

Summary

Wonderware Workflow brings Business Process Management to your industrial operations.

Wonderware Workflow will:

- Ensure consistent execution of standard work processes
- Analyze existing workflows for continuous improvement opportunities
- Synchronize workflow with other plant systems
- Extend workflow to Wonderware applications such as MES, Intelligence (EMI), InTouch and IntelTrac, as well as SimSci ROMeo, PRO/II and DYNsIM product lines

Business Value

- Increase operational consistency
- Improve cross-functional collaboration
- Streamline regulatory compliance
- Improve accountability
- Reduce operational costs
- Preserve process knowledge



Wonderware Workflow

ENABLE TRUE COLLABORATION

In today's business environment, companies are faced with many challenging demands:

- Responding to market dynamics
- Driving higher levels of quality and consistency
- Managing regulatory compliance
- Managing suppliers and vendors
- Reducing operating costs
- Managing global operations

These ever-changing challenges are forcing companies to evaluate and improve their business processes across their organization.



Wonderware® Workflow software is an advanced workflow application that enables companies to digitize manual and automated processes that include people, equipment and/or systems. Based on a sophisticated Business Process Management (BPM) foundation, Wonderware Workflow enables companies to Model, Execute, Analyze and Improve processes inside and outside of their organization to drive higher levels of collaboration, productivity and innovation.

With Wonderware Workflow, companies can institutionalize work processes that manage normal, unscheduled or disruptive events within their operations environment. This industrial workflow application benefits operations, maintenance, engineering, quality, environmental & safety departments within an organization by:

- **Increasing productivity** – Automating manual processes and proliferating best practices, eliminating manual error-prone procedures, effectively coordinating people and systems to accomplish simple or complex tasks.
- **Providing ownership-driven innovation** – Employing a model-driven approach that empowers non-IT users to visually compose processes, monitor and measure the performance of processes, change and adapt processes.
- **Enabling knowledge management** – Digitizing Standard Operating Procedures (SOPs), Good Manufacturing Practices (GMPs) and work instructions to ensure that company policies and procedures are being executed in a consistent and compliant manner.

WONDERWARE WORKFLOW ENABLES ORGANIZATIONAL BEST PRACTICES

Wonderware Workflow software is a comprehensive workflow solution for industrial operations that allows organizations to build specific business processes that help in monitoring key business activities. Whether it is for regulatory compliance, or best practice sharing, or to enhance other systems of record (Manufacturing Execution Systems; Enterprise Manufacturing Intelligence; Enterprise Asset Management; Enterprise Resource Planning), Wonderware Workflow provides collaboration, visibility, and process enforcement.

WORK TASKS MOBILE APP

You can now access your Wonderware Workflow tasks while on the move, using your mobile device (Apple iPhone, Apple iPad or Microsoft Windows 8 tablet). Make decisions and take action faster with the Work Tasks mobile application. Use the latest in mobile technology to:

- Update tasks in real-time, keeping critical workflows moving
- Receive useful messages and notifications on new tasks
- Approve or reject a task
- Provide feedback via configurable forms
- Flag a task based on importance



WORKFLOW-ENABLED APPLICATIONS

Work processes in industrial facilities span across many different departments with a wide range of personnel involved. These processes typically include:

- Operations and Production related activities
- Maintenance related activities
- Quality related activities
- Warehouse related activities
- Environmental & Safety related activities



Many of these processes are embedded in commercial off-the-shelf applications and custom applications. People-driven processes are generally employed to fill the “white space” that exists between the applications. This landscape creates a significant obstacle that organizations need to overcome in an effort to drive higher levels of productivity and innovation.

Wonderware Workflow has been designed to seamlessly collaborate with existing hardware and software assets to enable organizations to Model, Execute, and Analyze processes that require people and systems to be coordinated effectively to accomplish specific business objectives. Let's take a look at how Wonderware Workflow can add value to your existing application landscape.

HMI Applications

- **Operator Alarm Response Management:** Guide operators through a series of actions to resolve a particular alarm condition. If necessary, collaborate with other resources or escalate to a supervisor to assist in resolving the alarm condition.
- **Electronic Work Instructions:** Guide operators through standardized and validated processes that have been established by the organization for common activities such as machine setup, line shutdown, plant startup, product changeover, material staging, etc.
- **Model-Driven HMI Logic:** Leverage Wonderware Workflow's visual modeling capability to eliminate custom scripting used for defining process, machine or line control logic at the supervisory level.

