



The Precast Plant of the Future Hollow Core

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Progress Group

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Echo Precast Engineering

Content

1. Opportunity

2. Progress Group vision

3. Half slab <--> Hollow core

4. Challenges & opportunities <--> Tools

4. A. Human resources

4. B. Project complexity

4. C. Sustainability

4. D. Efficiency

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Opportunity



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Progress Group - companies



„Our Mission is to sustainably create better living conditions for people“

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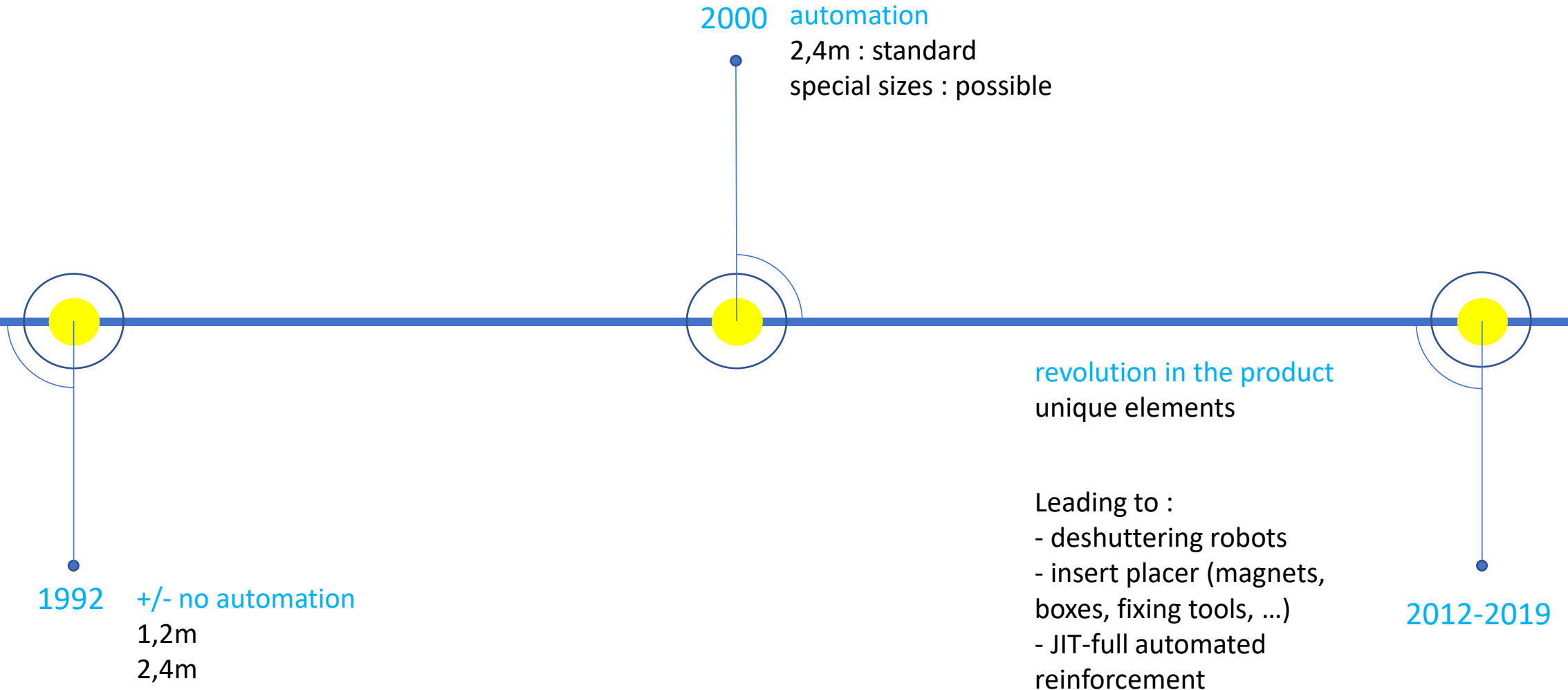
4. C. Sustainability

