

AUTOMATING BUSINESS PROCESSES WITH EMC APPLICATIONXTENDER WORKFLOW MANAGER

A Detailed Review

Abstract

ApplicationXtender® Workflow Manager, part of EMC® ApplicationXtender 6.5, enables small and medium-size businesses to manage their business processes with enterprise-level control. Its core functionality and key features help them streamline and automate these processes, increasing operational efficiency.

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Executive summary

It is no secret that large organizations face a rapidly growing volume of information—digital- and paper-based. To cope with this information and improve the business activities such as accounts payable (AP), claims processing, and loan origination that rely on it, these companies routinely invest heavily in solutions that manage transactional processes.

But, truth be told, midsize businesses face the same information and process management challenges—albeit with far smaller budgets. They often carry extra staff in order to manage inefficient processes that are bound by the limitations of paper. At the same time, they lack the tools to analyze processes, identify the bottlenecks that breed inefficiency, and measure business performance. All told, these limitations increase costs and reduce competitive agility. EMC® ApplicationXtender® was precisely designed to meet the needs of this market. ApplicationXtender provides out-of-the-box capabilities that allow organizations to quickly create an "electronic file cabinet" for information, enabling the capture, organization, and delivery of images, documents, reports, and other business-critical information.

Built on a central repository, ApplicationXtender deploys quickly without programming and is easy to customize. Once deployed, it is simple to monitor and requires no dedicated IT support. ApplicationXtender provides specific capabilities for high-speed image capture and storage, enabling information that originates on paper to be digitized and easily accessed. With ApplicationXtender, knowledge workers can quickly retrieve information via popular Microsoft Office desktop applications or through its SharePoint integration, gaining greater control over business documents, enhancing the quality of decisions, increasing customer service levels, and improving productivity.

Using Windows-based tools, administrators can centrally configure and manage application resources such as templates and repository parameters, storage devices, and business rules. Remote management and monitoring services offer a central view of the application environment and related resources.

For current ApplicationXtender customers, this is all old news. But the release of ApplicationXtender 6.5 brings significant enhancements, including a new workflow engine—ApplicationXtender Workflow Manager. AX Workflow Manager enables small and medium-size businesses to manage their business process with enterprise-level control.

Introduction

This white paper will focus on the value of automating business processes with the high-level functionality of ApplicationXtender Workflow Manager and outline some of its key features.

Audience

The audience for this white paper includes the owners of small to medium-size businesses and line-of-business managers in the departments of large organizations.

The value of automating business processes

To remain competitive, businesses must constantly reconsider and optimize the way they do business. This means ensuring that information systems and applications don't inhibit business processes as they evolve. Just like larger organizations, many small and medium-size businesses struggle to speed transaction processing and reduce cost, while improving process quality and control. Once businesses have employed capture technology to cope with the volume and variety of content that drive their business processes, process automation can improve efficiency across a range of transactional activities from invoice and claims processing to loan origination and case management.

Automated workflow and business rules are the tools of process automation. Workflow ensures that the steps in a process are handled in the correct order. When integrated with workflow, business rules capture and enforce the business requirements of a process such as approvals, activity queue length and wait time, financial limits and thresholds, exceptions and exception routing, regulatory guidelines, and so forth.

The same technology that enables processes to be automated via workflow also makes processes auditable. As transactions pass from step to step in a workflow, they create audit trails. Audit trails can be used to analyze process efficiency and prove compliance with internal guidelines and regulatory mandates.

For companies that deploy it, process automation technology provides a host of benefits, including:

- Reduced cycle time
- More efficient operations at lower cost
- An integrated view of process information
- Greater accuracy and fewer manual processing errors
- Improved response to compliance and litigation inquiries

The publishing industry was an early adopter of automated business processes. In the mid-1990s, many publishers re-engineered their business processes to reduce the costs of delivering print copies of books and journals to warehouses and consumers. The industry adopted digital processes that could be managed electronically—and in many cases automated. It was workflow technology that provided the methodologies and software to manage and automate those digital processes.

EMC ApplicationXtender Workflow Manager

Most business processes involve several departments within an organization. They may also include parent company subsidiaries or even third-party participants outside the organization such as partners and suppliers. EMC ApplicationXtender Workflow Manager is an advanced workflow solution that includes the process management and analysis capabilities necessary to create departmental and horizontal workflows and improve process efficiency. Built on the Microsoft .NET framework, AX Workflow Manager easily integrates with existing line-of-business business applications.

