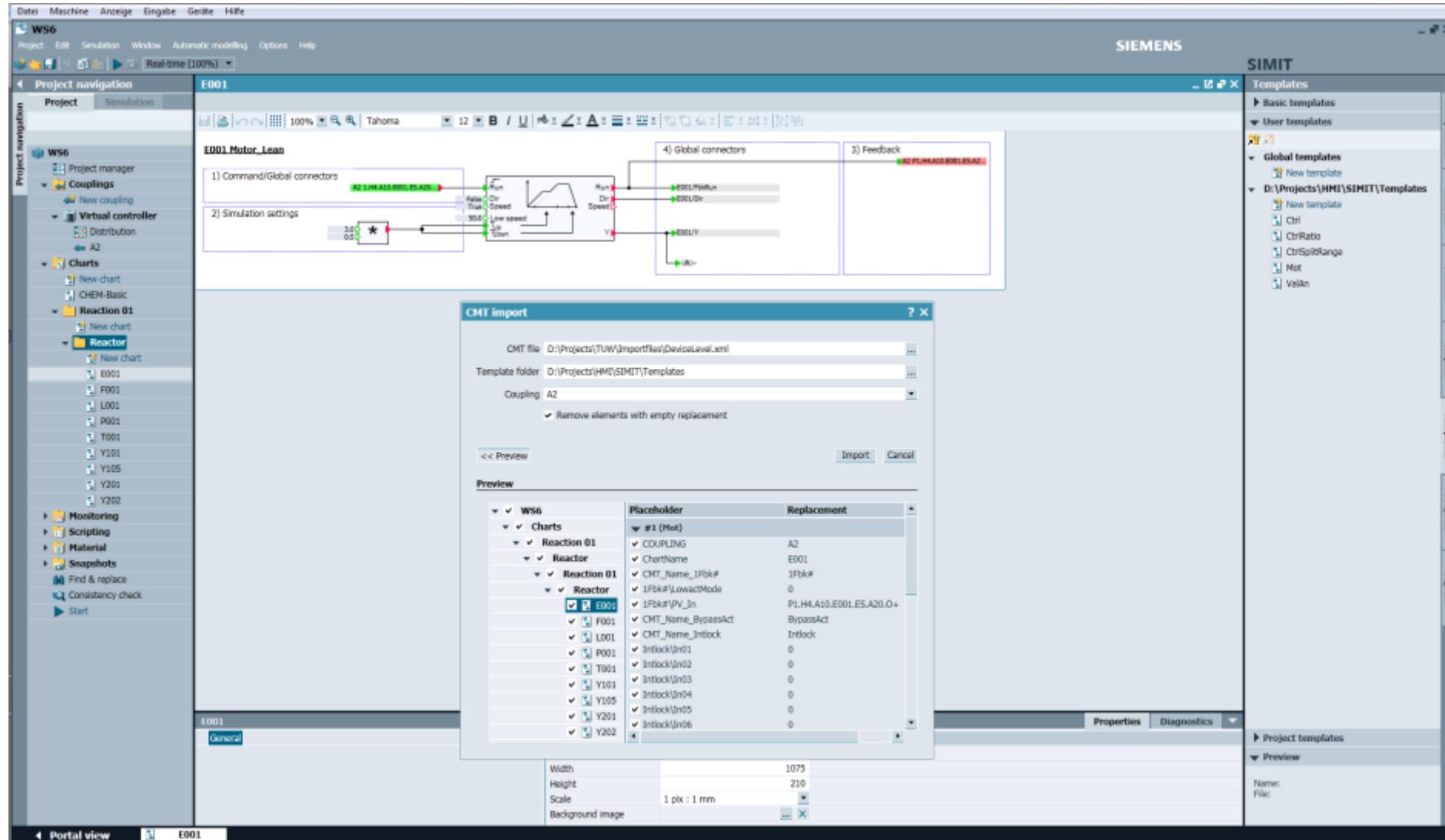
Amesim

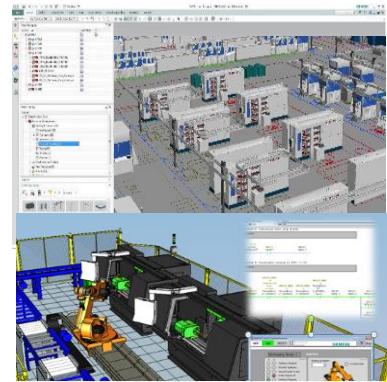


Simulation at every level

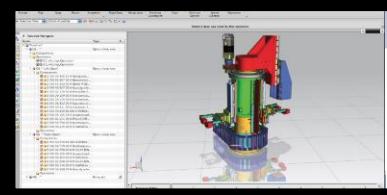
SIMIT

SIEMENS
Ingenuity for life

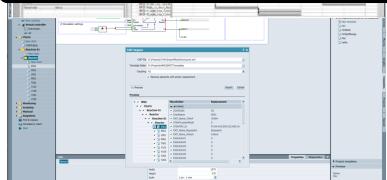




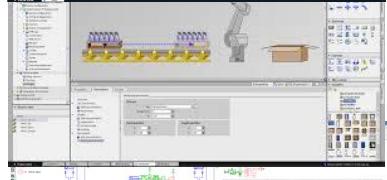
- Production line



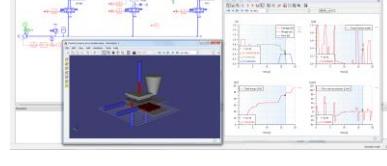
- Robotic cell



- Mechanics



- Component & Periphery **SIMIT**



- Automation

PLCSim Adv

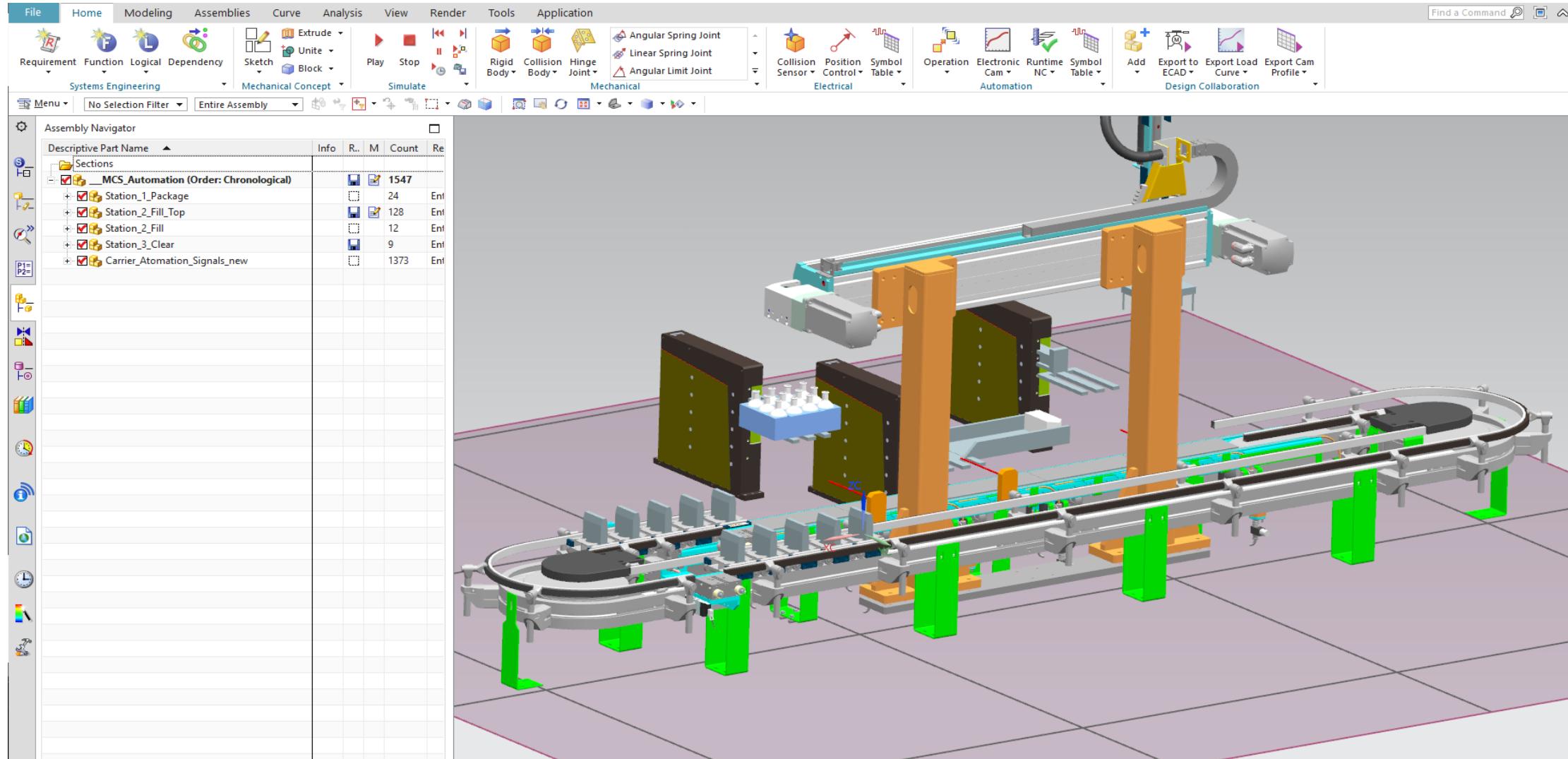
- Component physics

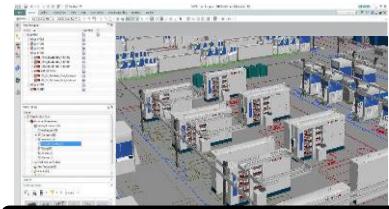
Amesim

Simulation at every level

Mechatronic Concept Designer

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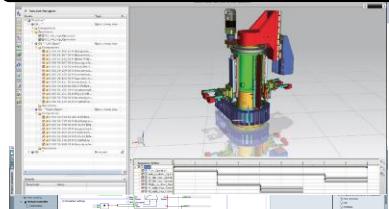