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Half slab <--> Hollow core



Half slab



Half slab

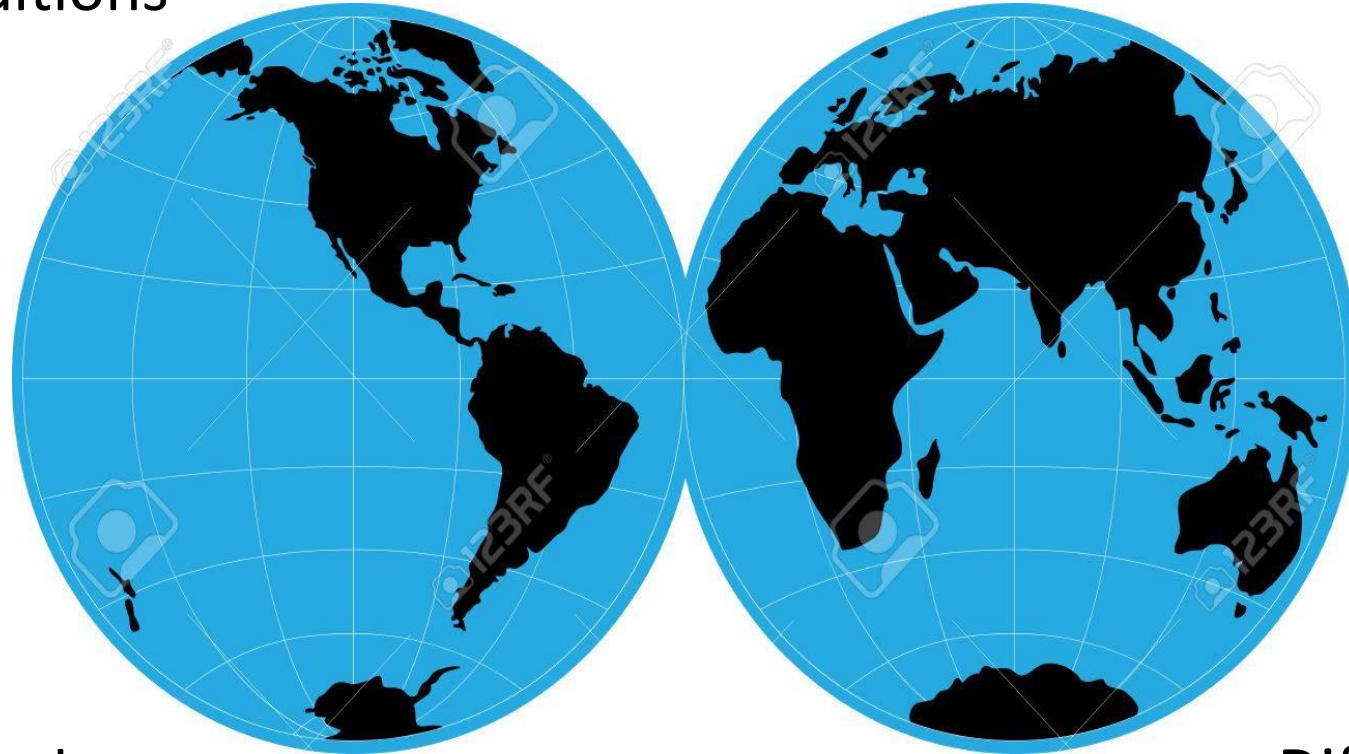


Hollow core

WORLDWIDE

Different conditions

Different approaches



Different markets

Different situations

Different people

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Challenges & opportunities <--> tools

1. **Human resources**
2. **Complexity**
3. **Sustainability**
4. **Efficiency**



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The future for HR?

Companies are suffering from growing pains



Organizations are focused on growth. Year-on-year, **98%** are growing their revenues

