



RIB Smart Production

Industry 4.0 – Houses directly from the assembly line

Build better together!



Robert Neubauer

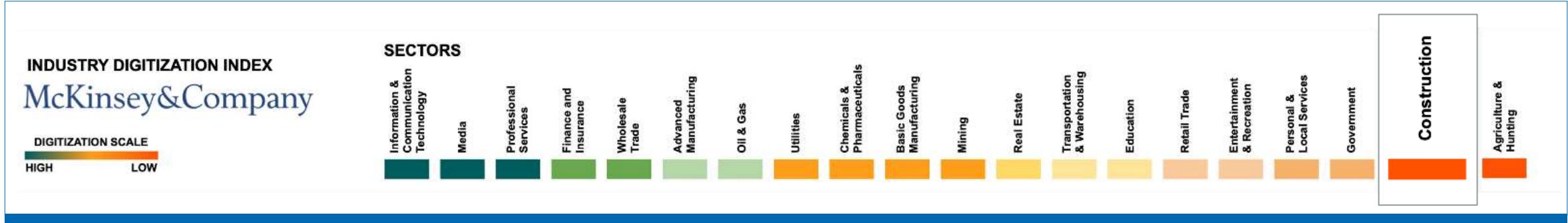
Managing Partner
Operations

Agenda

- | **Introduction – Digitization in Construction**
- | **RIB | Smart Production**
- | **Modern Industry 4.0 Production for Prefab**

The lack of digitization leads to inefficiencies

The construction industry is among the slowest to adopt digital technologies