- Production line



- Robotic cell



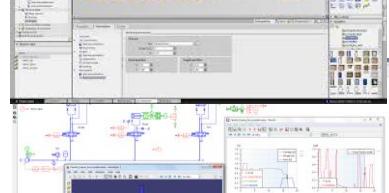
- Mechanics

MCD



- Component & Periphery

SIMIT



- Automation

PLCSim Adv



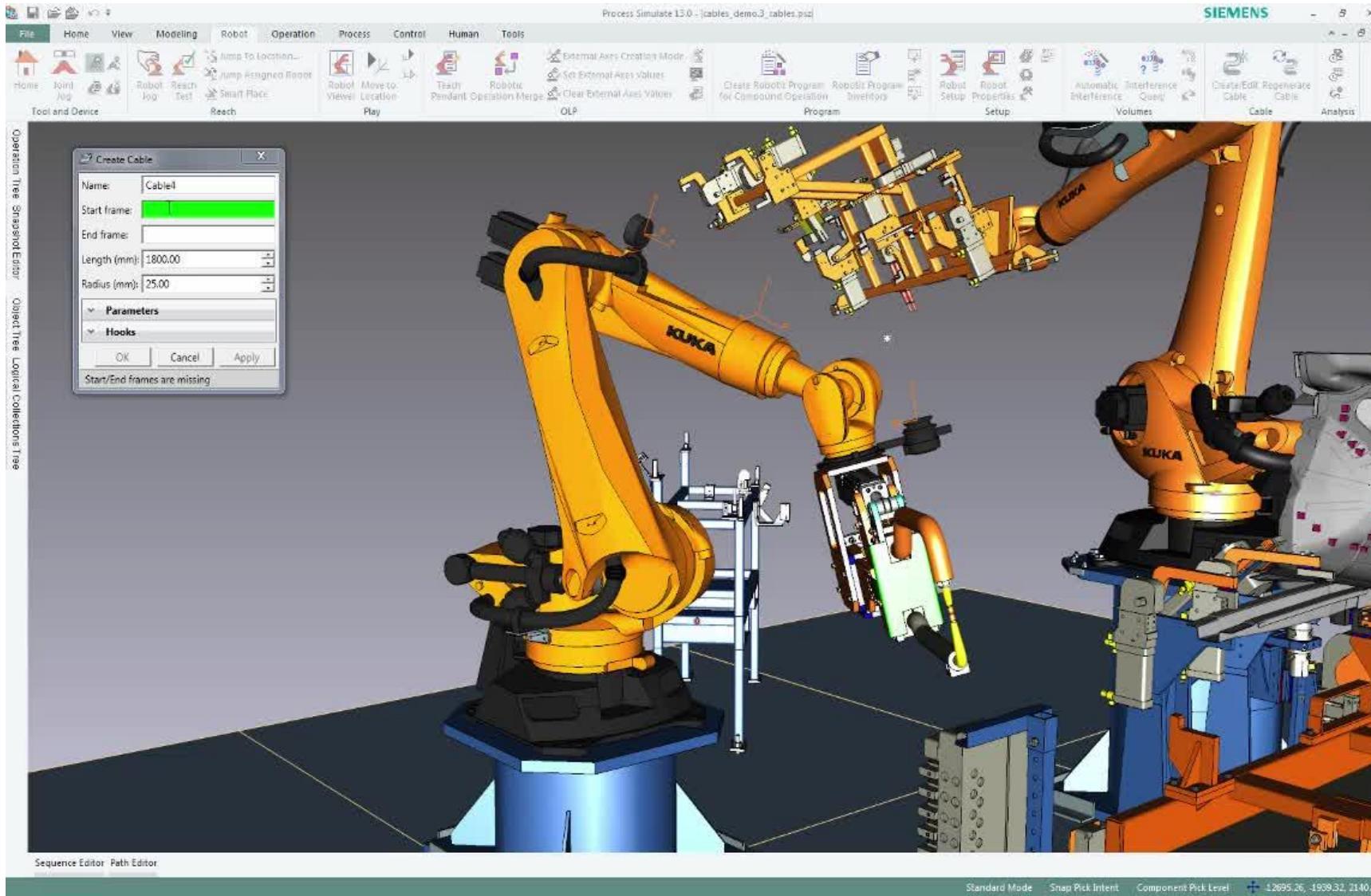
- Component physics

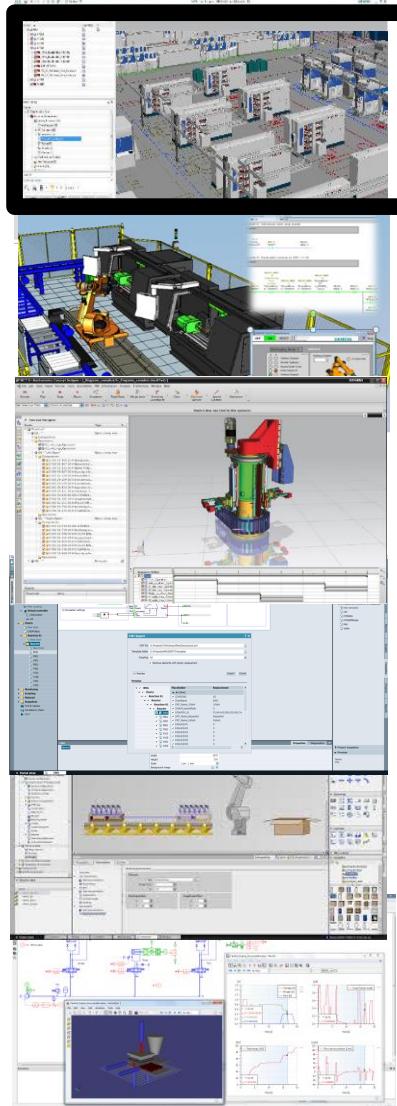
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Simulation at every level

Process Simulate

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- Production line
- Robotic cell
- Mechanics
- Component & Periphery
- Automation
- Component physics

Process simulate

MCD

SIMIT

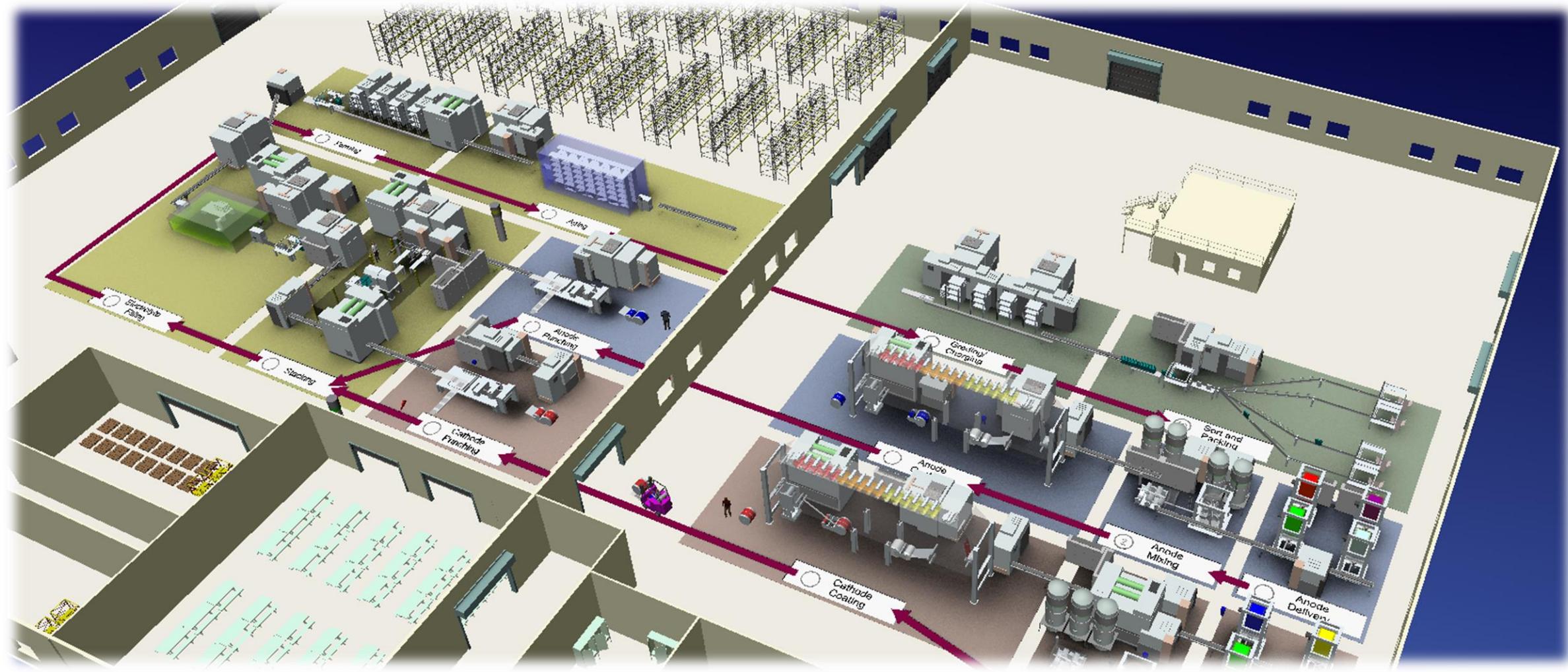
PLCSim Adv

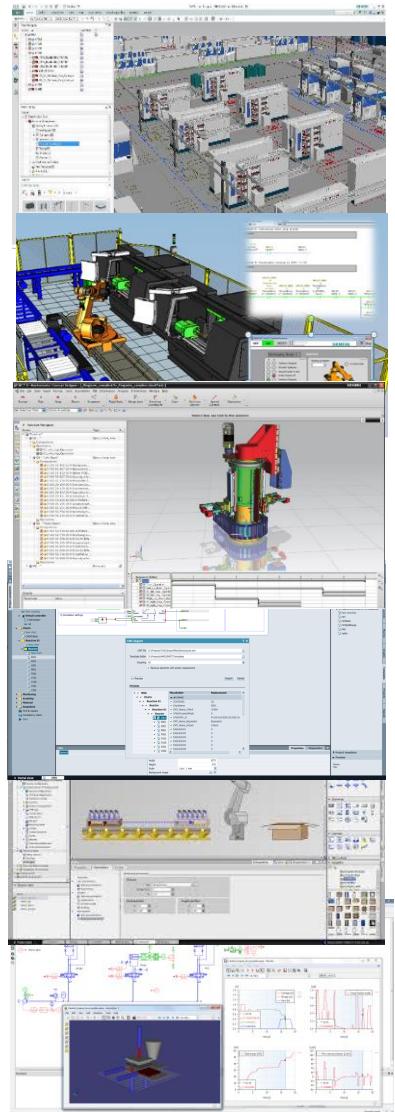
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Simulation at every level

