INDUSTRIAL IOT SOLUTIONS: BEST PRACTICES FROM POC TO EXPANSION

Barbara Couturier & Neal Hagermoser

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PTC: A GLOBAL TECHNOLOGY LEADER

Vertica ls

- 33% Industrial Products
- 15% Federal, Aerospace & Defense
- 16% Electronics & High Tech
- 14% Automotive
- 8% Life Sciences
- 8% Retail & Consumer
- Other 6%

Regions

- 42% Americas
- 39% Europe
- 19% Asia Pacific

Fast Facts

- $1.24B FY18 Total Revenue
- 6K Employees
- 30 Year Heritage of Innovation
PTC IS UNIQUELY POSITIONED TO DELIVER IOT SUCCESS

**Market Leadership**

"A key player for product manufacturers in the connected world, commonly referred to as the Internet of Things (IoT)"

ThingWorx is in the **upper right quadrant**.

"PTC is moving quickly to own the IoT and to strongly channel it for customers to use in new and strategic ways."

"PTC provides the vision, the technical resources, and the ongoing commitment to win in this market."

**The Internet of Things (IoT) Enablement Company of the Year for the Enterprise Market.**

**Thought Leadership**

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<td>How Smart, Connected Products Are Transforming Competition</td>
<td>How Smart, Connected Products Are Transforming Companies</td>
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**ARTICLE COLLECTION**
A Manager’s Guide to Augmented Reality

- How to Engage with Augmented Reality
- Augmented Reality in the Workplace
- Augmented Reality in the Classroom
- Augmented Reality in the Home
- Augmented Reality in the City
- Augmented Reality in the Future
- Augmented Reality in the World
RECORD OF SUCCESS WITH OUR JOINT CUSTOMERS

2X production capacity. Reduced quality defects by 50%.

50% reduction in planned maintenance costs.

Leading Tools Manufacturer

Proved success with condition monitoring and cross factory visibility, which led to the current implementation plan for >100 factories.
CUBE PACKAGING

• Scenario
  – Produce High-quality, environmentally-conscious and ethically-manufactured packaging products
  – Strive to improve manufacturing operations by implementing initiatives to minimize their environmental impact
  – Continue digital transformation journey

• Results:
  – **Proactive Monitoring.** Ability to address issues before they cause downtime. Reduced quality defects by 50%.
  – **Streamline Operations.** Ability to take faster action to reduce downtime. Doubled production capacity.
  – **Faster Time to Insight.** Ability to gain insight into processes in real time.
• Consortium 5 IoT Projects:
  – Advanced Analytics with Predictive Maintenance
  – Advanced Video Analytics – Video as a Sensor
  – Safety and Security – Man-down and Directed Response
  – Connected Worker – Location-based and Context-aware
  – Full Asset Management – Integration with Mechanical Integrity

• Results
  – New business lines and income sources
  – 2X increase avoided in insurance deductible through Asset Integrity Management
  – 50% Reduction in planned downtime
MAJOR TOOLS MANUFACTURER

• Scenario
  – Journey to Industry 4.0, includes 20+ IIoT use cases, including operations optimization, predictive maintenance and inventory optimization.
  – Successful POV and early expansion led to the current plan to roll out to over 100 factories, worldwide.

• Goals
  – Operations optimization:
    • Increase productivity 10 - 25%
  – Predictive maintenance:
    • Reduce costs by 10 - 40%,
    • Reduce downtime up to 50%
    • Reduce capital investment 3 - 5%
  – Inventory optimization:
    • Save 20 - 50% of carrying costs
SUMMARY FOR SUCCESS

• **Start Small** and gain tangible value.
  – Have a clear goal for your POC, with measurable outcomes.

• **Create a Foundation** to expand and scale.
  – Include IT and leverage a standard architecture.

• **Invest in digital technologies.**
  – Critical for manufacturing organizations, like Cube Packaging, Texmark, and Hirotec to realize:
    • Faster Time to Insight
    • Accelerated Deployment
    • Future Readiness
Thanks for Your Time!

Neal Hagermoser
nhagermoser@ptc.com

Barbara Couturier
bcouturier@ptc.com