And traditional methods or isolated point solutions are inherently inefficient and wasteful.

Slightest
Efficiency gains come from the construction industry over the last 60 years

10-20%
higher construction costs due to lack of coordination

170 mil.
Tons of materials go to waste every year

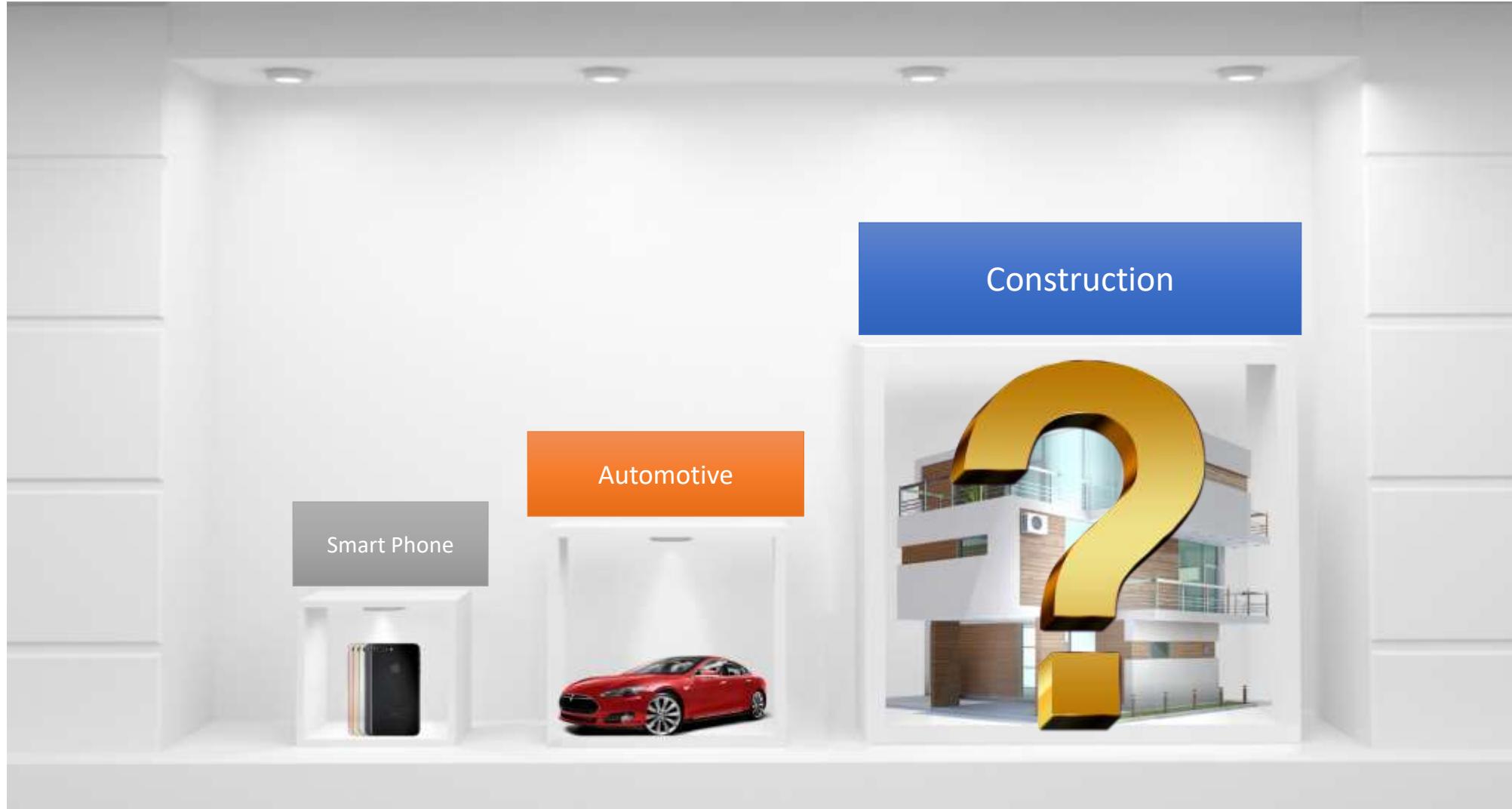
35%
Of time that construction professionals spend on non-optimized tasks

