



Facilities Management Solutions

Delivering Open Choices to Facilities Managers

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Executive Summary

In today's environment, Facility Managers are faced with several significant challenges as they struggle to manage the needs of their organization. They are facing increasing costs for energy, service and maintenance, additional and more complex security and regulatory requirements with fewer knowledgeable resources. With all these challenges, they are constantly looking for ways to streamline their operations and reduce costs.

The biggest single issue, as identified by open communications protocol organizations like LonMark® and validated by Echelon®, is the proprietary distribution models offered by established Building Automation System (BAS) suppliers. These models are exclusively provided by a single contractor for a specific territory, thereby eliminating competitive bids for installation, maintenance, service and support. Facility Managers worldwide echo this sentiment signifying the need for more choices in the selection of products and services.

Wonderware facilities management software offerings are provided through an open distribution model to the largest independent systems integrator network in the world without exclusivity for product or territory. This model enables competitive choices to end-user customers in their selection of contractors, service, support and maintenance which overall helps provide the lowest total cost of ownership. This open distribution model has served to create a competitive environment for the industrial manufacturing sector. This model has helped create robust, innovative and advanced applications enabling manufacturers to stay agile and extremely competitive in the global market place.

Now these same benefits can be realized by Facility Managers worldwide as the Wonderware Ecosystem of Partners, System Integrators and Solution Providers is now available to the Infrastructure needs of the market through the Wonderware Facilities Management Software Solution.

Open Standards are the Key to Cost Savings in Facilities Management

Most traditional BAS vendors deliver a costly architecture due to proprietary hardware, software and a single vendor supplied solution for the entire application. With the Wonderware software solution, the supervisory environment is decoupled

from the control environment, unlocking the architecture for open, competitive, and consistent supervisory solutions while also enabling competitive bids for the control layer. In addition, the supervisory layer software is decoupled from the hardware providing the capability to upgrade each component separately as technology changes occur and customer needs evolve.

Part of the customer demand for a more sustainable architecture has been the development and adoption of open industry standards. Many trade and technology organizations have built into their charter the collaborative process of creating a set of data communications standards that will enable their customers the option of implementing a solution from multiple vendors. In the Industrial environment, DDE, NetDDE (developed by Wonderware and provided to Microsoft®), Modbus®, OPC®, SNMP and XML are typical supported protocols. Wonderware also supports established application standards such as S95 (the international standard for the integration of enterprise and control systems) and S88 (a consistent set of standards and terminology for batch control which defines the physical model, procedures, and recipes).

Additionally, Wonderware now has data access servers for BACnet®, LonMark and the Echelon i.LON® SmartServer, with utilities devoted for application development and automatic network, device and object creation services built in for system integration simplicity.

The Wonderware Software Solution Provides a Faster Start to Application Development

The Wonderware Facilities Platform provides the basic application services needed for a modern facilities monitoring application. Included is a library of templates, graphics, faceplates and symbols managed by the Facilities Platform for designing, developing, deploying and managing a distributed network of applications in a consistent and efficient manner. All systems, devices, applications and assets within facilities can be modeled as templates. Templates enable the building of the entire solution with approved standards thus providing further support for a robust and sustainable model. Wonderware has designed features in its software that enable customers to develop applications that are consistent in look, feel and most importantly operation.

A tremendous amount of time is saved as engineers reuse templates containing all information necessary for supervisory control including scripts, alarms and communication methods. This technique greatly improves system reliability as

these templates are field-proven. Such reusability is critically important when faced with having to train new operations and maintenance personnel. For multi-site operations, operators only need to learn how the system works for one facility and they then know how the application works across all facilities, thereby reducing the cost and time required for training and support. Existing operations best practices can be captured and enforced before knowledgeable employees exit the workforce.

Build the Open Applications Needed to Optimize Operations

Facilities managers, building owners, engineers and operations personnel can leverage what their industrial peers know. How Wonderware solutions can help them solve even the most challenging applications, and how the following industry standards and applications are being deployed effectively in the commercial sector:

Enterprise Applications

- Asset Management**
- IT Asset Integration**
- IT Security Integration**
- Maintenance Management**

Energy Applications

- Aggregation**
- Costs Analysis**
- Demand Limiting**
- Demand Response**
- Meter Management**
- Optimization**
- Real Time Pricing**
- Remote Generator Dispatch**
- Smart Grid**
- Utility Bill Management**

Equipment Monitoring

- Availability**
- Optimization**
- Performance**
- Utilization**

Regulatory Compliance & Validation

- 21CFR Part 11**
- Carbon Credits**
- Energy Policies**
- Green initiatives**

Weather

- Analysis**
- Influences**
- Forecast preparations**

Key Capabilities you can Leverage from the Industrial Marketplace

IT Infrastructure Protection

- Bandwidth Monitoring**
- Hacker Detection**
- Security User Credentials**
- Security Policy Compliance**

IT Compliance

- Computer Resource Monitoring**
- Firewall Friendly**
- Patch Management**

Portal Integration

- Network Device Monitoring**
- Network Performance Monitoring**

Application Development Tools

- Change Management**
- Collaboration**
- Remote Deployment**
- Replication**

High Availability

- Redundant Servers**
- Redundant Engines**
- Redundant Communications**
- Robust Architecture**

Integration standards

- BACnet**
- LonMark**
- ModBus**
- OPC**
- SNMP**
- Web Services**
- XML**

Standardization Platform

- Capture Knowledge worker intellect**
- Consistent Applications & Interface**
- Reduced Training**

Performance Management

- Costs Analysis**
- Equipment Utilization**
- Key Performance Indicators (KPI)**
- Overall Equipment Effectiveness (OEE)**

Mobile Workforce Management

- Wireless Stations**
- Network Utilization**
- Remote Annunciation**

Historian

- Analysis**
- High Performance**
- Normalized Information**
- Store & Forward**
- Within Context**

Benefits for Manufacturing Facilities Managers

With an integrated solution where the facilities management and manufacturing systems are integrated, all the costs savings associated with consistency, training, maintenance, operations and overhead are realized throughout the plant, site, region and enterprise. Additionally, the total cost of manufacturing can be calculated when the typical overhead expenses for energy are monitored in real-time and recorded to the historian, where information can be analyzed within contexts such as energy costs per batch, per product, per shift, normalized for square footage and degree day effects. When associated with time of day rates, product runs can now be analyzed and potentially shifted according to the most efficient and cost-effective schedule.

In addition, optimization algorithms that are standard in the manufacturing sector also can be implemented in the operations sector of the business. Overall equipment effectiveness (OEE) downtime analysis, maintenance management and asset management are typical applications that cross between operations and manufacturing, and when a total integrated solution is implemented, these applications can be visualized, optimized and standardized for deployment across the enterprise. Wonderware has over 500,000 active software licenses, helping customers manage operations in over 125,000 plants.

Conclusion

Wonderware software has been traditionally applied in applications for the Industrial manufacturing sector of the market, but the single biggest relationship between manufacturing and facilities is the fact that every manufacturing plant is a facility. Usually the facilities management portion of automation solutions include monitoring and controlling the environment of the plant as well as its utilities such as water, wastewater, gas, oil, steam, hot water, chilled water and energy. Many manufacturing operations are energy intensive and can be affected by temperature and humidity, components usually under facilities control.

Now these industrial capabilities can be applied in the commercial market.

Wonderware software enables great potential for existing commercial facilities and customers to take advantage of the open distribution model, industrial architecture, optimization and efficiency applications of the Wonderware Ecosystem.



Contact Wonderware or your local Wonderware Distributor for more information on automation and information solutions.

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