



# Transforming the future of construction industry

ABB Robotics



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# Our Business Areas

Employees  
~105k

Countries  
+100

Revenues  
~\$26 bn



Electrification



Motion



Process Automation

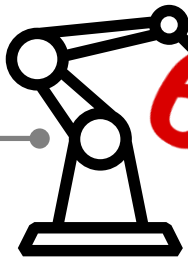


Robotics & Discrete Automation

# ABB Robotics 2021 Construction Industry Survey

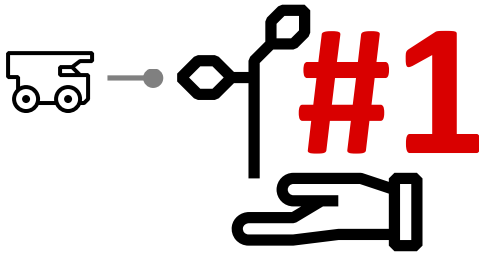
What do you believe are the **main challenges** currently faced by your business and the construction industry as whole?

-  **44%**  
Recruiting staff
-  **42%**  
Worker safety
-  **39%**  
Quality & consistency
-  **38%**  
Reducing waste

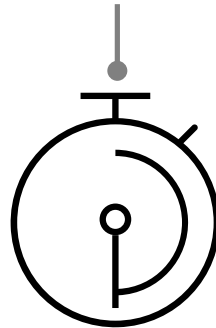


**65%**

Of respondents are **planning to introduce robots and automation** within the next 10 years

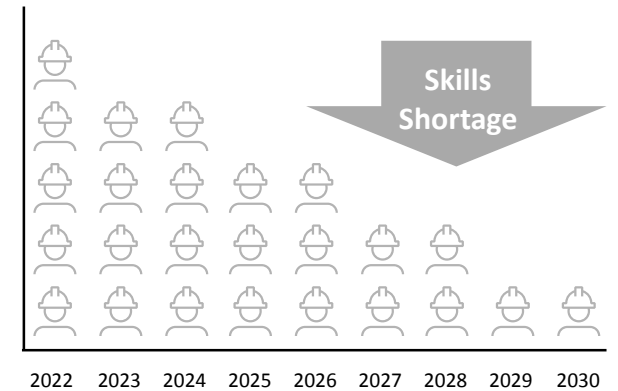


Respondents see **sustainability** as the primary driver for change over the next 10 years



**45%**

Of respondents believe that **robots could help to reduce project times**



**91%**

Think that the construction industry faces a **skills shortage** over the next 5 to 10 years



# How automation can transform the industry to....

## Address the labor crisis



- 91% of construction businesses say they face a skills crisis over the next 10 years.
- Applying robotics to construction not only fills labor gaps onsite, using robots for the most repetitive and dangerous jobs frees labor from low-level tasks, allowing employees to upskill.

## Build more efficiently



- Robots and digital tools can automate the fabrication of modular homes and components off-site
- Robots can save time, handle repetitive tasks with precision, safety and speed, from welding to materials handling and structural 3D printing.