“ Only a few engineering and construction companies are taking advantage of digitalization.

McKinsey & Company

Source: McKinsey: Imagining Construction's Digital Future | McKinsey Global Institute, World Green Building Council

So why does this work in other industries ...





RIB | Smart Production

Digitalization for Prefabrication Industry

Prefabrication using an integrated Industry 4.0 Workflow



Construction-Preparation



Planning



Sales & Forecasting



Project & Technician Planning



Production & Utilization Planning



Production



Master Computer



Plant Control



Machines & Robotics



Logistics



Precast- & Stockyard Management



Transport Planning & Shipping



Construction & Installation Engineering

Constructionsite Documentation



iTWO Smart Production

Produktionplanung & Steuerung
für die Vorfertigung



Construction-Preparation



Planning



Sales & Forecasting



Project & Technician Planning



Production & Utilization Planning



Production



Master Computer



Plant Control



Machines & Robotics



Logistics



Precast- & Stockyard Management



Transport Planning & Shipping



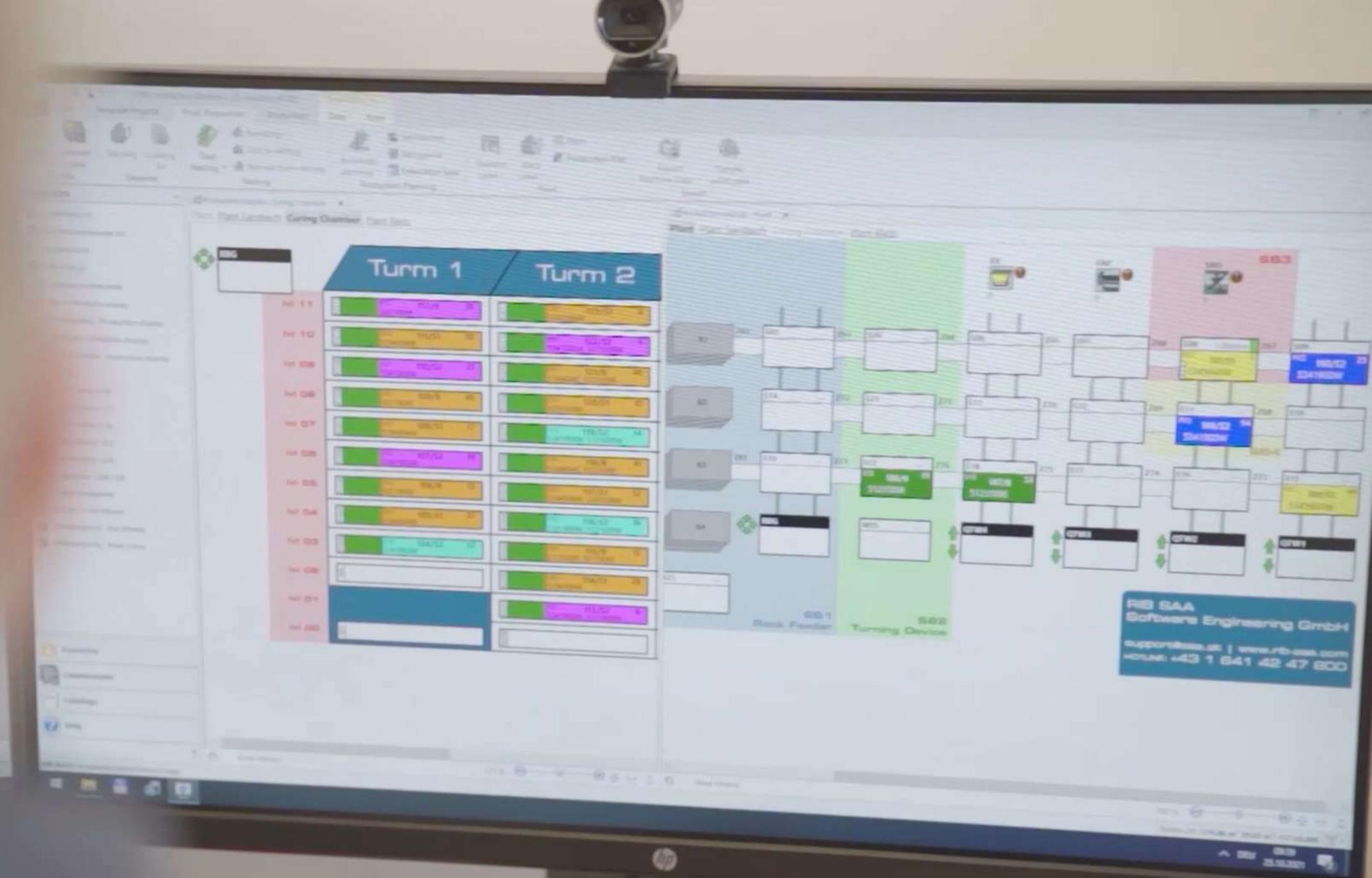
Construction & Installation Engineering





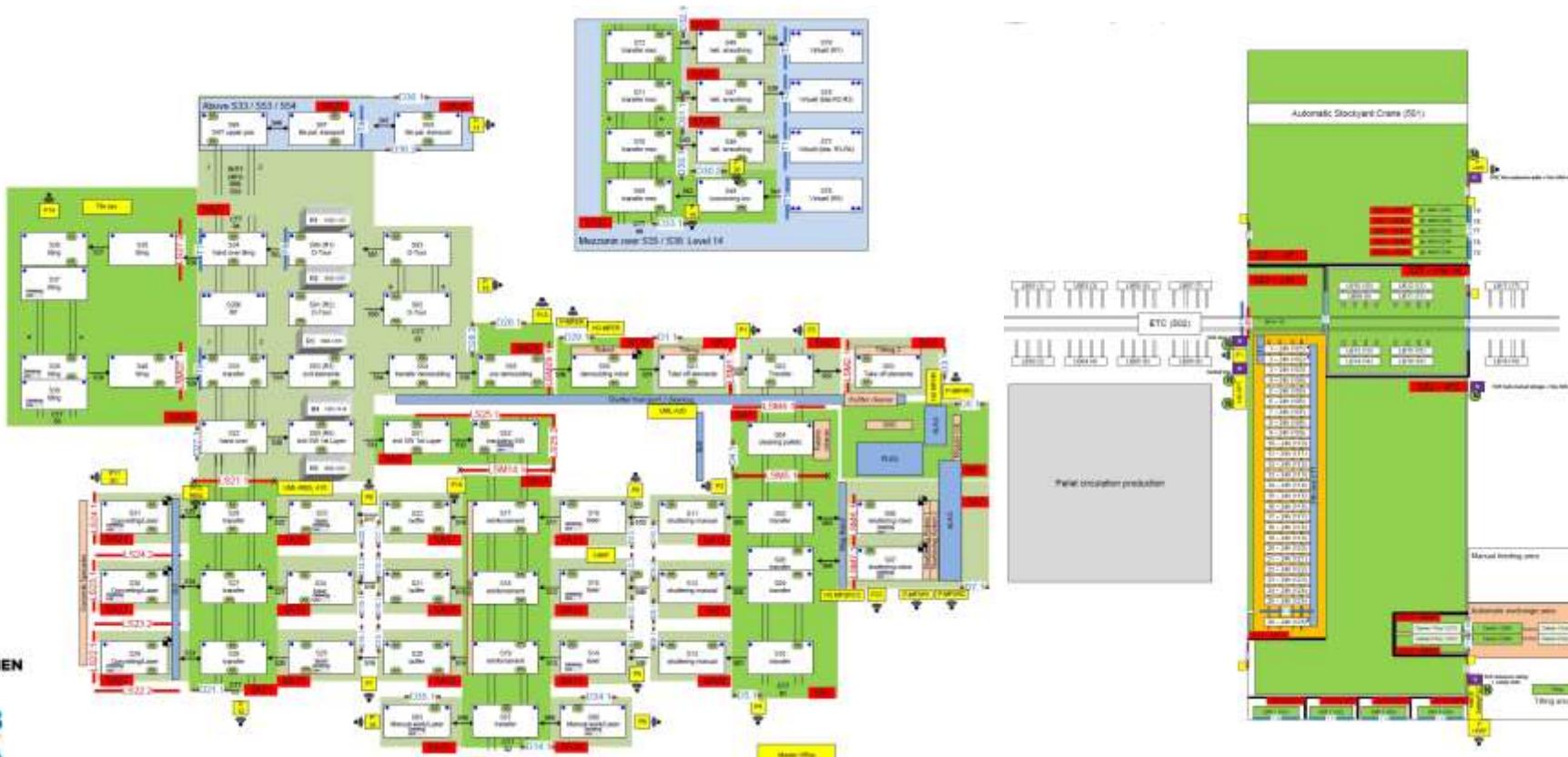
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Modern Industry 4.0 Production-Line
for Prefabrication