MES Applications

- **Specification Change Management:** When a specification change has been requested by a user, the system would submit the request to the appropriate resources (e.g. Operations, Process Engineering), enforce the decision making process, communicate the decision back to the stakeholders, and update the appropriate specification management applications (PLM, ERP and/or MES).
- **Positive QA Release:** After a production order or lot has been completed, the system would compile data from the appropriate data sources, highlight information that is out-of-spec or requires resolution, and coordinate any reviews or additional actions required for the selected disposition (e.g. release to distribution, hold for QA review).
- **QA Hold Resolution:** After a QA hold has been issued against material by an operator, the system would coordinate the appropriate resources (e.g. QA, Operations) to review the issue, as well as coordinate any reviews or additional actions required for the selected disposition (e.g. remove hold, rework, return to vendor).
- **LIMS Integration:** When a laboratory sample is required for a particular process, the system would prompt the operator for the sample, collect the sample data, send the sample data readings to the LIMS application, receive the sample results from the LIMS application, and coordinate any additional actions required based on the sample results (e.g. continue batch, place batch on hold, change batch parameters).
- **Model-Driven Business Rule Management:** Leverage the visual modeling capability of Wonderware Workflow to eliminate the custom script or code used for defining classic MES business rules.

WORKFLOW-ENABLED APPLICATIONS, CONTINUED

ERP (Enterprise Resource Planning) Applications

- **Material Receiving and Inspection:** When raw materials are received by a customer, the system would enforce the QA sampling plan defined for the product and vendor, highlight information that is out-of-spec or requires resolution, and coordinate any reviews or additional actions required to complete the receiving and inspection process prior to submitting the information to the ERP application.
- **Master Data Approval:** When master data is changed in the ERP application, the system would coordinate the appropriate resources (e.g. QA, Process Engineering) to review the change, potentially capture additional information required to make the change at the plant (e.g. effective date, qualified production lines), enforce the plant-level signoff process, and update the appropriate applications (e.g. LIMS, MES, Quality) on the plant floor.
- **Production Order Download Synchronization:** When bulk production orders are downloaded to the plants within an enterprise, the system would apply plant specific business rules to break down the bulk orders into manufacturing orders that look at the capacity constraints of a particular plant.
- **Production Order Reconciliation:** When production orders have been completed on the plant floor, the system would compile all the production records associated with the order (e.g. production, consumption, labor records) from the MES application, coordinate the resources required to review the production records (e.g. Production Supervisor, Shift Supervisor), highlight inconsistencies with the data, capture any changes made to the data, and send the reconciled information to the ERP application.

Mobile Applications

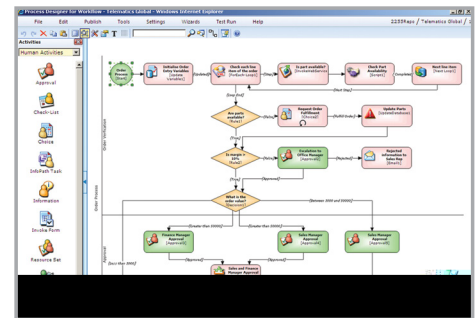
- **Demand Driven Plant Floor Inspection Rounds:** Leverage the ability to create new inspection rounds as needed for your mobile workforce.
- **Coordinated HACCP Inspections:** Coordinate appropriate resources, enforce the decision making process, communicate the decision back to the stakeholders, and update the target applications (e.g. PM and MES).
- **Lean Manufacturing Procedure Enforcement/Operator Driven Reliability Support:** Perform Preventative Maintenance (PM) tasks on all types of well and production equipment, and communicate back to the appropriate target applications
- **Coordinated Equipment Startup/Shutdown Procedures:** Enforce sequencing of work tasks with location verification and access to digital copies of equipment drawings and procedures based on situational awareness.

WONDERWARE WORKFLOW COMPONENTS

Wonderware Workflow software's process design and workflow task execution components are seamlessly embedded into Wonderware System Platform so workflow activities are found in applications that are already used in your operations. These components may also be embedded into third-party commercial applications or custom applications for a comprehensive workflow solution.

