



**RIB**

Use Case

**Smart Productions  
sensor technologies  
for sustainable  
prefab production**



# Transforming Prefab Production for Sustainable Excellence

Using modern sensor technologies and embodied carbon tracking

## 1. Challenge

In pursuit of excellence and environmental responsibility, the forward-thinking prefab plant embarks on a transformative journey to revolutionize its production process. The plant aimed to produce more sustainably and reduce waste, all while maintaining uncompromised quality.

## 2. The Smart Production Solution:

To realize their sustainable vision, the prefab plant embraces the cutting-edge RIB Smart Production technology, seamlessly integrating advanced sensor technology into their production workflow. The comprehensive solution includes the following key components:

### RIB MES and DOKA's Concremote Sensor:

At the heart of the smart production solution was the native integration of DOKA's Concremote Sensor into RIB MES. This technology continuously monitored the progress of concrete curing, providing real-time data and insights to the master computer, enabling it to optimize the curing process. By doing so, it significantly reduces the waste of energy and time caused by inefficiencies during the curing process.

### RIB Smart Productions Casting Thickness Check:

Leveraging the innovative technology, the prefab plant gained an accurate and real-time view of the concrete pouring process. The Casting Thickness Check allowed them to optimize quality management and fine-tune their pouring process, leading to a substantial reduction in unnecessary concrete waste and ensuring flawless end products.

### RIB's Carbon Quantifier

As part of their commitment to environmental stewardship, the prefab plant integrates RIB's Carbon Quantifier into their operations. This powerful tool precisely tracks embodied carbon during production, enabling them to effectively minimize their carbon footprint.



### 3. Seamless Implementation:

The implementation of these cutting-edge technologies needs to be meticulously planned and executed, ensuring a seamless integration into the prefab plant's production process. Our skilled team of experts collaborates with on-site engineers to incorporate Concrefy and RIB Smart Productions Casting Thickness Check into their RIB MES workflow. This results in enhanced visibility and control over the concrete pouring process, empowering the optimization of resource usage and minimizes wastage.

The RIB Carbon Quantifier seamlessly integrates into their operations, providing real-time data on CO2 emissions. This valuable information not only allows to make informed decisions to reduce environmental impact but also provides essential data for sustainability reporting and compliance.

### 4. Benefits and Outcomes

The prefab plant's sustainable production approach yields numerous benefits for both their operations and the environment:

- **Waste Reduction:** Optimized quality management through sensor technology leads to a substantial reduction in concrete waste. Overpouring is significantly minimized, saving valuable resources and costs. Underpouring and subsequent product failures are reduced to a minimum as well.
- **Enhanced Quality Control:** Real-time monitoring and insights from the sensors ensure the concrete pouring process is meticulously managed, resulting in superior end products with fewer defects and failures due to underpouring.
- **Lowered CO2 Emissions:** By accurately measuring and analyzing CO2 emissions with the Carbon Quantifier, the prefab plant actively works towards minimizing their carbon footprint, aligning their operations with their sustainability goals.
- **Empowered Sustainability Reporting:** The integration of sensor technology provides sustainability officers with comprehensive and precise data on their production output and environmental impact. This data-driven approach facilitates strategic decision-making and transparency in their sustainability reporting.

### 5. Conclusion

As pioneers in sustainable prefab production, the plant stood at the forefront of eco-friendly innovation. By embracing RIB Smart Production's sensor technology, they not only achieve greater operational efficiency but also demonstrate an unwavering commitment to environmental responsibility. With this powerful transformation, the prefab plant is confident in leading the way towards a greener and more sustainable future for the entire industry.



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