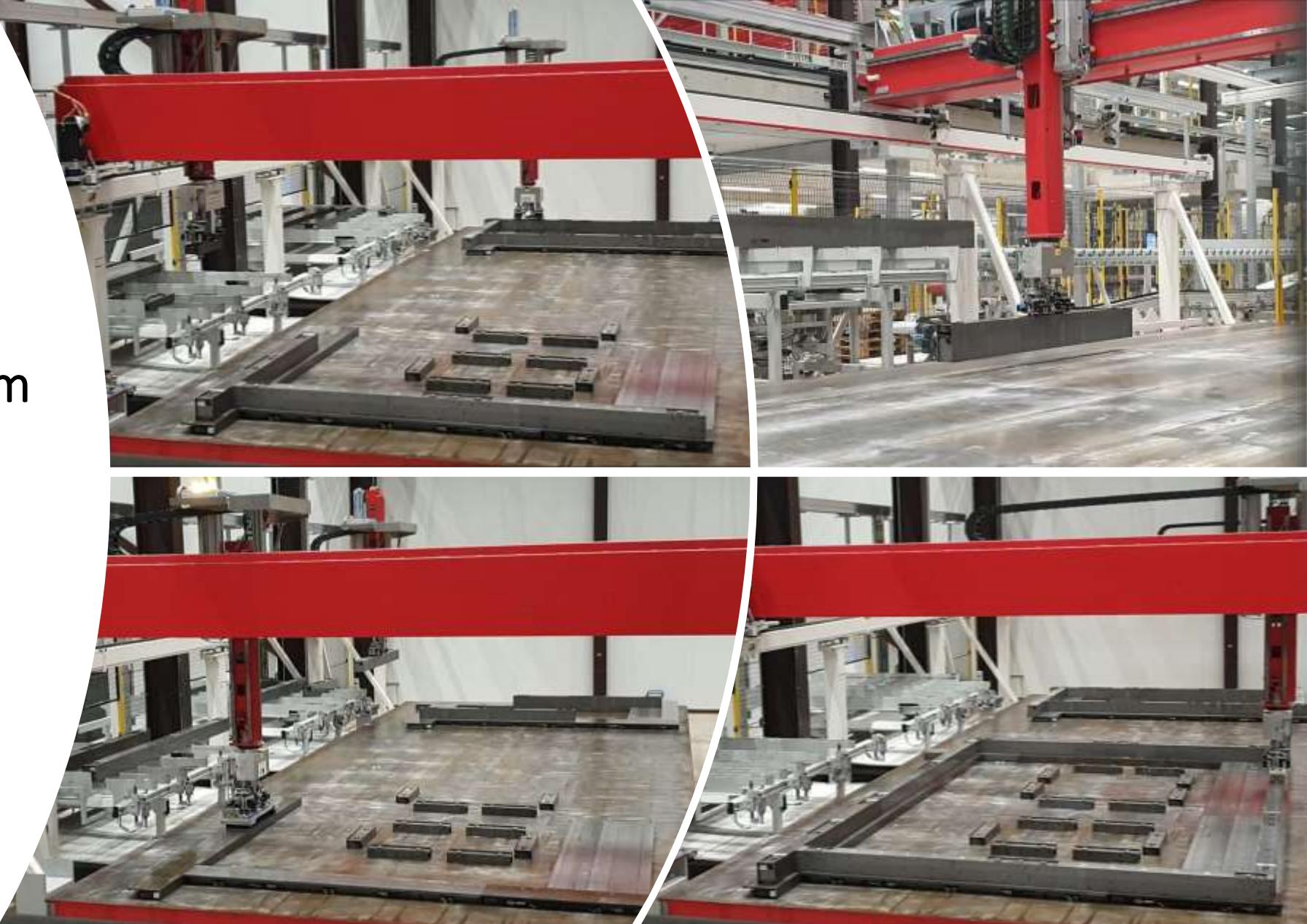
RIB | Smart Production - Industry 4.0

Flexible Multi-Line-Production – Flexible Model-Data



RIB | Smart Production Industry 4.0

- Robotic Deshuttering
- Suitable Shutter System
- Cooperative Robotic Shuttering



RIB |Smart Production Industry 4.0

- Multilane Production
- Paperless Smart Stations
- Optimized Supply Chain
and Materialflow
- Laserprojection



RIB |Smart Production Industry 4.0

- Automatic Mesh welding
Design to produce
- Automatic preparation of
Insulation
- Automatic Concreting
- Optimized order at
Batching plant



