THINGWORX APPLICATIONS
Asset Monitoring and Utilization
ThingWorx Applications accelerate time to value and time to scale by focusing on use cases that have substantive impact on the P&L while building a foundation for digital transformation.

High impact applications replace custom, bespoke approaches with repeatable, configured-not-coded, applications that leverage the domain expertise from hundreds of successful implementations.

These applications vastly reduce the effort associated with designing, coding, and testing new applications.
High impact applications

- Built for multiple customers, industries, locales and sites
- Affordable, quick to deploy and easy to support
- Extensible (horizontally and vertically)
- Built for performance at scale with dozens of assets at dozens of sites
- Managed applications with version control and pre-requisites
- Upgradable applications aligned with ThingWorx capabilities, features and releases
Vastly reduced efforts

- Up to 90% reduction in application development time & cost
- As much as 75% faster time to value
- As much as 67% reduction in time to scale
The high impact applications align to the most common requirements. This enables companies to rapidly create a foundation for digital transformation.

Using our scalable, extensible platform, they can iteratively extend into additional digital transformation use cases.
Out of the Box Features

- Multi-Language Support
- All features/displays configurable to security roles and settings
- Process Troubleshooter
- Waste, Downtime, and Production tracking models
- Waste and Downtime reporting mashups

System Configuration Displays:
- Plant Model
- Reason Trees
- Control Characteristics
- Smart Tools
- Products
Key capabilities

Ready to configure applications

Rapid implementation

Wrap & Extend

Future-proofed roadmap for continuous innovation
ThingWorx application - Asset Monitoring & Utilization (AMU)
ThingWorx Applications Framework

Leading with solutions, Pivoting strategy with applications for proven no regret use cases, that still have the power and flexibility of the platform.

INDUSTRIAL IOT SOLUTIONS PLATFORM

Asset monitoring & utilization

Advisors • Connectors • Domain Model • Business Logic • UI Elements

BUILDING BLOCKS

Connect • Build • Analyze • Manage • Experience

INFRASTRUCTURE & CLOUD
Strategic Partners • Global Systems Integrators • Management Consultants

EXISTING LANDSCAPE
Asset monitoring & utilization

With integration to maintenance systems, maintenance and reliability engineers can rapidly connect to and catalog assets, establish critical parameters needed to track asset-related performance, identify anomalous data trends, troubleshoot for root cause analysis, and access performance information from any device.

Challenges Facing the Industry

- Difficulty for maintenance personnel in a factory to connect and monitor the health of assets
- Need visibility on utilization to improve uptime and availability
- Want to inform user in real time in case of abnormal conditions

Benefits from AMU

- Using a descriptive analytics approach where asset health is monitored in real-time based on threshold values and complex event processing to identify abnormal conditions and alert people in real time. Form the basis for Predictive Maintenance.
Asset monitoring & utilization

Gain real-time visibility into asset performance, status, and overall utilization:

With a pre-built application that provides:

To enable operators to enable double digit impact:

Powered by:

InnovationSuite powered by PTC

thingworx® kepware®
Asset monitoring & utilization

Gain real-time visibility into asset performance, status, and overall utilization:

With a pre-built application that provides:

1. Configurable “Asset Cards”
2. Configurable alerts based on property rules and limits
3. Detailed views of trends for troubleshooting
4. Custom alerting & alarming for performance losses
5. Escalation process in case of unacknowledged alarms

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ThingWorx applications
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Asset monitoring & utilization

Gain real-time visibility into asset performance, status, and overall utilization:

With a pre-built application that provides:

To enable operators to enable double digit impact:

5 – 20% Increase in throughput

20 – 30% Reduction in unplanned downtime

2 – 13% Reduction in energy consumption

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Out of the Box Features

- Monitoring of Asset Properties through Kepware connectivity
- Configurable “Asset Cards”
- Configurable alerts based on property rules and limits
- Escalation process in case of unacknowledged alarms

KEY USERS

Maintenance engineers can see current readings and values from Asset Cards

Business decision makers can identify which assets are failing more often and why
AMU - Main Dashboard

Each Card Has:
- Number of active alarms
- Elapsed Up/Down time when applicable

Global to Display
- Configurable card size (small/medium/large)
- Filter by equipment type, alarm severity, etc...

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AMU – Alarm Configuration

Alarm Configuration

- Can create an alarm on any connected property of an asset
- High/Medium/Low alarm priorities
AMU – Alarm Configuration

Alarm Conditions

• Attribute-based alarms
• Multiple conditional operators
  • (=, <>, <, >, <=, >=)
  • Out of range, Between, Not in Between)
• Compare with constant or limits
AMU - Alarm Configuration

Alarm Actions

- Action: sending an email
- Title and body are configurable
- Adding multiple actions
AMU – Alarm Configuration

Alarm Escalation

- 3 levels of escalation possible
- Time-based escalation (unacknowledged)
- Alarm condition is still open after x minutes even if acknowledged
AMU - Alarm Acknowledge

- Designed to fit on a mobile
- Acknowledge link directly from the email
- Information about limits
**AMU - Reporting**

**Alarm Overview Report**

- Advanced filtering options (Asset type, properties, etc..)
- Distribution of alarms by severity or status
- Drill-down from pie chart to bar graph
- Y axis options
  - Alarm Count
  - Avg. Ack. and Closed Time
- X axis options
  - Equipment
  - Time
  - Status
AMU – Reporting

Alarm Notifications Report

- Advanced filtering options (Asset type, properties, etc.)
- Distribution of alarms by equipment or person
- Drill-down from pie chart to bar graph
- Y axis options
  - Notifications Count
- X axis options
  - Equipment
  - Time
  - Person