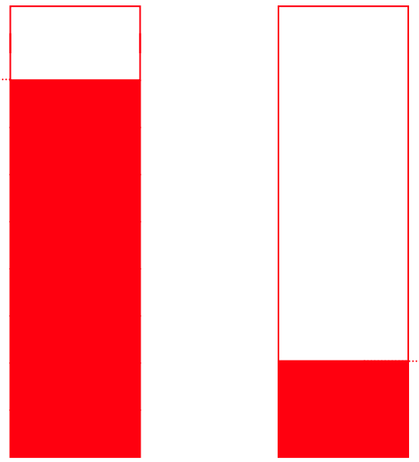
Global construction industry needs automated solutions to meet demand for pre-fabricated buildings

Offsite construction of pre-fabricated buildings has been around for many years, but ABB Robotics believes that automation and digital technologies can allow the industry to attain a new level of efficiency, productivity and performance in its built products.

80%

of homes in Sweden are now built off-site.



15-20%

of new building construction will be modular in the US and Europe by 2030 (Mckinsey).

34.7%

In Europe, the construction industry is responsible for 34.7% of the continent's waste.

Key benefits of off-site, pre-fabricated construction

QUALITY
With standardized practices and tools and in-factory quality checks, defects can be halved, with the best producers achieving **defect free rates above 95%.**

TARGETS
Offsite construction is **less weather-dependent**, which can cause delays, while also being less susceptible to the costs and risk of employing sub-contractors.

COMPLETION TIMES
Offsite building can reduce total construction time **by a third.**

COST
Offsite production helps reduce costs by **improving productivity**, while allowing the removal of waste and the optimization of supply chains. It can help reduce the cost of inner-city projects, due to limited access in and out of the site.

WASTE
Approximately 400 million tonnes of material is used in construction in the UK every year. **100 million tonnes (25%) is waste.** By contrast, off site production allows waste and emissions to be halved through production efficiencies and recycling.

SAFETY
At 1.74 per 100,000 construction workers, the fatal injury rate is almost **four times** the rate across all industry sectors. Robots can improve safety by taking on the most hazardous tasks, leaving people free to plan and solve problems.

By **2030**

ABB predicts a significant change

81%

81% are likely to introduce, or increase, their use of robots in the next 10 years.