Plant Simulation

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- Production line
- Robotic cell
- Mechanics
- Component & Periphery
- Automation
- Component physics

Plant simulation

Process simulate

MCD

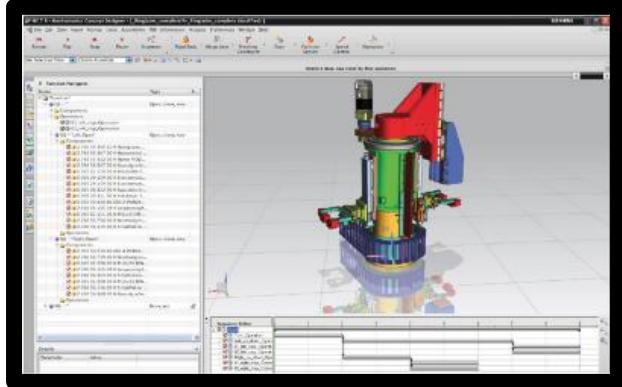
SIMIT

PLCSim Adv

Amesim

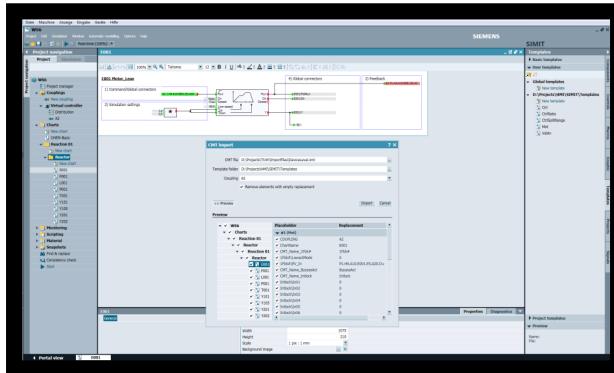
Simulation at every level

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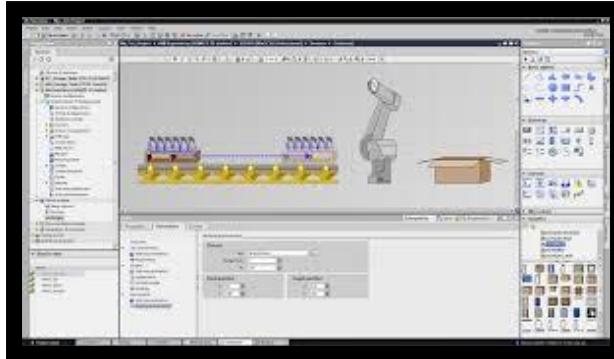
- Mechanics

MCD



- Component & Periphery

SIMIT



- Automation

PLCSim Adv

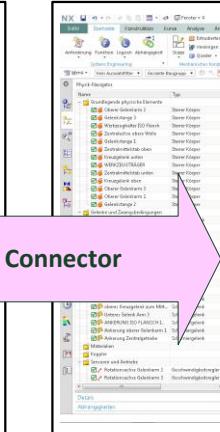
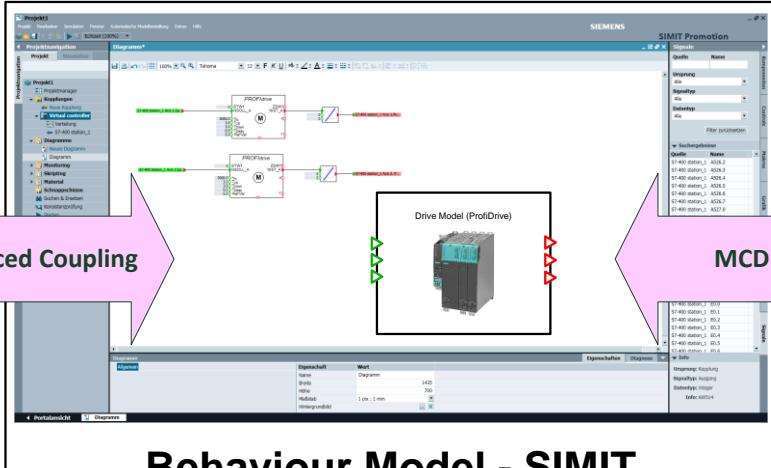
Automation

Component & Periphery

Mechanics



PLCSIM Advanced



MCD Connector

Kinematic Model - MCD

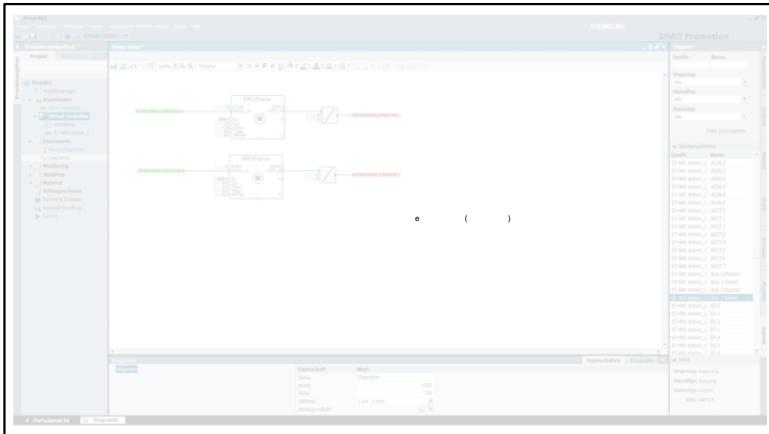


Automation

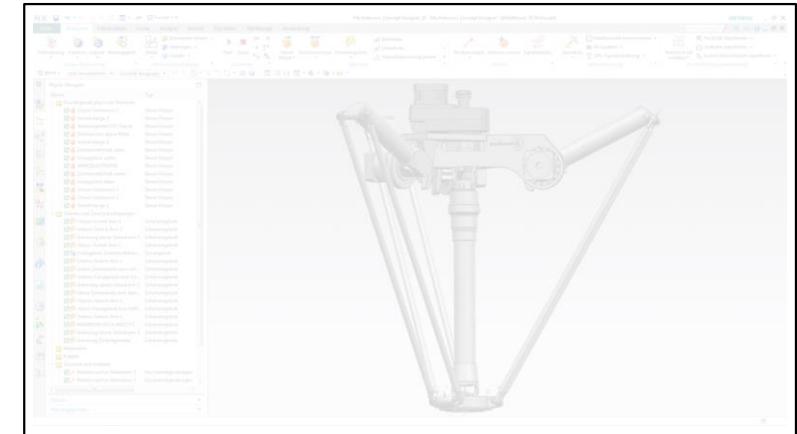


PLCSIM Advanced

Component & Periphery



Mechanics



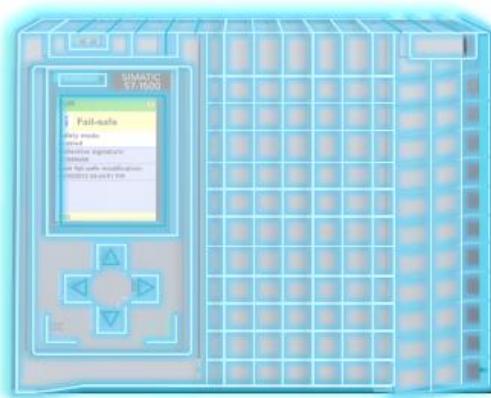
PLC Sim Advance

The Digital Twin of S7-1500

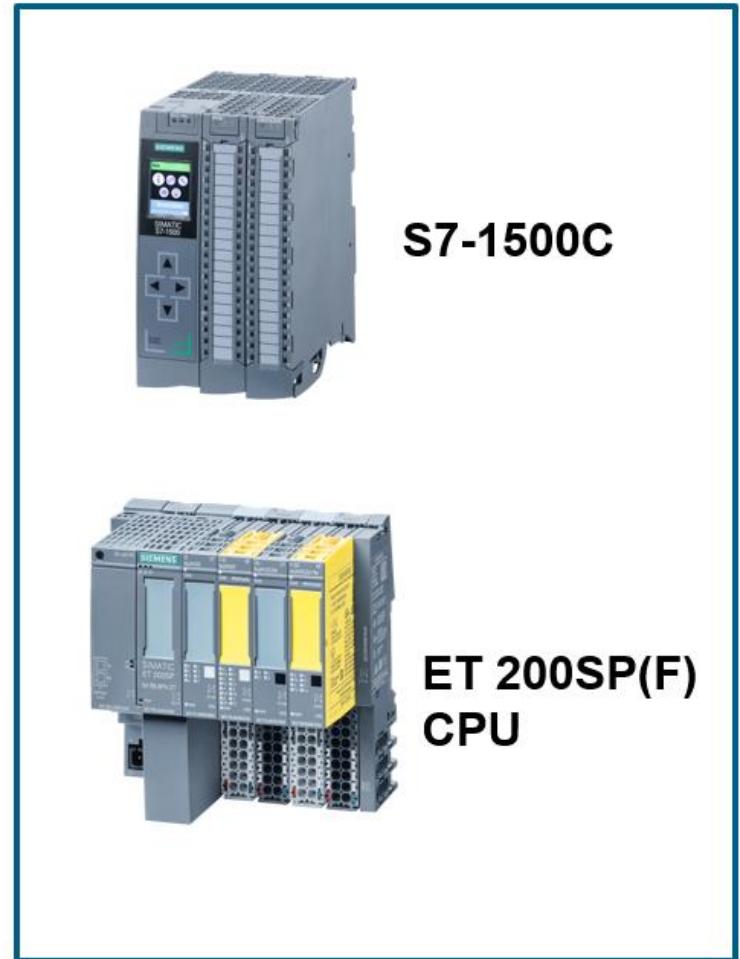
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Virtual controller