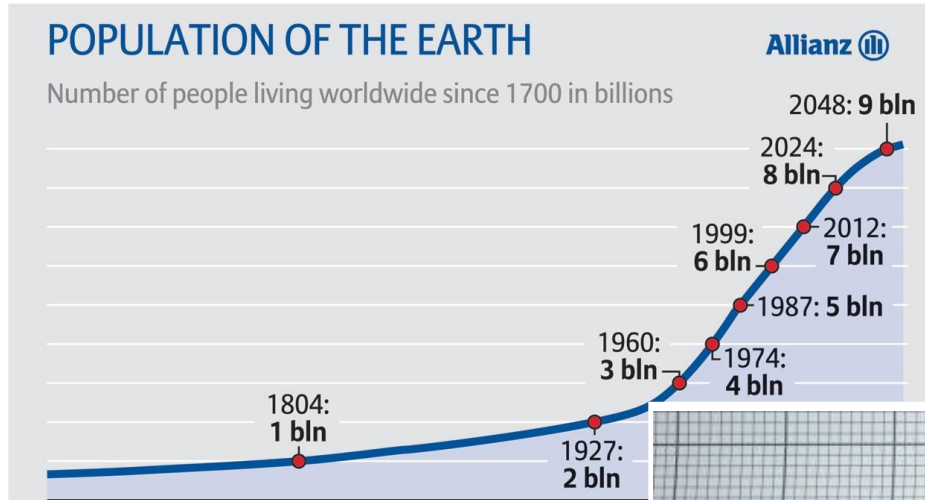


84% say they have problems finding/recruiting the right skills to help them grow

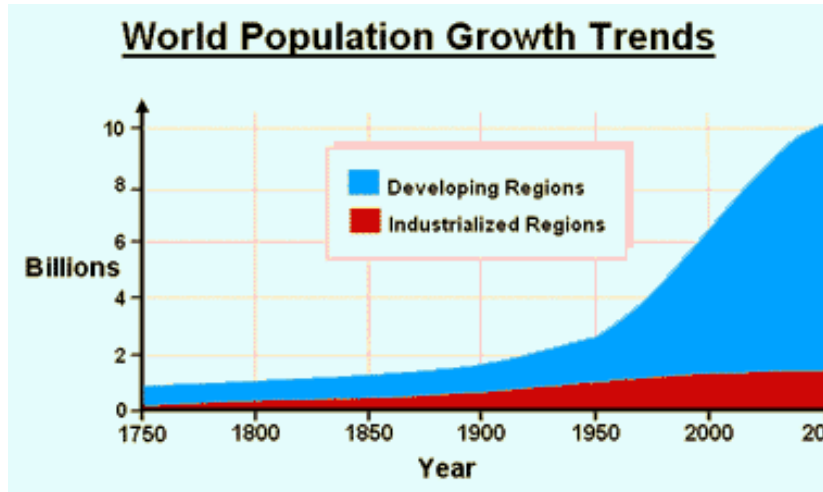


And yet, **10%** of employees leave every year
Finding the right people may be tough. But keeping them is just as hard.

Human resources



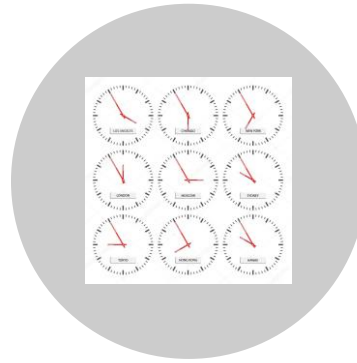
Population is growing



Human resources

“global” employees with their differences in :

- culture
- language
- time zone
- workplaces
- “social media” generation
- ...



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Project complexity

„The sheer complexity and variability of today’s megaprojects require a project-operating approach that integrates technical and management systems“

McKinsey Global Institute



Ghelamco Arena (Belgium)



Mineta San José Airport (USA)



Jubilee Church (Italy)