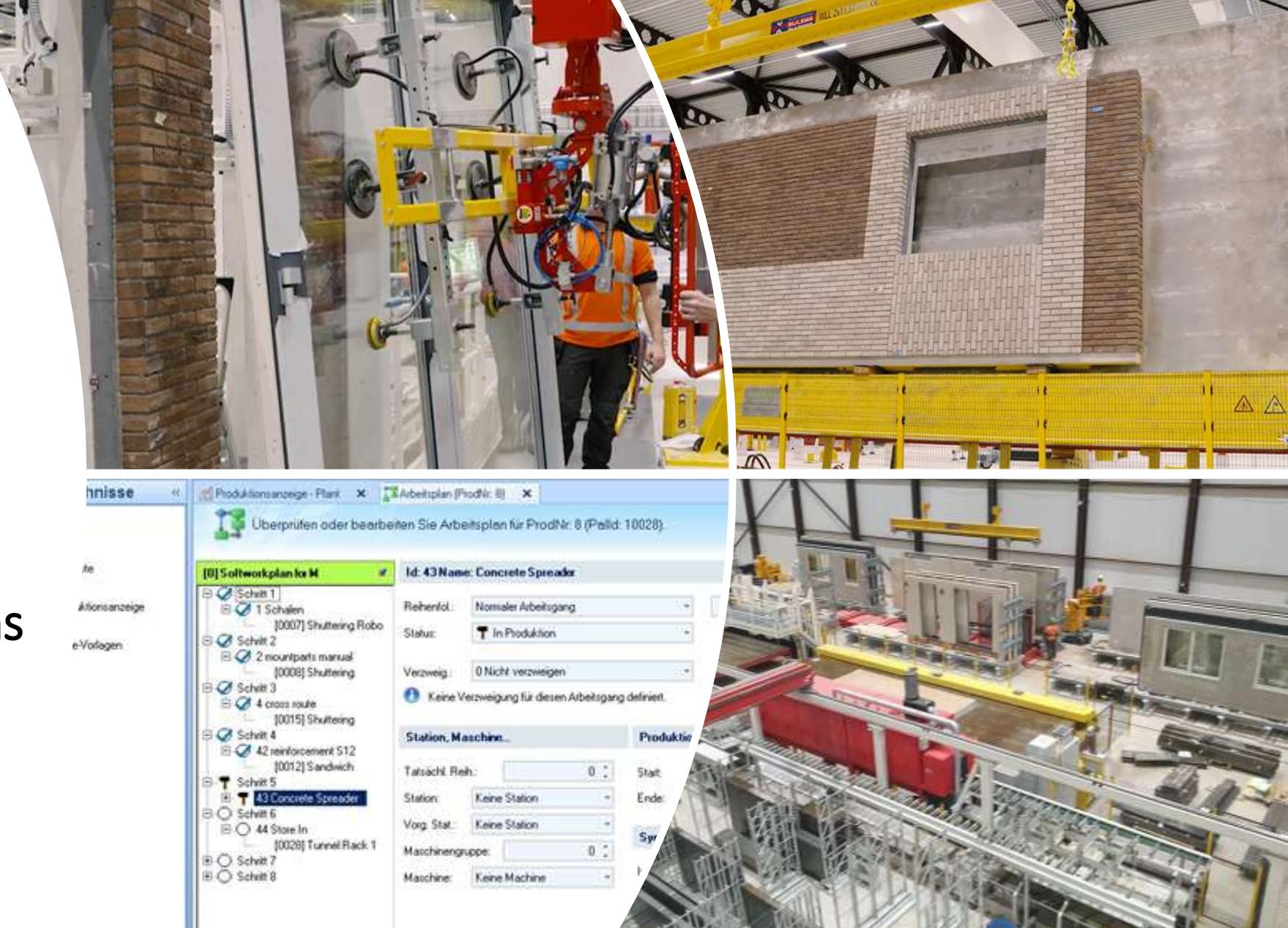
RIB |Smart Production Industry 4.0

- Automatic Plant-Logistics
- Safe integration of human work between automatic systems
- Trowelling
- Automatic Brickplacing



RIB | Smart Production Industry 4.0

- Inline Finishing
- Preplanned packing
of delivery units
- Flexible, configurabel
Software-Working-Plans



RIB |Smart Production Industry 4.0

- Fully integrated,
Automatic Stockyard
System
- Optimized Truckloading
- Integration of manual
Stockyard operations
- Safety concept



RIB | Smart Production - Industry 4.0

Fully under digital control – like in automotive Industrie



iTWO PPPS

Planning and Production
Transport &
Installation

iTWO MES

Production
Mastercomputer

iTWO ICS

Intelligent
Control
Systems

iTWO SCE

Stockyard-Logistics
& Control-Systems



Building Better Together