## Build more sustainably

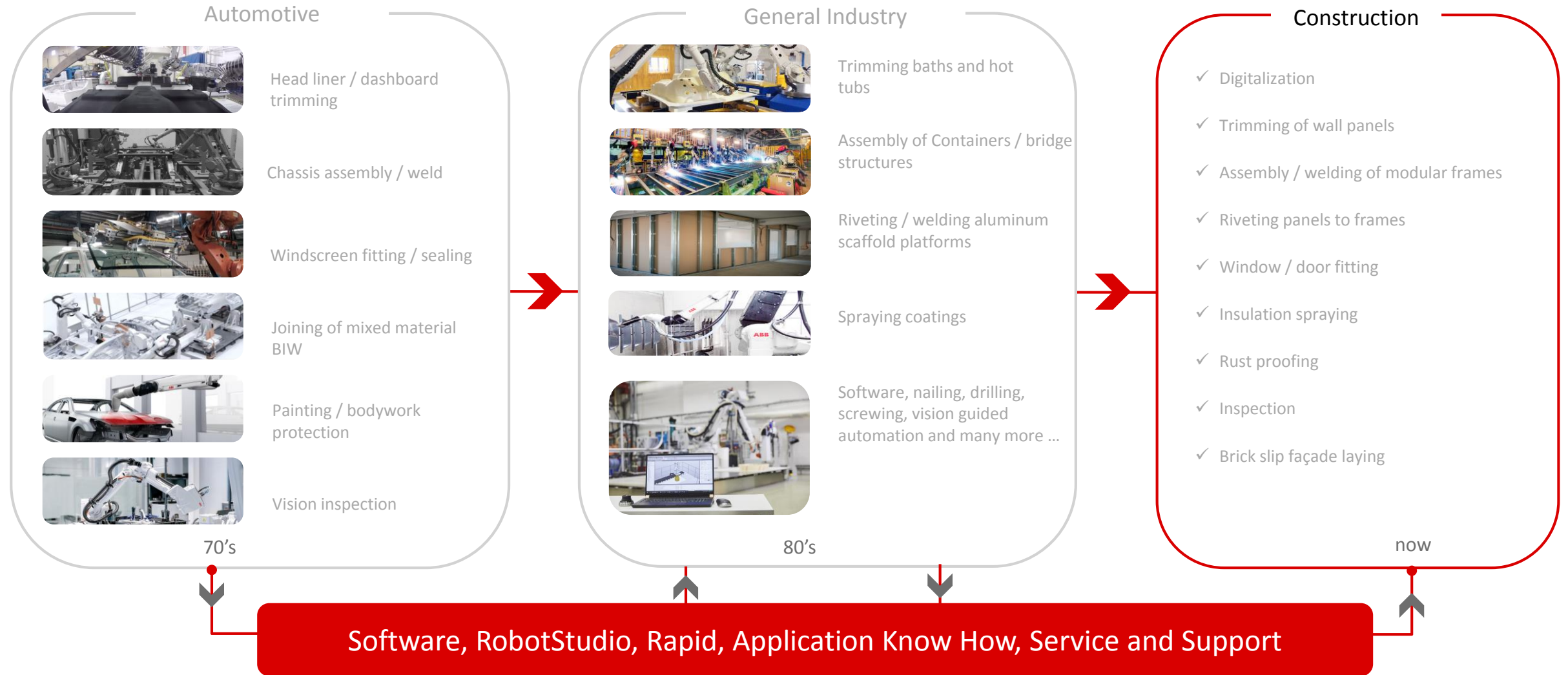


- Up to a 25% of material transported to a building site leaves as waste.
- With robotics and digital solutions, you can design waste out at the beginning of a project through effective building design and construction processes.



# Knowledge transfer to address key challenges

Many applications transferable to construction



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# The importance of the entire ecosystem