Mapping of the real controller

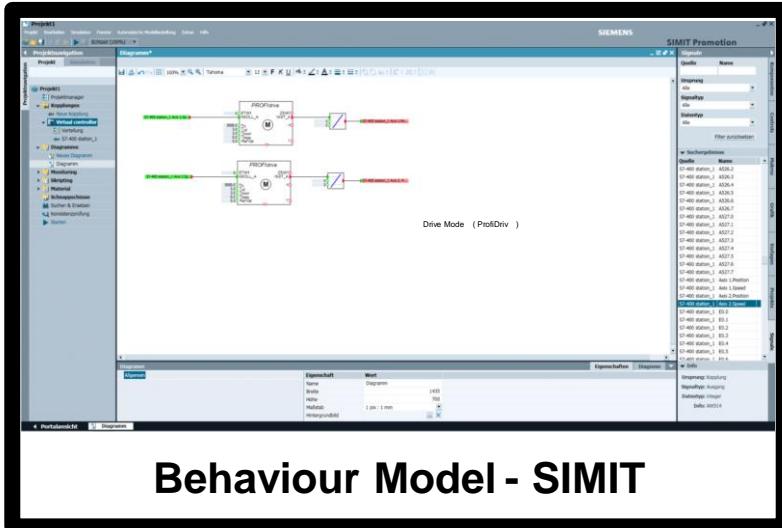


Automation

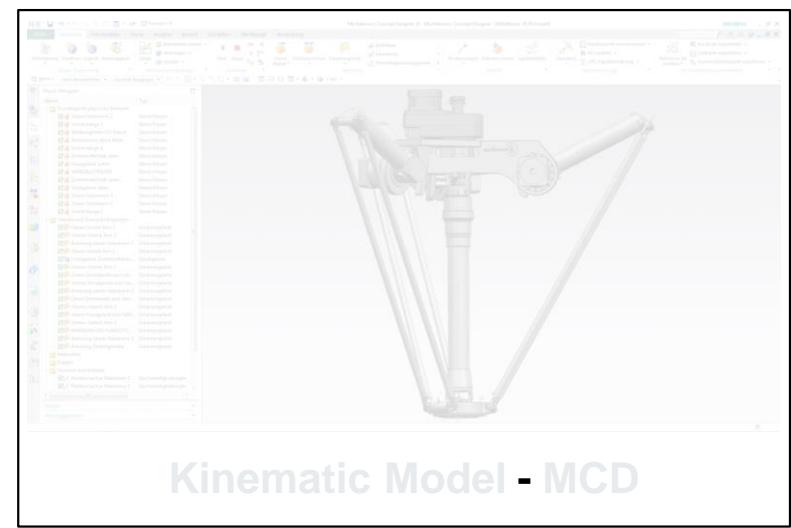


PLCSIM Advanced

Component & Periphery



Mechanics



SIMIT – Virtual Commissioning and Operator Training

Simulation of Profidrive

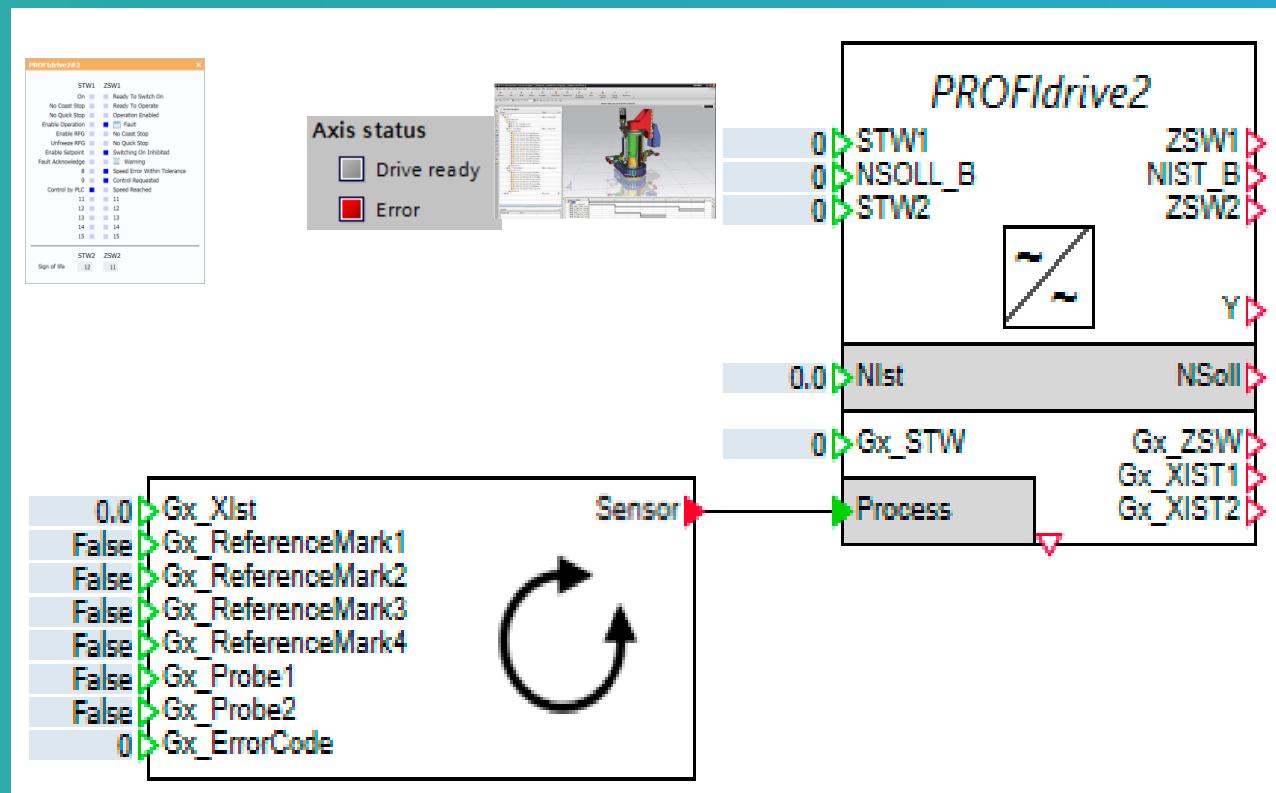
Simulation of I/O

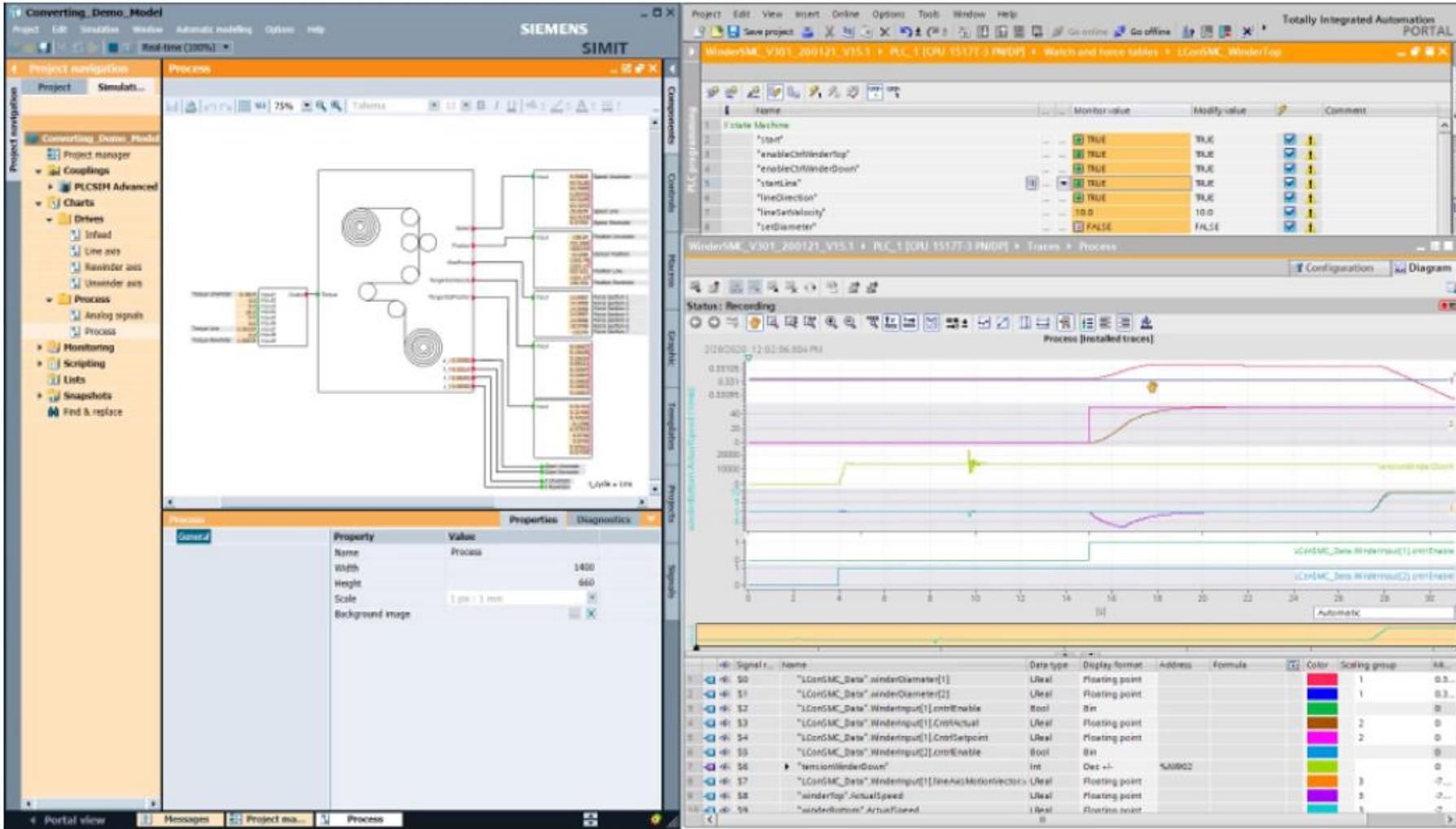
Simulation of Safety

Bus synchronous

Interface to Co-Simulations

Interface to Hardware