Handling the complexity of projects



Just in time production & delivery



Quality



No errors

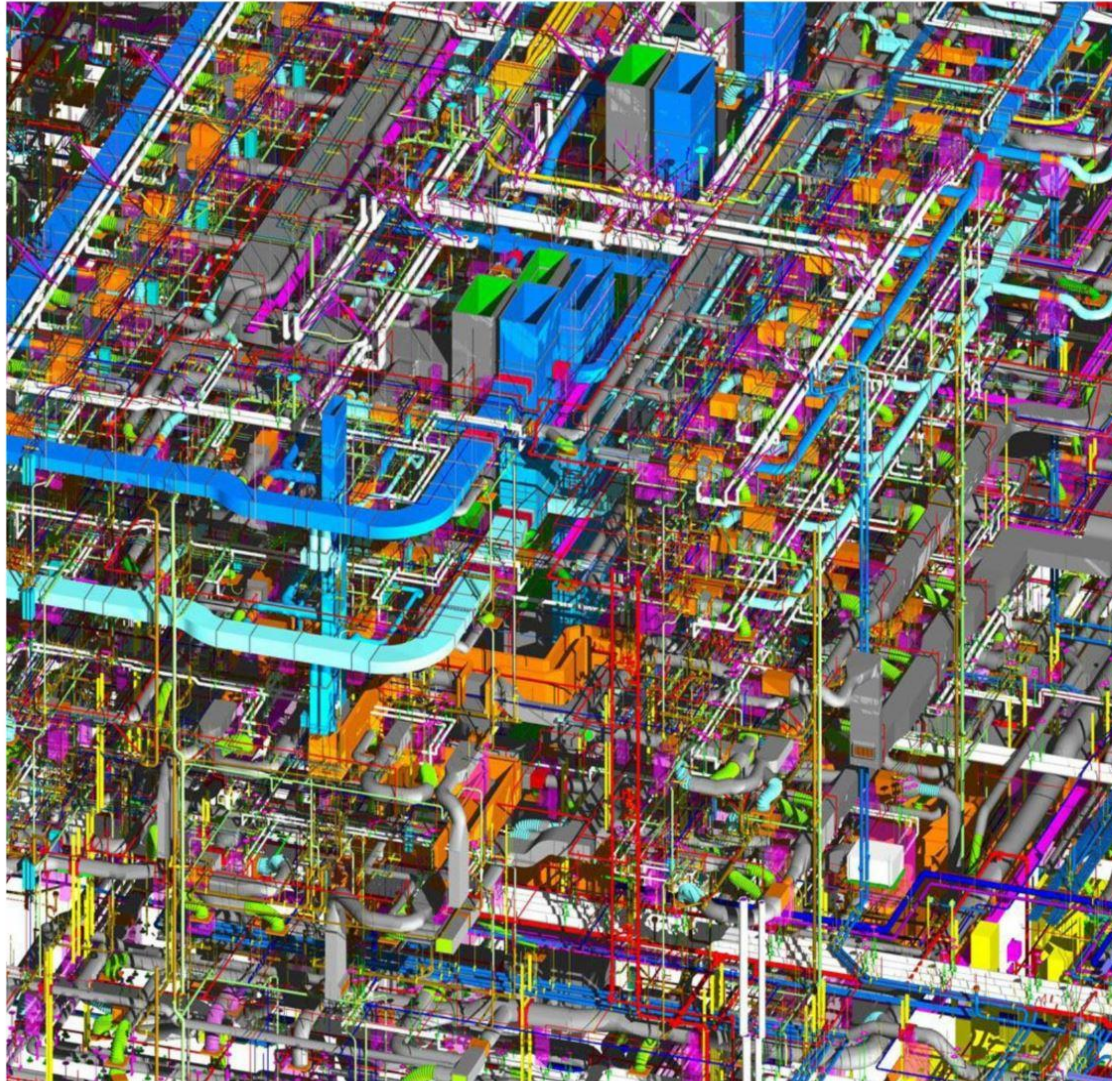


Flexibility



Product responsibility

Project complexity



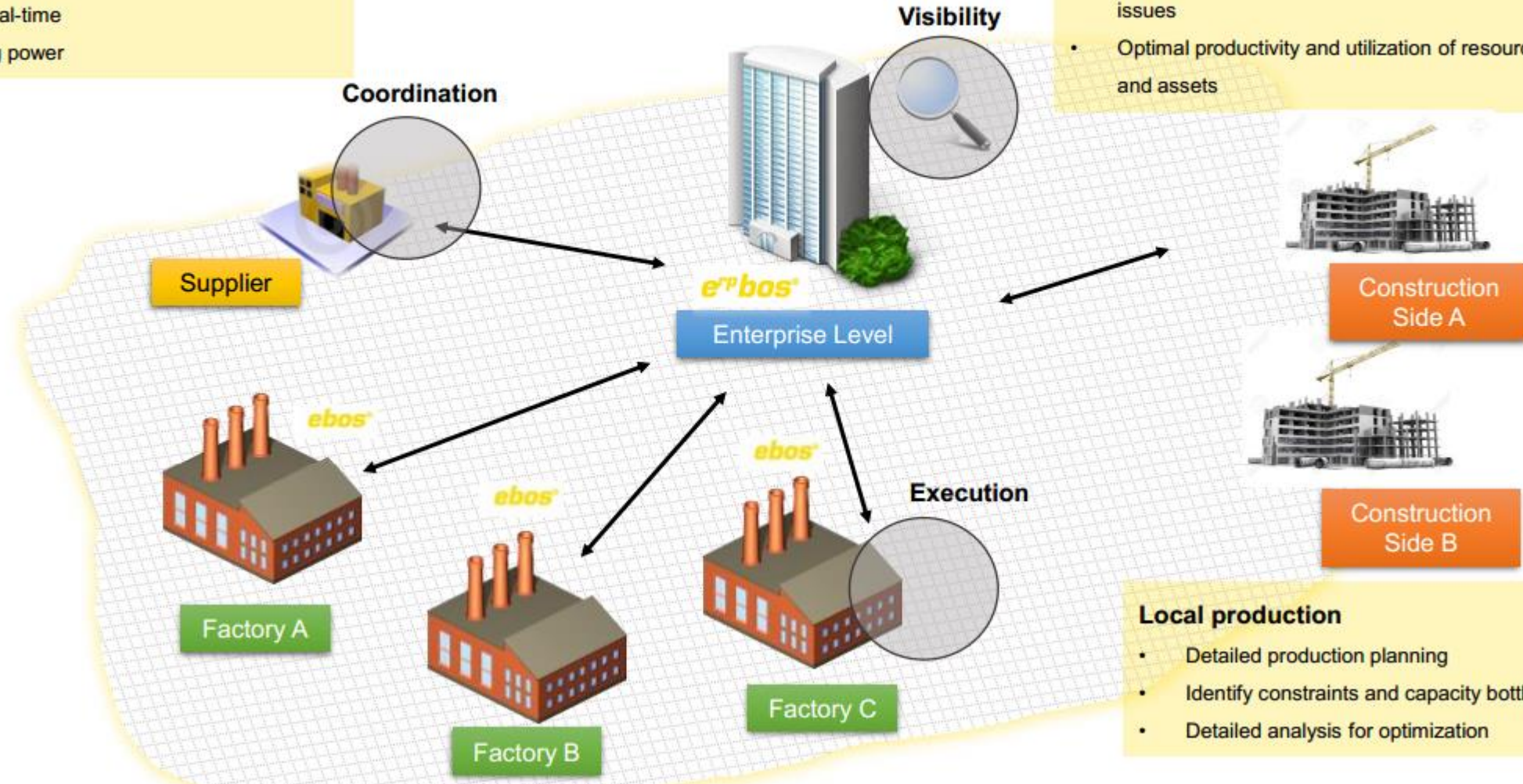
Project complexity

Global coordination

- Up-to date schedules
- Complete traceability
- React in real-time
- Purchasing power

Plant-to-enterprise visibility

- Complete visibility across plants
- Quick adjustments to exceptions and quality issues
- Optimal productivity and utilization of resources and assets



Local production

- Detailed production planning
