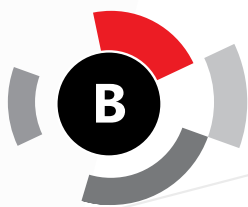


CASE STUDY



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## Gaining Real-Time Visibility Using ThingWorx



10,000+ Employees



Automotive Brake System



US, Mexico, & Expanding

Brembo is a world leader in the design, development and production of braking systems and components for cars, motorbikes, industrial vehicles and machinery, for the Original Equipment market, after-market and racing. Headquartered in Italy, Brembo has production sites in 15 countries spanning North America, Europe, Asia, and South America. Easily identified by their red brake systems, even those outside of the racing world are familiar with the prestigious brand Brembo has built.

## SUMMARY

### ! THE CHALLENGE

Disparate systems and islands of information on the plant floor leading to limited real-time decision-making ability.

### ✓ THE SOLUTION

Integrated several disparate sources of data to capture and display a complete story of what's happening on a production line. Mashups were created for different user groups to action items.

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## THE CHALLENGE

Like many manufacturers, Brembo's largest subsidiary, Brembo North America, is looking to capitalize on real-time, smart technology to drive manufacturing efficiency. With 7 large facilities in the U.S. and Mexico, all with unique processes and equipment, Brembo had plenty of data but little insight. What they needed was a way to capture process data by integrating all the disparate sources into a consolidated plant floor solution. Brembo also wanted a complete story of what was occurring on each manufacturing line so they could action these insights and improve throughput, all in a way that was quick to value.



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## THE APPROACH

Brembo went to the market to find an IoT platform and integrator that could deliver value in weeks rather than months. PTC's ThingWorx appealed to Brembo because of its flexible foundation, and ability to leverage investments in interfaces and data stores – meaning they didn't have to start from scratch. Further, they wanted to ensure the approach proved functional, while providing the proper framework to expand capabilities and scale across the enterprise. As a trusted ThingWorx integrator, PTC knew Brock could bring the automation and IoT expertise necessary, and methodology to design solutions with scalability for Brembo's large-scale enterprise. Working collaboratively with the customer, Brock Solutions outlined a digitization roadmap, starting with a 3 line pilot followed by a phased approach to a full facility rollout, improving and enhancing the system as each phase was implemented. This approach allowed for other value-add enhancements and functionality to be implemented from the 'wish list' while the system was being deployed throughout the rollout.



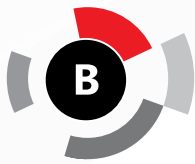
## THE SOLUTION

The solution leverages Kepware to tie in and integrate several disparate sources of data to capture and display a complete story of what's happening on a production line. Sources of integration included various plant equipment (lathes, mills, robots etc.), PLCs, Quality Systems, ERP, Maintenance Systems, etc.

In approximately 10 weeks from inception to delivery, Brock leveraged the connectivity of Kepware and rapid development capabilities of ThingWorx to collect and display this data on three custom mashups (see images) to provide three unique user groups with real-time actionable data.

The plant manager can view overall operational efficiency of the facility in real-time on a tablet, a line operator can view their production metrics including actionable alerts like fluid refills on a single pane of glass, and a continuous improvement representative can troubleshoot events regardless of system, all in a single platform.

This automated data capture and improved visibility of the plant floor have given stakeholders across various levels of the organization the insights needed to make smart, informed business decisions leading to reduced scrap and overall downtime, ultimately impacting the bottom line of the business.



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## CASE STUDY brembo

### NEXT STEPS

With the 50+ line plant rollout coming to a close, Brock, ThingWorx and Brembo are now deploying the solution to other manufacturing sites in the US and Mexico. With the infrastructure now in place, Brembo is looking at other ways to leverage the platform, exploring things like energy management and predictive analytics.

PTC's partnership with Brock Solutions, along with the ThingWorx platform, have helped us accelerate our digital transformation. The solutions delivered have shown value in weeks, rather than months, and will help us drive innovation and improved business results.

**Dan Sandberg**  
CEO Brembo North America

### ABOUT BROCK SOLUTIONS

*The largest, independant global integrator in the real-time digital space.*

**\$150+**  
**MILLION**  
IN REVENUE

**600+**  
**INDUSTRY**  
PROFESSIONALS

**30+**  
**YRS**  
**EXPERIENCE**  
AUTOMATION  
& MES

**10K**  
**GLOBAL**  
PROJECTS



Serving customers in multiple sectors of the manufacturing industry

**Continuous**

**Batch**

**Discrete**

**Complex Assembly**

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