Mechatronic Concept Designer

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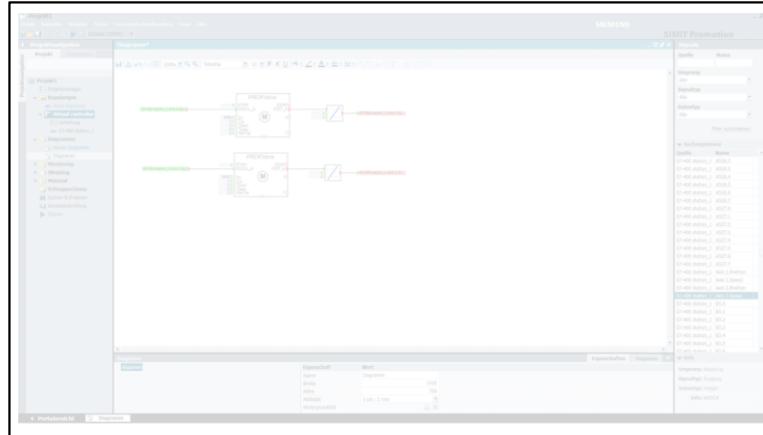
Automation

Component &
Periphery

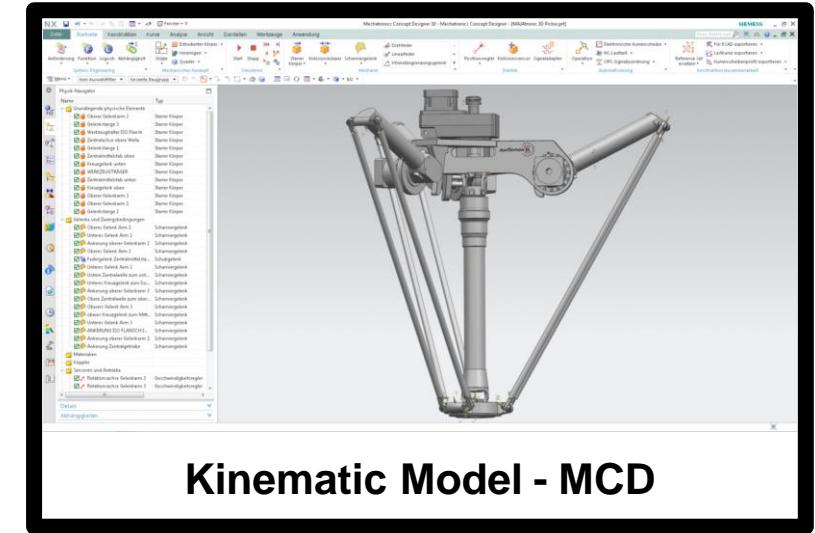
Mechanics



PLCSIM Advanced



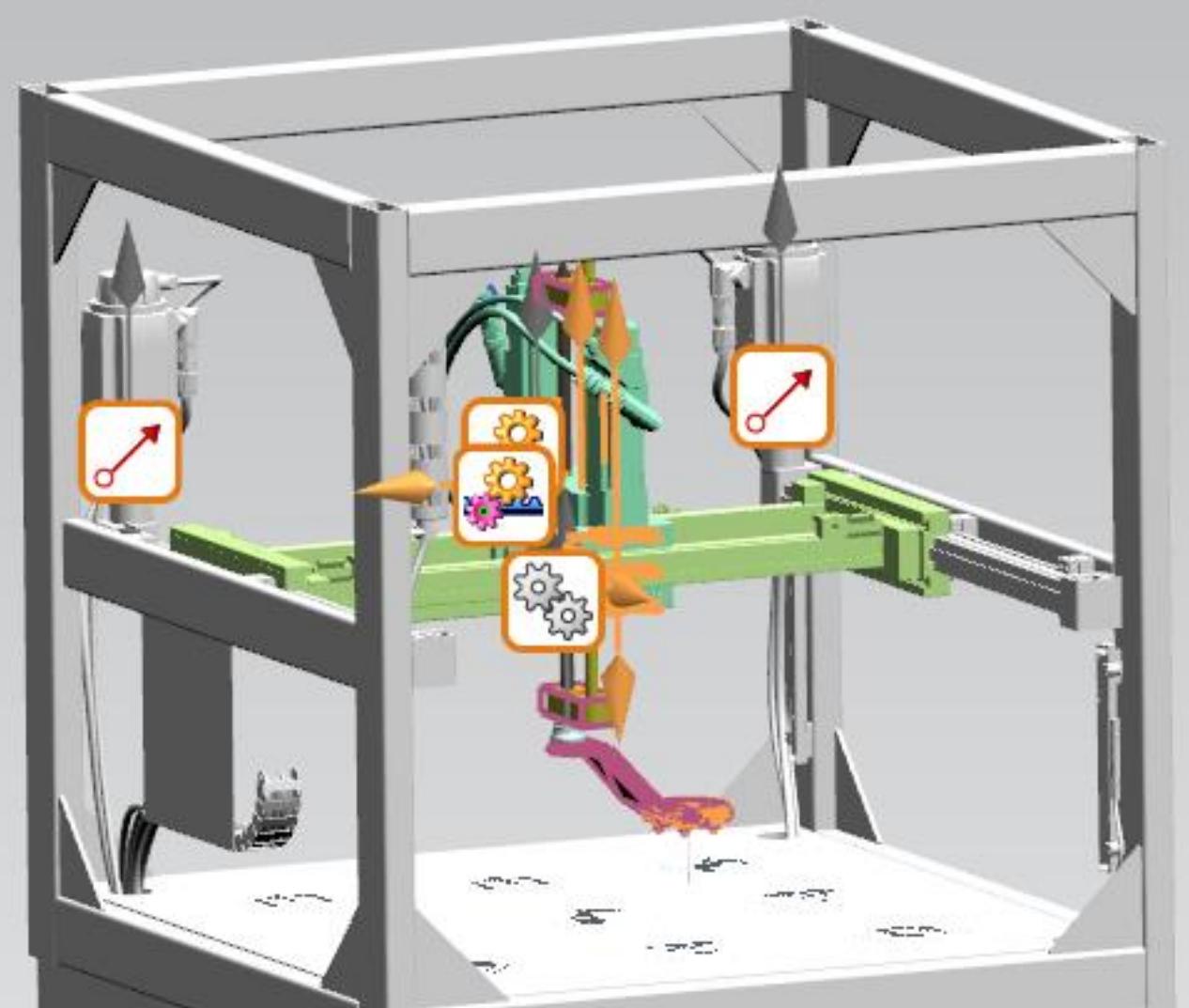
Behaviour Model - SIMIT



Kinematic Model - MCD

Kinematic- and Physics

- CAD Import
- Kinematics, Motion, sensors
- Cycle time validation
- Collision test
- CAM profile optimisation