- Identify constraints and capacity bottlenecks
- Detailed analysis for optimization

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Sustainability



Water saving



Dust and waste



CO2-Emission



Green energy

Sustainability

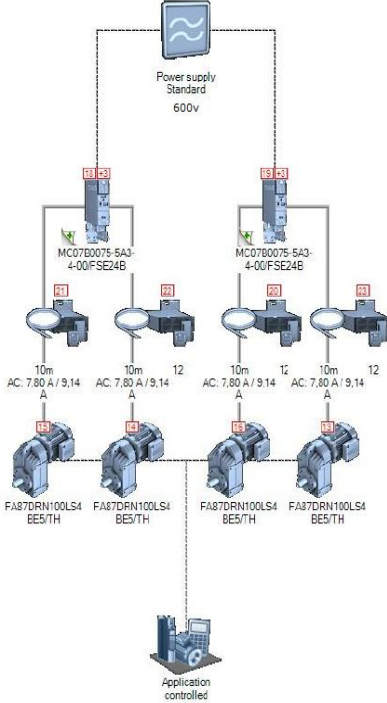


Battery

Using the right technology



New generation of motors



New generation of drives

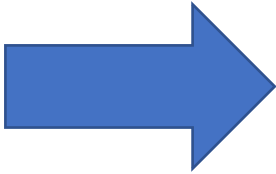
Sustainability

Transport wagons



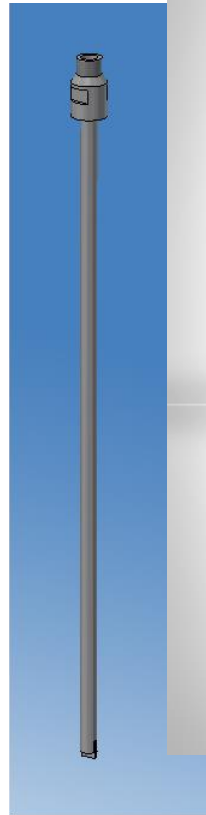
Sustainability

Fresh Concrete Saw – battery driven



Plotter

- safe energy through weep hole drilling in wet concrete
- not heavy work on dry concrete