Process Designer

- Intuitive, visual modeling environment for easy process design
- Over 50 out-of-the-box configurable workflow activities
- Processes can be designed and imported from Microsoft® Visio
- Workflow actions secured through itemized security features
- Supports complex branching and decision trees
- BPMN (Business Process Modeling Notation) compliant

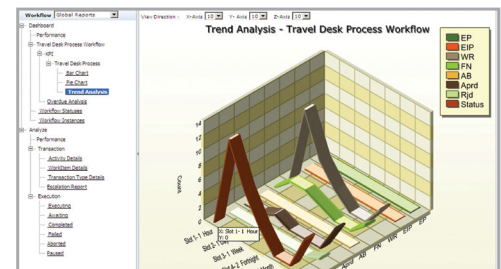


Forms Designer

- Create custom forms to collect and/or visualize data at a particular step in the process
- Editor to enable end users to create new forms, or maintain existing forms
- Forms can be linked to, or initiate, workflows
- Multiple forms can be associated with a particular workflow
- Supports "Inline" form designs
- Create custom web "landing pages" for displaying forms
- New form controls simplify form creation and maintenance
- Scripting is available to perform more advanced tasks
- Security can be applied to different fields on the form
- Supports use of Microsoft InfoPath® forms

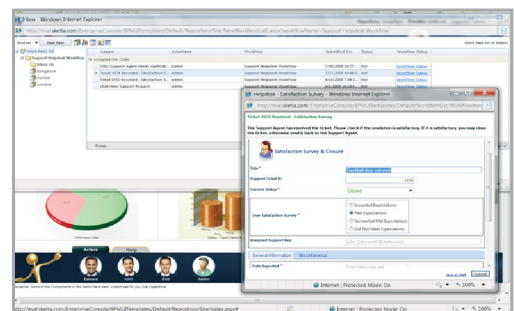
Business Activity Monitoring (BAM) & KPIs

- Out-of-the-box activity reporting and activity monitoring views
- Associate workflows with BAM events
- Customizable Key Performance Indicators (KPIs)
- Standard out-of-the-box performance analysis
- Visibility to workflow instances and genealogy
- Proactive alerts of business exceptions and KPI triggers



Communication Channels

- Comprehensive Microsoft Outlook® integration
- Support for two-way communication on mobile phones
- Supports web, PDA, email, voice and IM for task delivery and response
- Extensive API's and web services support

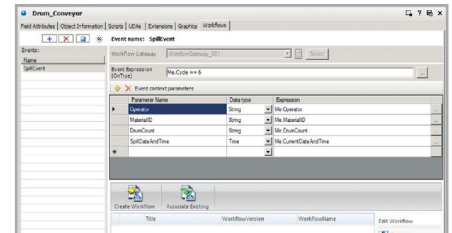


WONDERWARE WORKFLOW CONNECTORS AND ACCELERATORS

Wonderware Workflow is designed to work with your existing software infrastructure. Connectors enable data exchange between Wonderware Workflow and common plant systems, while accelerators provide tools to reduce the time needed to implement Wonderware Workflow into applications such as Microsoft SharePoint – driving faster time to value.

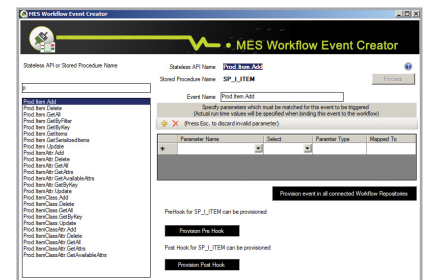
Wonderware System Platform Connector

- Provides configurable read/write and wait-for-event workflow activities for Application Server integration
- Provides access to Enterprise Console from Wonderware Information Server
- Extends standard objects in ArchemstrA® IDE with a workflow tab to configure workflow events
- Enables Wonderware Historian events to invoke workflows
- Provides ArchemstrA graphic templates for task delivery and response
- View and respond to workflow tasks in InTouch for System Platform