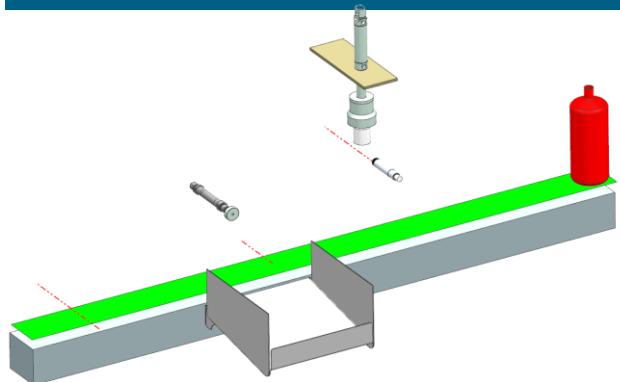


Mechatronic Concept Designer

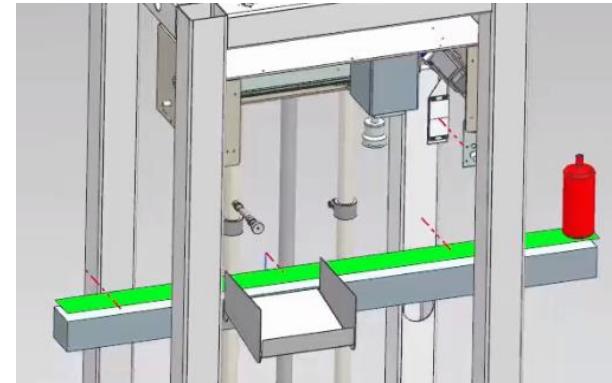
Continuous design iteration

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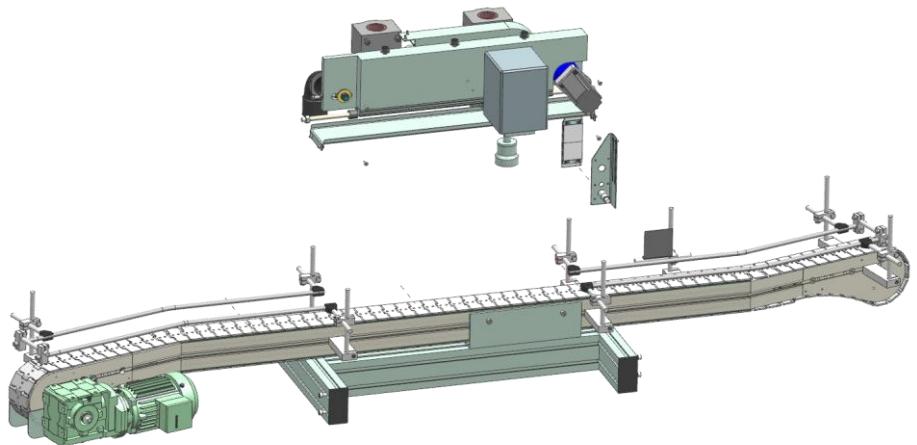
Simple Process



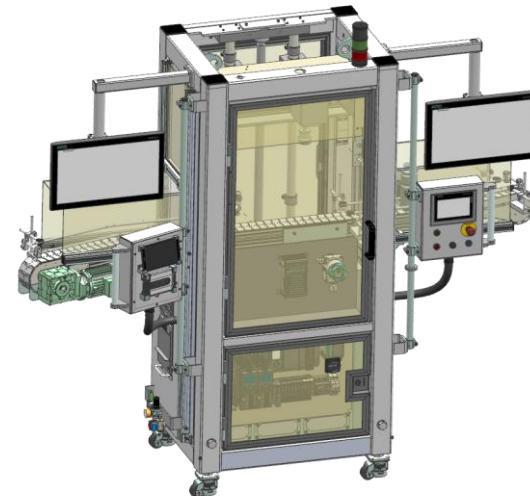
Detailed Process



Optimized Process



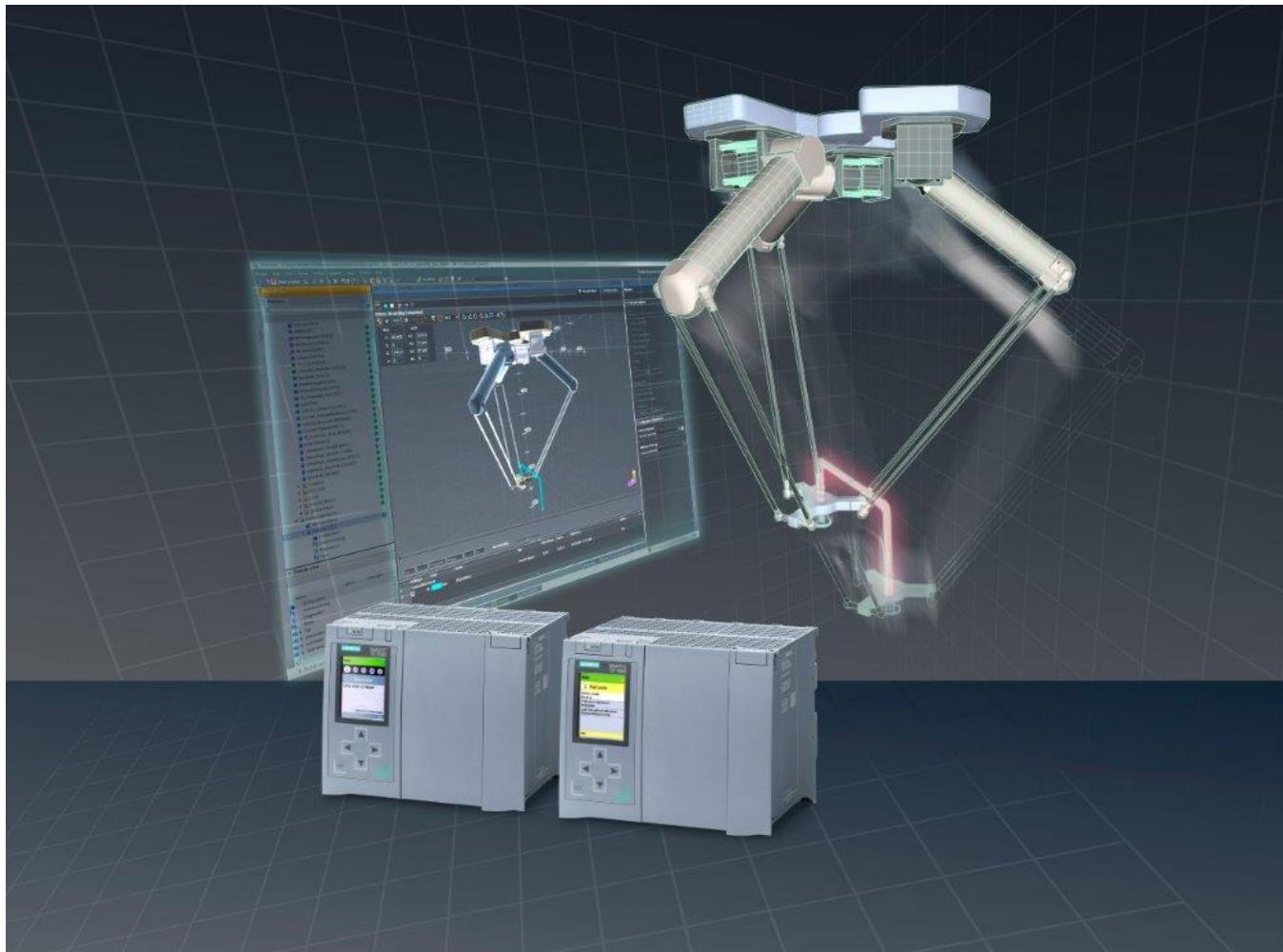
Complex Process



Agenda

- Hvorfor Virtual Commissioning?
- Siemens Digital Twin koncept
- **Integration af robotter**
- Eksempler på use cases
- Bonusinfo
- Q&A
- Næste webinar





Highlights

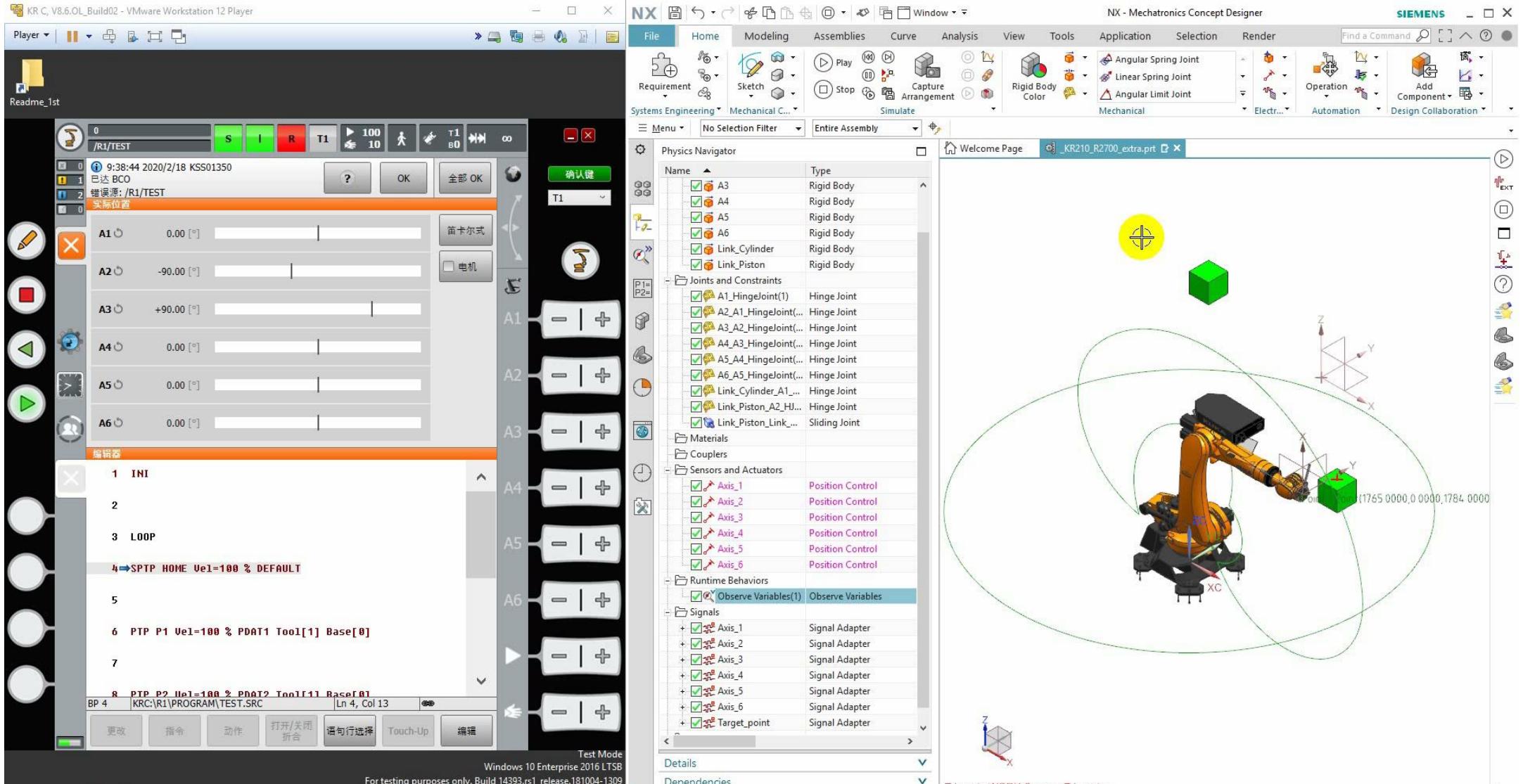
- Fully PLC integration
- High level of usability
- No expert knowledge