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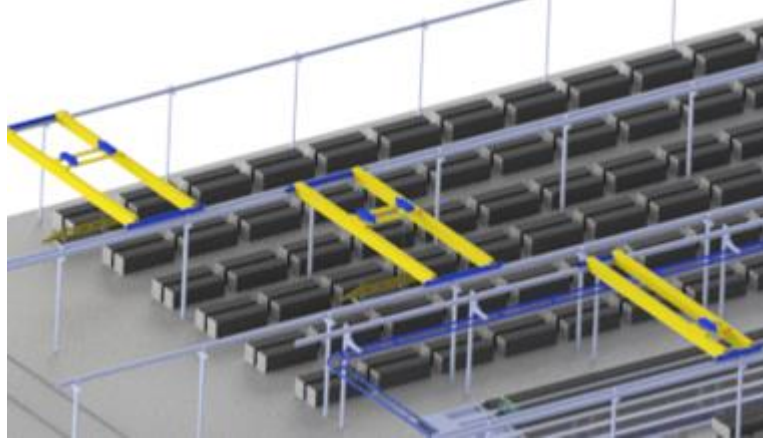
4. B. Project complexity

4. C. Sustainability

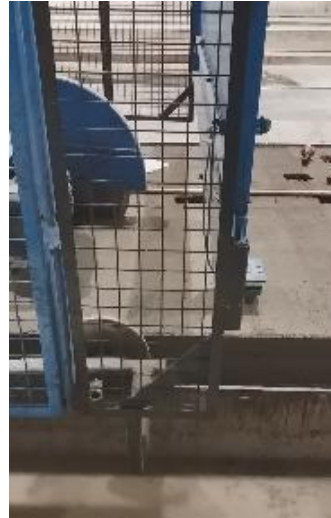
4. D. Efficiency

Efficiency

Full automatic storage



Full automatic fresh
concrete saw



Full automatic sawing



Full automatic concrete supply

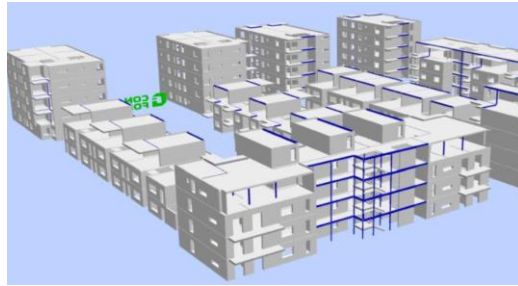


Plotter

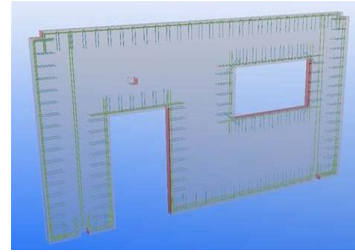


Efficiency

Project



BIM Model

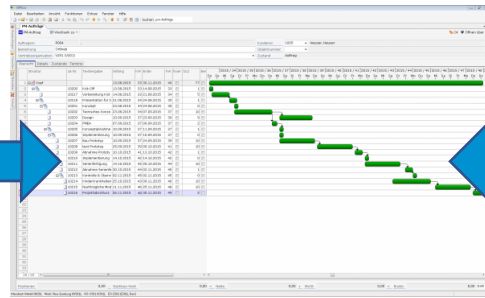


Statistics

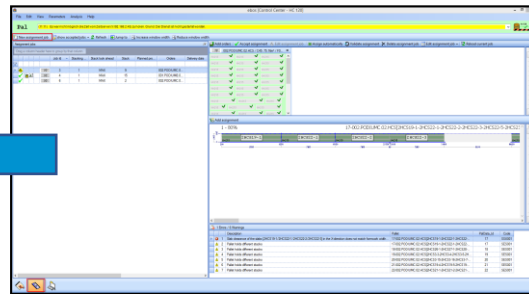
Planning



Transport

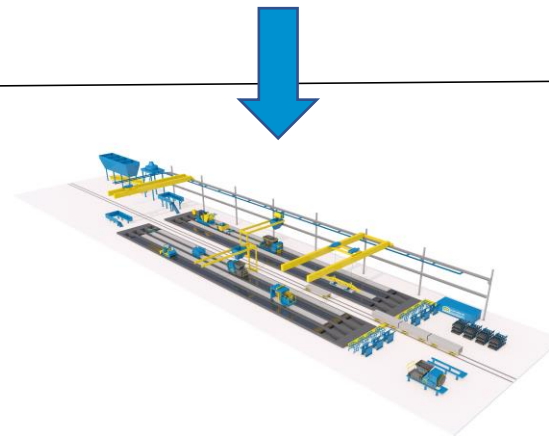
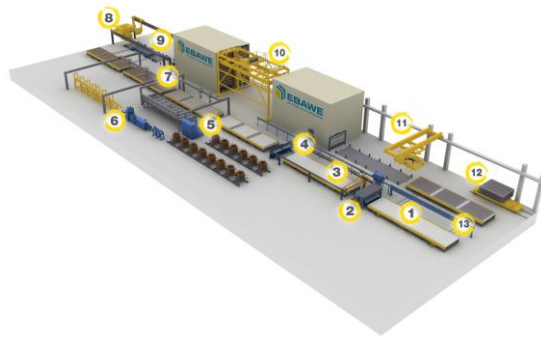