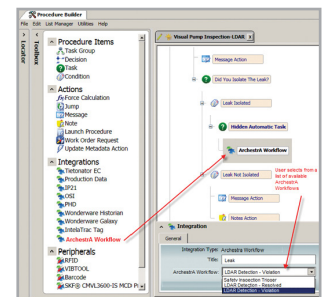
Wonderware MES Connector

- Provides configurable workflow activity to transact with Wonderware MES middleware
- Enables MES middleware extensibility hooks to invoke or interact with workflows
- Provides configurable workflow activity to retrieve data from the Wonderware MES database



Wonderware Intelatrac Connector

- Provides configurable Intelatrac Action to invoke workflows
- Provides configurable workflow activity to invoke Intelatrac web services
- Provides configurable wait-for-event workflow activity for Intelatrac procedures
- Provides configurable workflow activity to retrieve data from the Intelatrac database

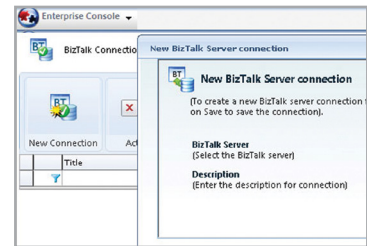


Avantis Enterprise Asset Management (EAM) Connector

- Connector leverages existing web services capabilities and reduces the time to value
- Defines workflows that will:
 - Create new Avantis objects Entities, Work Requests, Work Orders
 - Return data from Avantis objects Entities, Work Requests, Work Orders
 - Update data in existing Avantis objects

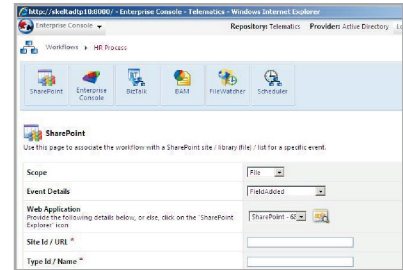
BizTalk Connector

- Invokes workflows from BizTalk orchestrations for people-based workflow integration
- Invokes BizTalk orchestrations from workflows for advanced system integration



SharePoint Accelerator

- Provides advanced workflow capability that seamlessly integrates SharePoint with your manufacturing or industrial processes
- Delivers work tasks to SharePoint lists
- Allows initiation of workflows from document libraries, lists and content types
- Offers a rich set of SharePoint Actions that inherit and manipulate SharePoint metadata during a workflow process



SUPPORTED BROWSERS

Microsoft Internet Explorer Versions:

- IE 7.0
- IE 8.0
- IE 9.0

Firefox 17.0

DATABASES SUPPORTED

- SQL Server 2005 SP3 Express
- SQL Server 2008 SP 1 Standard, Enterprise
- SQL Server 2008 SP2 Standard, Enterprise
- SQL Server 2008 SP3 Standard, Enterprise
- SQL Server 2008 R2 Standard, Enterprise
- SQL Server 2012 Standard, Enterprise
- SQL Server 2012 SP1 Standard, Enterprise

VIRTUALIZATION

- VMware vSphere (for High Availability and Disaster Recovery applications)

OPERATING SYSTEMS SUPPORTED

- Windows XP SP3 Professional
- Windows Server 2003 SP2 Standard, Enterprise
- Windows Server 2003 R2 SP2 Standard, Enterprise
- Windows Vista SP2 Business, Ultimate, Enterprise
- Windows 7 Professional, Ultimate, Enterprise
- Windows 7 SP1 Enterprise, Professional, Ultimate
- Windows Server 2008 SP2 Standard, Enterprise
- Windows Server 2008 R2 Standard, Enterprise
- Windows Server 2008 R2 SP1 Standard, Enterprise

MOBILE

- Apple iPhone/iPad iOS 5.1, 6.0, and 6.1
- Windows RT
- Windows 8 Professional

EXTENSIONS PROVIDED

Wonderware Workflow software builds on WCF / SOA / Web Service and .NET technology as an extension to the existing suite of Invensys products.

Wonderware Workflow software provides extensions to:

- Avantis.PRO Enterprise Asset Management Software
- Wonderware System Platform
- Wonderware Application Server
- Wonderware Historian Server
- Wonderware Information Server
- Wonderware IntelaTrac
- Wonderware Intelligence
- Wonderware InTouch for System Platform
- Wonderware MES/Operations and Performance

For more information on Wonderware Workflow, please contact your local Invensys/Schneider Electric sales representative, or visit us at software.invensys.com.



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Rev. 03/14 PN WW-4079