Robot integration of 3. party robot branch

OPC link to MCD and Kuka Robot Soft Controller

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Agenda

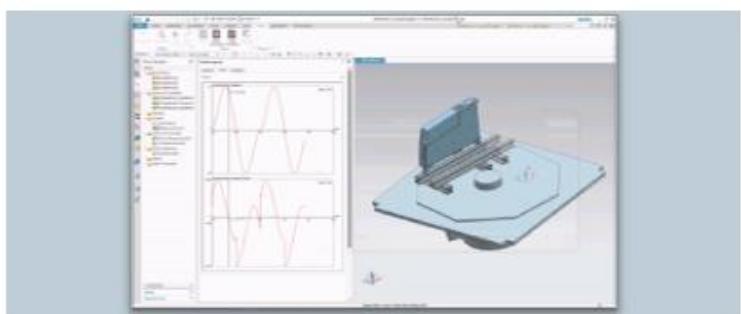
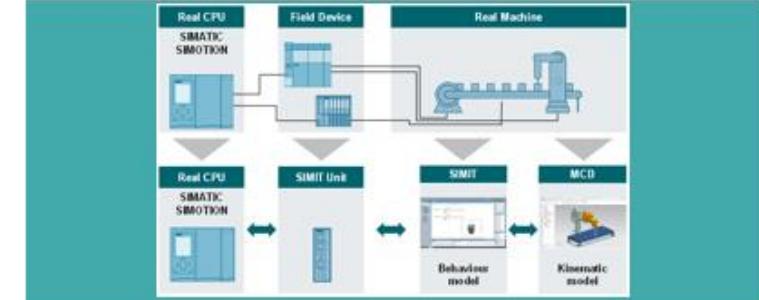
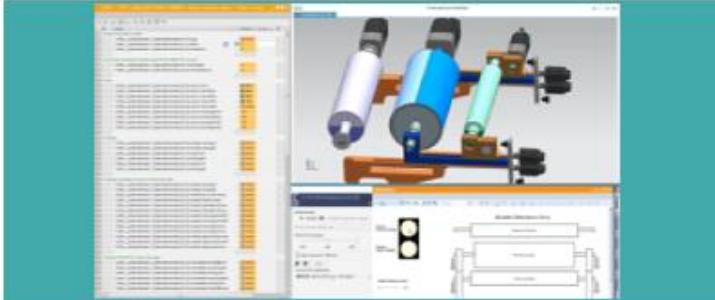
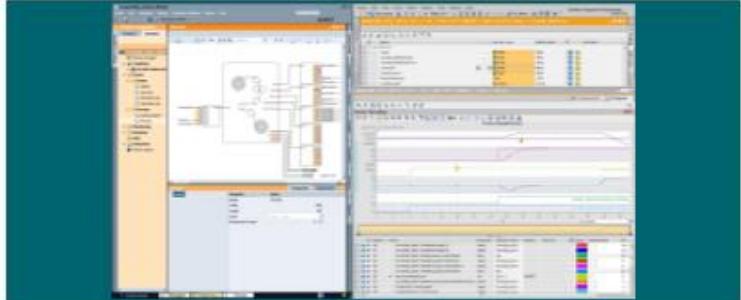
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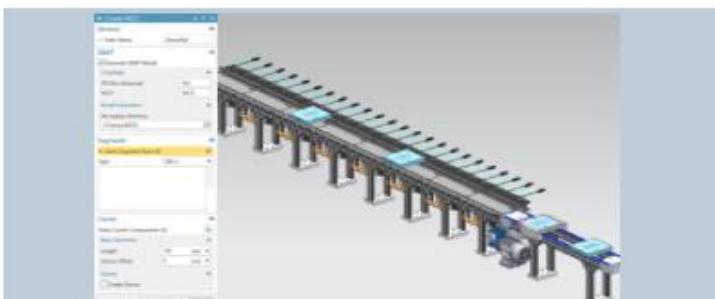
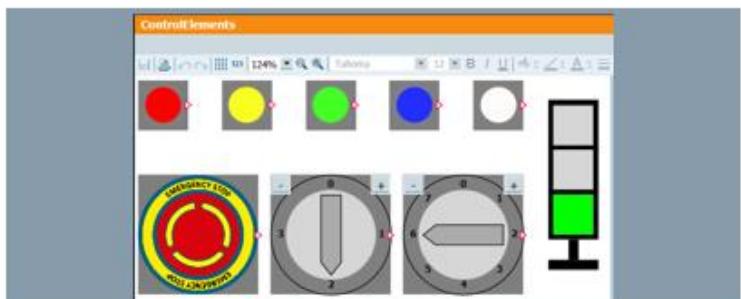
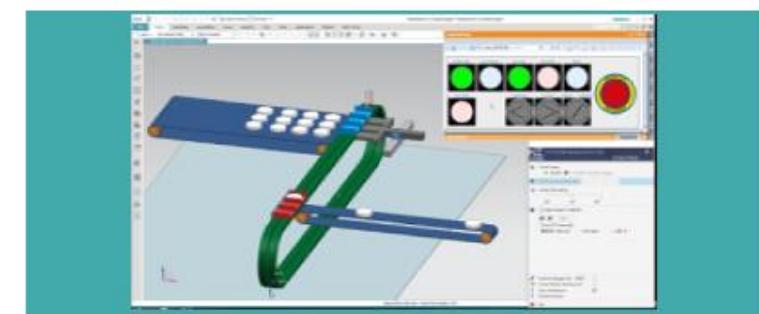
Simulation Solution Examples

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Download free of charge



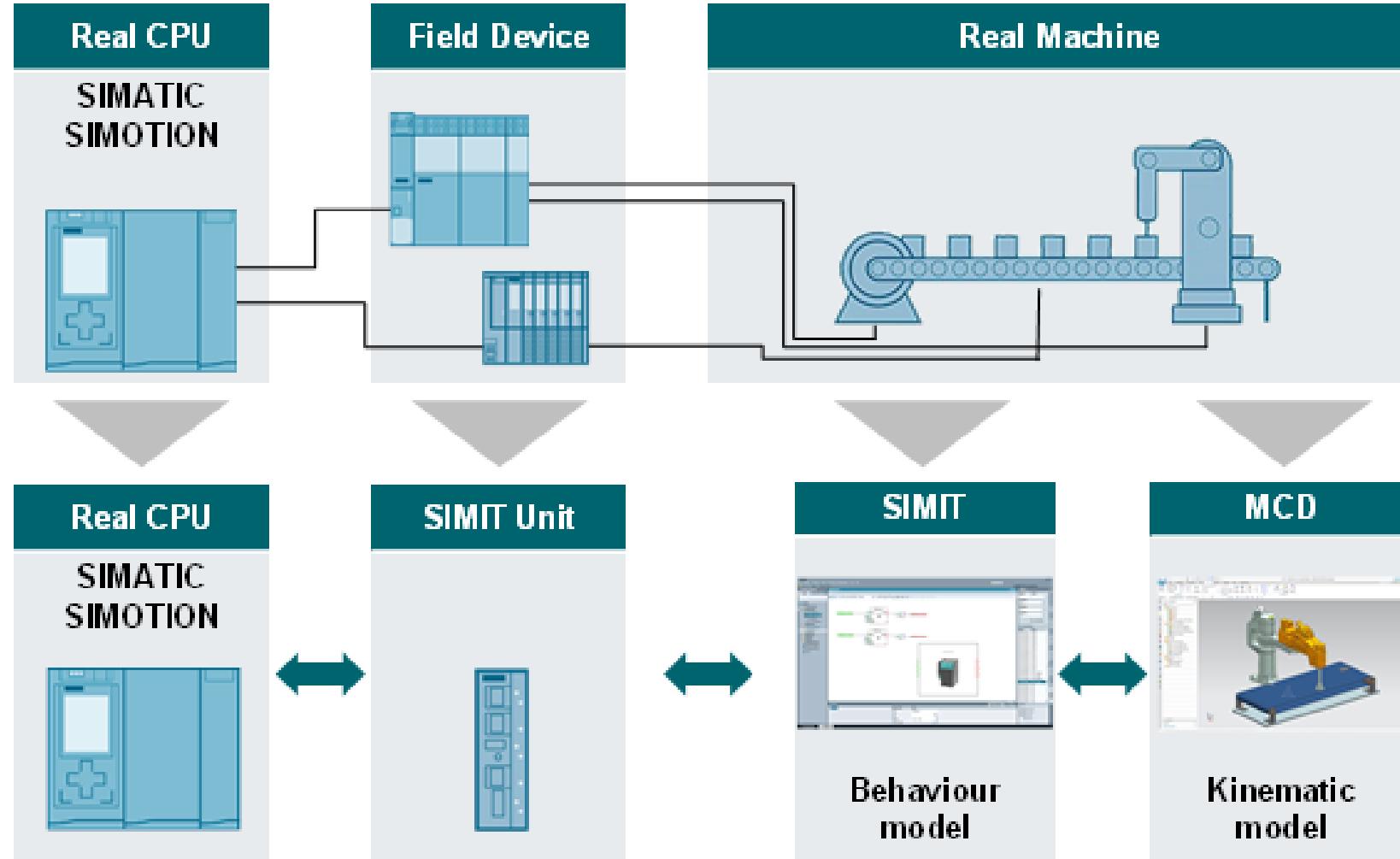
   Virtual Commissioning by
PMA APC
SIOS Overview Page
<https://support.industry.siemens.com/cs/ww/de/view/109777165>