## Universities



## Architects / Designers



## Product / Material Suppliers



## General Contractors



## Machinery Manufacturers



## Software





# How we support transformation in the construction industry today

## On-site automation

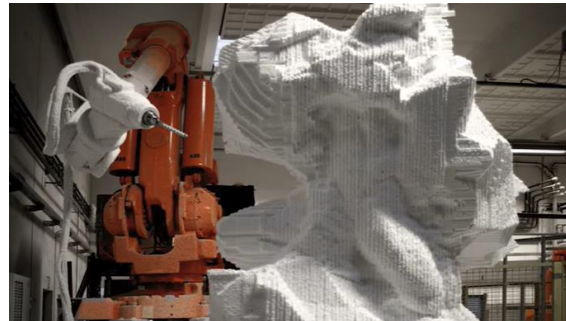
### Installation of Elevators

Schindler Elevators



### Walk paths and Sidewalks

ODICO



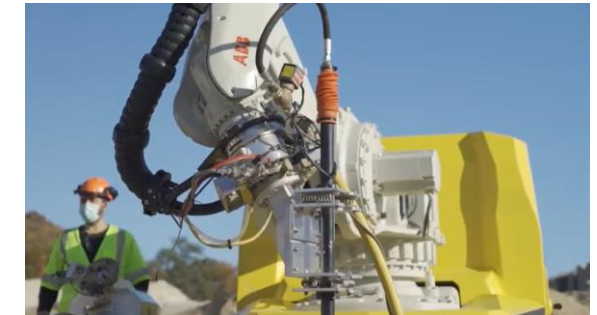
### Masonry walls

NCCR Digital Fabrication



### Drilling

ULC Technologies



# How we support transformation in the construction industry today

## Off-site automation

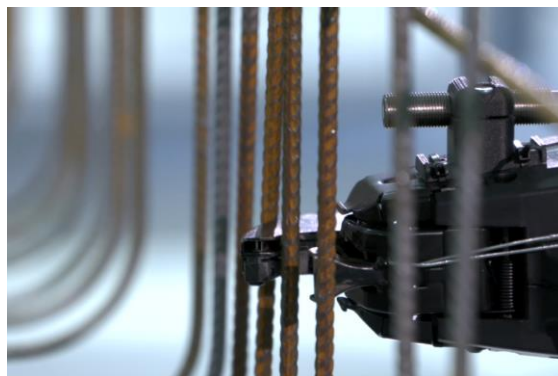
### Assembly of modules

Autovol



### Structural

SKANSKA



### Diverse

IndexLab

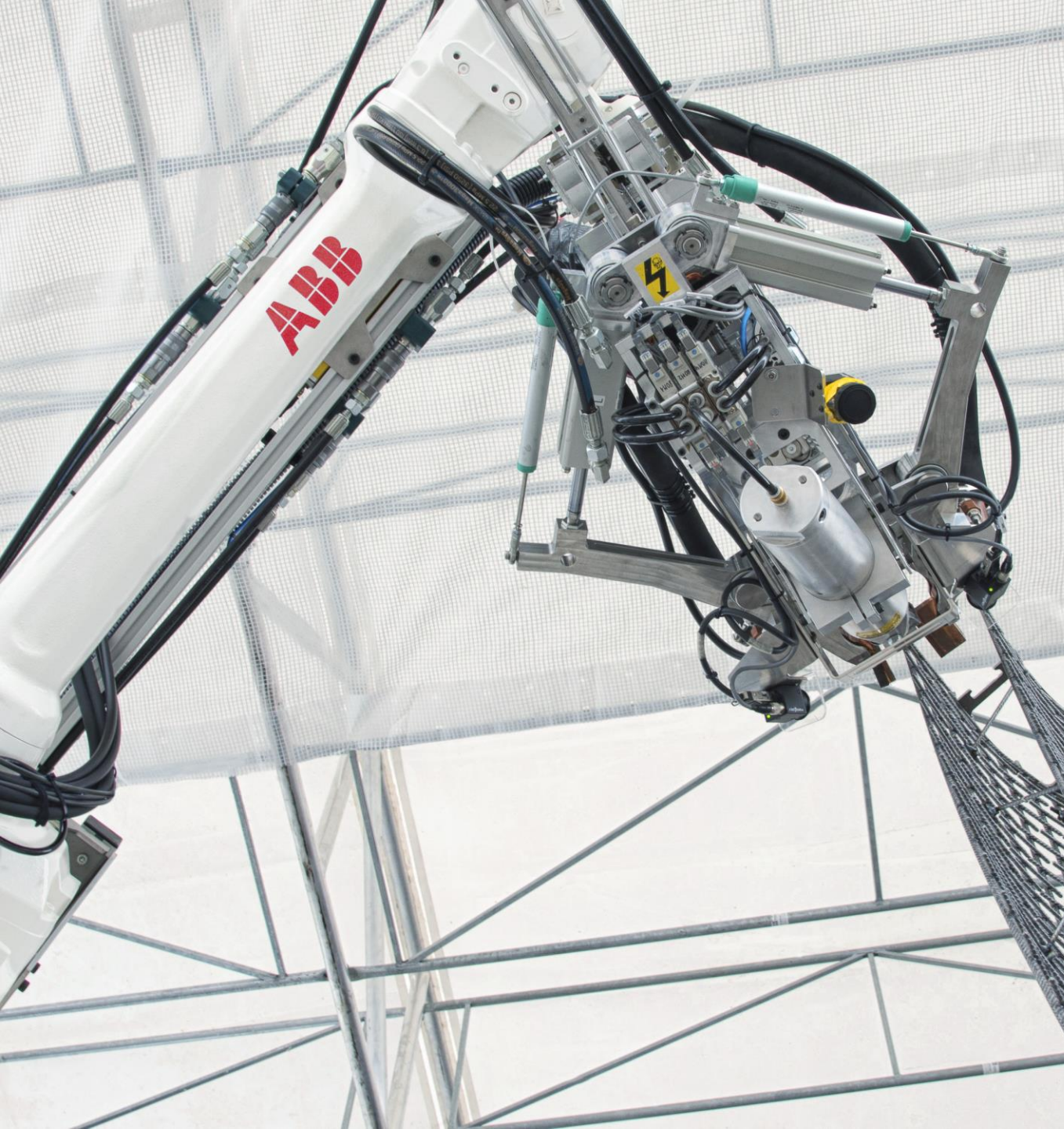


### Additive Manufacturing

Weber – Saint Gobain







# The construction sector is facing a “perfect storm”

1. What do you see as the major challenges facing the construction industry the next 5-10 years?
2. Why do you think robotics have not been embraced earlier by the construction industry?
3. How do you perceive the benefits of modularization and standardization off pre-fab components?



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# Thank you



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