Scheduling



Reports

Production



Data Capture

Efficiency

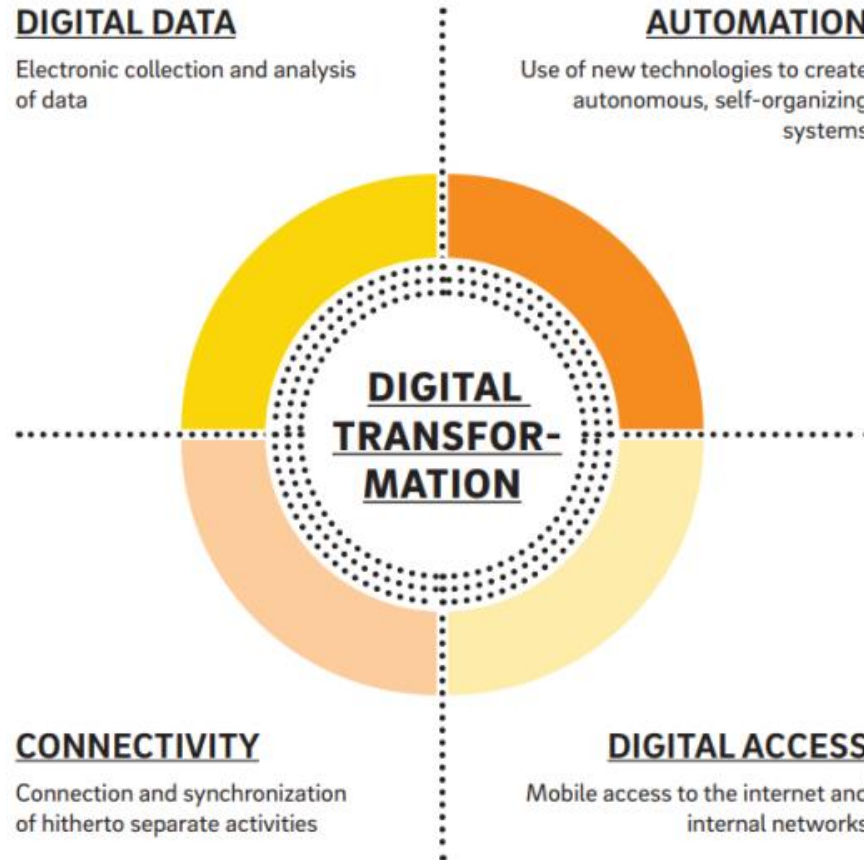
Digitalise - automation

DIGITAL DATA

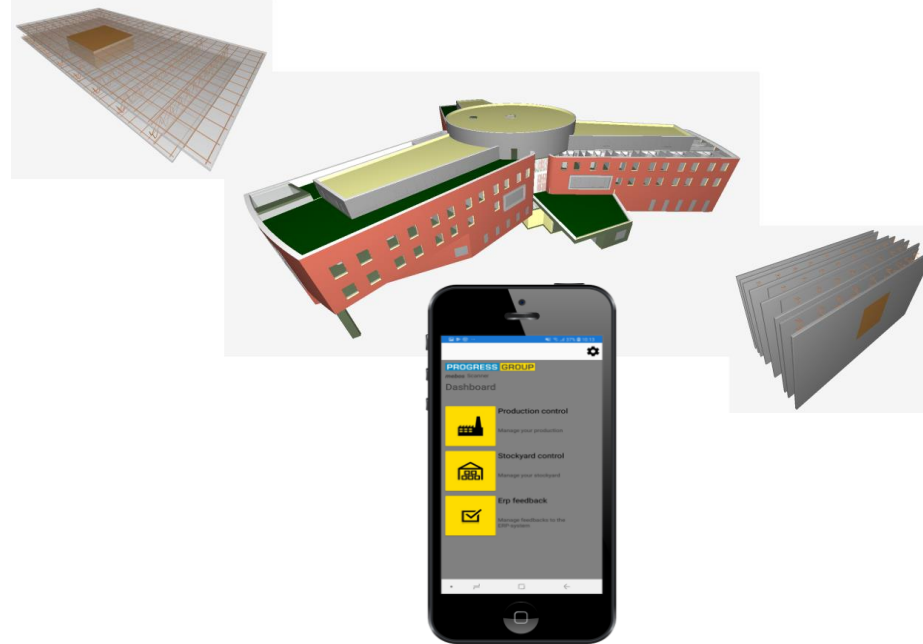
Electronic collection and analysis of data

AUTOMATION

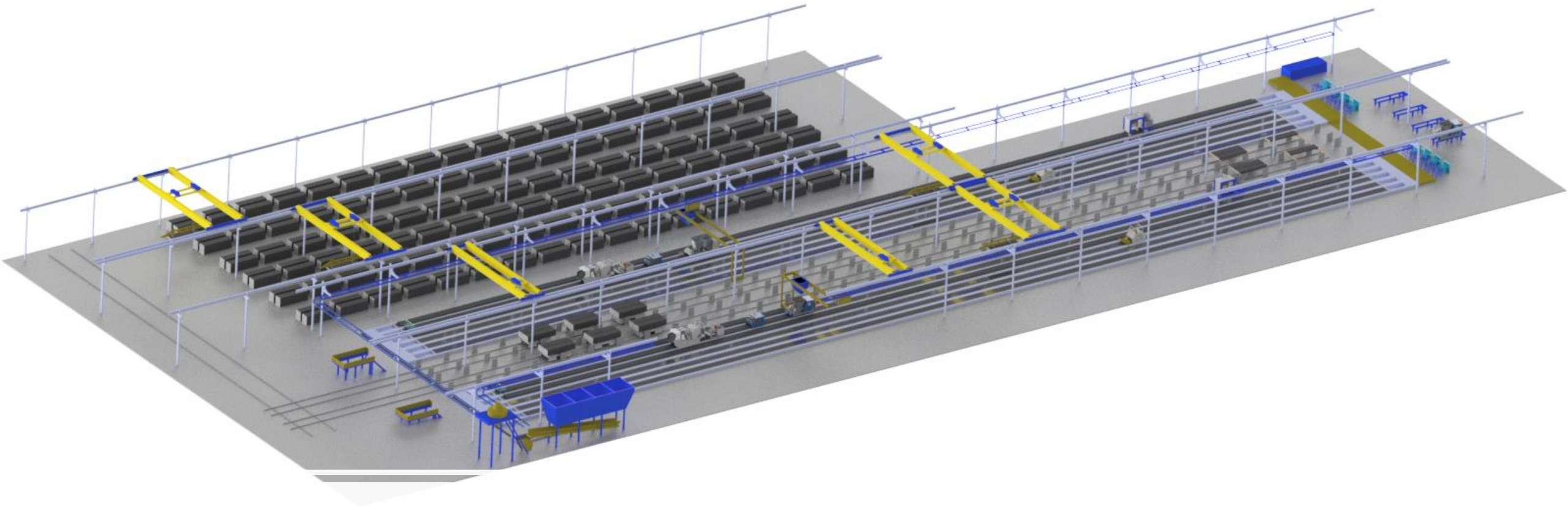
Use of new technologies to create autonomous, self-organizing systems



Cloud based digital access



The Precast Plant of the future



The Precast Plant of the future



Important is: **never standing still**

Investing in the **right machines**
digitalisation, smart processes
and products

combined with well-thought ideas
about **energy & material**

and pay attention to creativity &
involvement of the **people**

We are ready for the future



Thanks for your attention