Virtual commissioning of machines

Getting started

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Siemens software package

Virtual Commissioning applications examples

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- Virtual commissioning of machines - Getting started
- Motor Sizing with NX MCD
- MCD/SIMIT model for Intelligent Belt - Multi Belt Control
- MCD/SIMIT model for cylinder positioning
- MCD/SIMIT model for Simapress + Press Safety Blocks
- MCD/SIMIT model for Multi-Carrier-System

Virtual Commissioning

Summary

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Highlights

- Reduced cost
- Reduced Time
- Reduced risk
- Higher engineering quality



Agenda

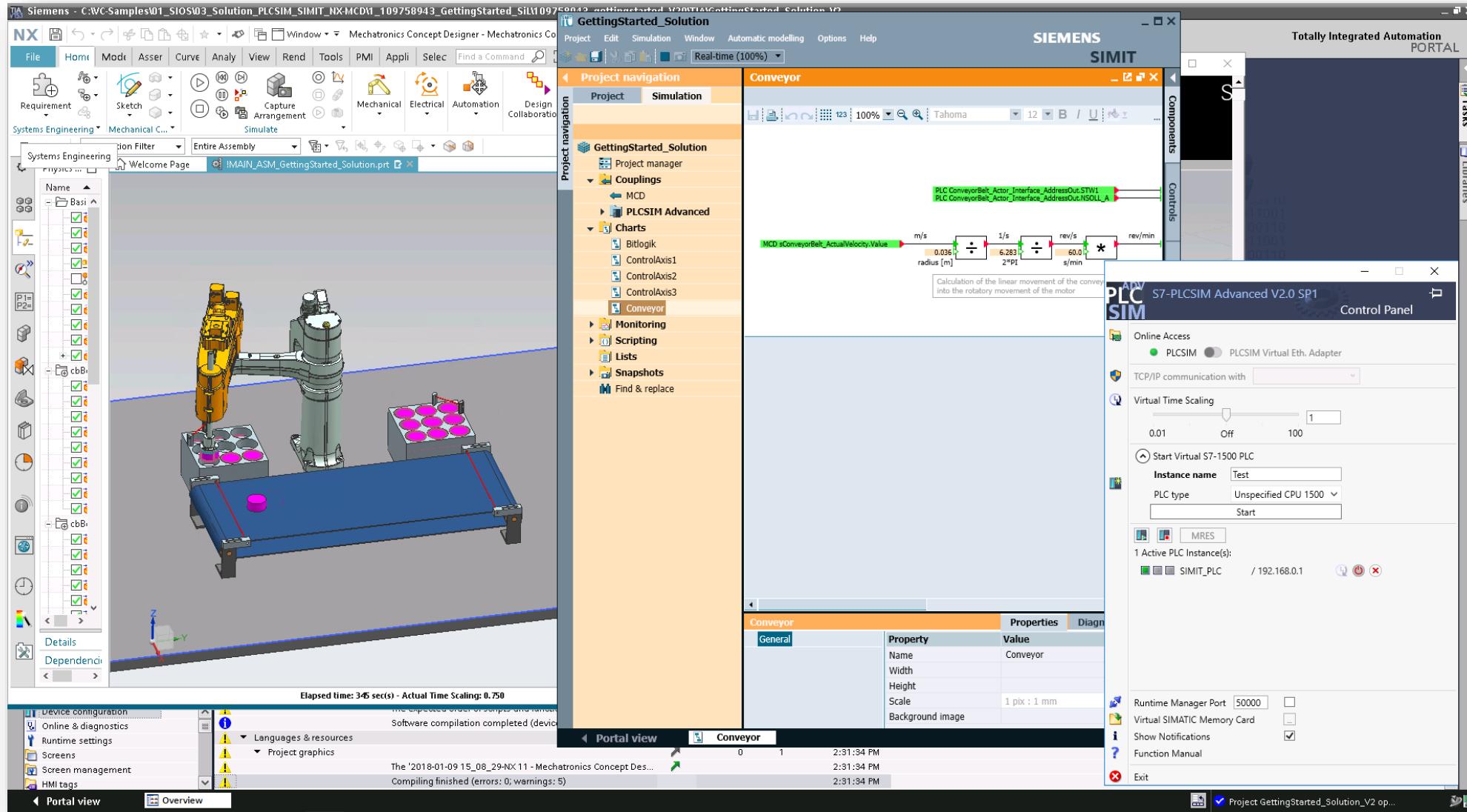
- Hvorfor Virtual Commissioning?
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- Eksempler på use cases
- **Bonusinfo – Gratis Cloud version**
- Q&A
- Næste webinar



Simulation Software in the Cloud

Free Trial Access – 21 days

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Kontakt os

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Gense webinar og download
relevant materiale på
www.siemens.dk/di-webinarer



Næste webinar

**Opnå større effektivitet og
brugervenlighed i dit
procesanlæg**

Simatic PCS neo sætter nye
standarder inden for procesautomation

Fredag den 4. september kl. 11.00

Tilmeld på www.siemens.dk/di-webinarer

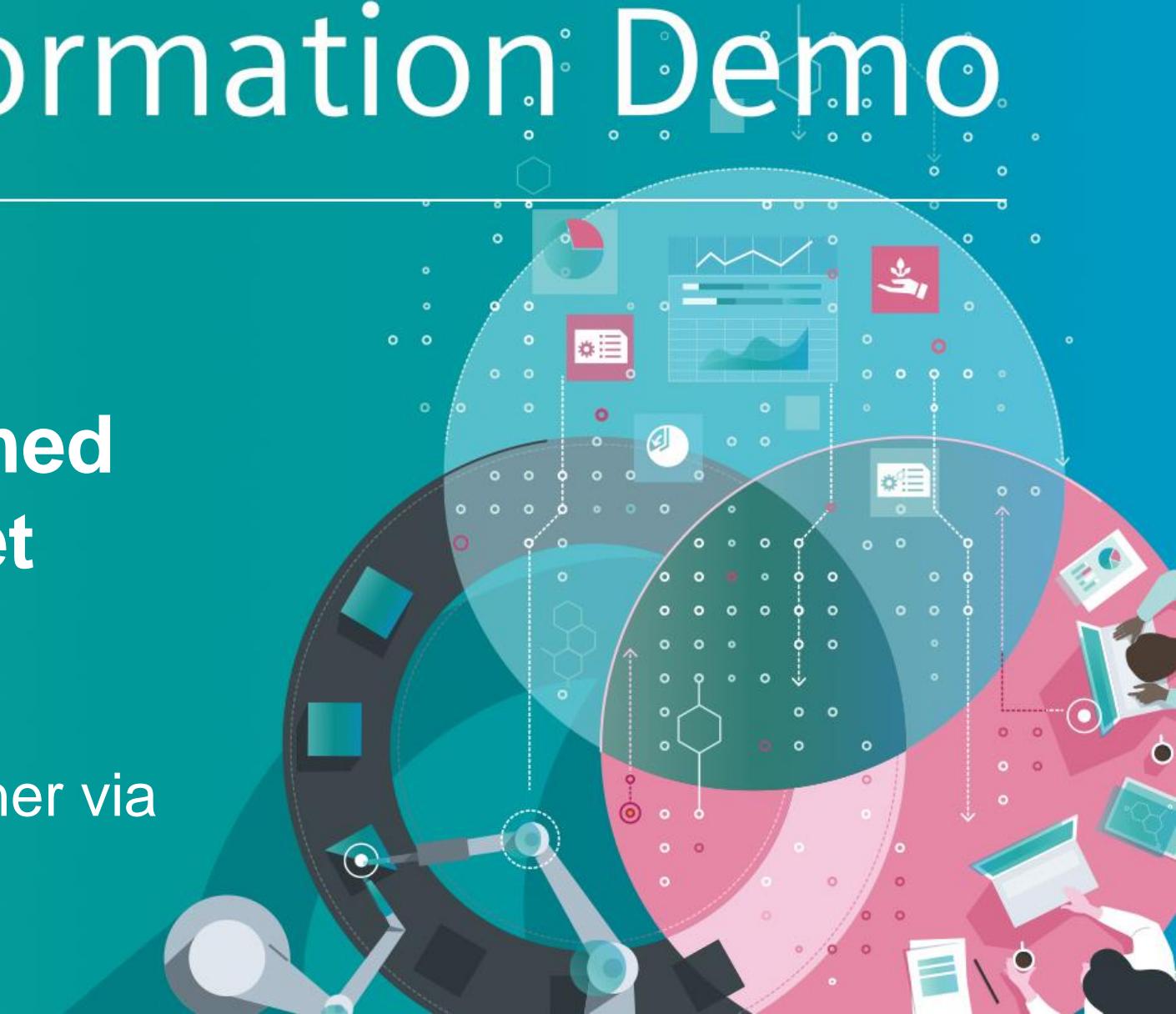


Industry Information Demo

NYHED

Så er vi på YouTube med
tips og tricks målrettet
den danske industri

Find hurtigt playlisten og abonner via
www.siemens.dk/di-demo





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