AX Workflow Manager enables organizations to improve performance and reduce costs within and across functional business units by automating and optimizing manual, document-intensive processes such as those found in AP and loan origination. With AX Workflow Manager, business analysts can design, test, implement, analyze, and manage automated workflows. AX Workflow Manager includes workflow samples, a user-friendly, graphical process designer, and built-in reporting and forms support. Bottom line, ApplicationXtender Workflow Manager is more powerful and much easier to use than its predecessor, AX WorkflowXtender. AX Workflow Manager enables business analysts to:

- Use an intuitive, graphical process designer to discover, analyze, and design workflow automations without coding or IT support
- Streamline processes by eliminating bottlenecks and unnecessary or redundant steps
- Test and refine processes before they're deployed in a production environment
- Centrally integrate, categorize, and manage processes with AX Workflow Manager's Enterprise Console
- Enjoy advanced customization and integration capabilities using .NET
- Implement a workflow solution in minutes with out-of-the-box workflow samples
- Monitor and analyze user and process performance with built-in reports
- Leverage platform support for the latest databases including Microsoft SQL Server and Oracle
- Meet compliance requirements with comprehensive audit trails

AX Workflow Manager also features advanced server clustering, which accommodates growth and enables organizations to:

- Scale workloads across multiple servers
- Monitor CPU utilization and health
- Distribute work to the least active CPU
- Cluster commercial databases such as SQL Server and Oracle

The capabilities of AX Workflow Manager boost process efficiency while reducing staff and operational expense—a significant contribution to an organization’s competitive strength.

Use case—accounts payable

Although this white paper uses an accounts payable use case to illustrate the value of automating business processes, process automation can be applied to virtually any transactional activity as the following table makes clear.

Table 1. Process automation benefits many functional areas

Financial <ul style="list-style-type: none"> • New account enrollment • Expense report processing • Credit review • Sarbanes-Oxley control 	Administrative <ul style="list-style-type: none"> • Procurement • Contracts management • Facilities management • Customer complaints
Human resources <ul style="list-style-type: none"> • New hire processing • Performance reviews • Benefits administration • Leave and travel requests 	Information technology <ul style="list-style-type: none"> • Service desk requests • Change management • Enhancement requests • Lead follow-up
Sales and marketing <ul style="list-style-type: none"> • Customer communications • Pipeline updates • Forecasting • Order fulfillment 	Product development <ul style="list-style-type: none"> • New product introduction • Product enhancement requests • Quality assurance • Bug reporting

Accounts payable (AP) is an instructive use case because the AP function exists in just about every business regardless of size or industry. According to International Accounts Payable Professionals, it costs over \$8 to process an invoice and 70 percent of that cost is tied to physical document handling. Considering the invoice volume a typical AP department handles, that \$8 represents a very significant operational expense on an annual basis. On its own, volume strains AP resources, often preventing timely payment processing. Processing paper documents simply

compounds the problem and adds to the cost. Especially in distributed environments, paper documents:

- Create complex and time-consuming invoice approval and payment authorization routing
- Require manual data entry and document matching that delays the payment process
- Result in late payments that damage vendor relationships, incur late-payment penalties, and jeopardize credit ratings

Clearly, technology that increases an AP department's volume processing capability without increasing headcount can deliver substantial cost savings.

Meeting the demands of accounts payable with ApplicationXtender and ApplicationXtender Workflow Manager

ApplicationXtender provides AP departments with a comprehensive solution that streamlines the entire invoice processing environment. It does this in a variety of ways, not the least of which is with a central repository to capture and store all electronic information. As Boston's Delphi Group points out, most businesses lose 15 percent of the paper they handle, and each lost piece of paper costs a business \$120 on average. So a central repository would seem an obvious first step for AP departments looking to improve operations.

But as fundamental as a central repository is, ongoing process improvement requires workflow technology that facilitates timely routing of invoices for approval, improves the accuracy of data entry, and feeds key information directly into ERP and financial systems. ApplicationXtender Workflow Manager addresses this need to automate and control the invoice processing flow.

With AX Workflow Manager, invoices are scanned as they are received, keyed into the accounting system, and automatically routed to appropriate personnel until the invoice is paid. Paid invoices and all related documentation are archived in the ApplicationXtender repository. AX Workflow Manager deploys rapidly to reduce processing time while boosting employee productivity and improving information accuracy.

To simplify deployment and reduce time-to-proficiency for AP staff, AX Workflow Manager leverages industry-standard, predefined invoice approval and routing schema. And, with ApplicationXtender's flexible architecture, AX Workflow Manager can be tailored to meet the needs of virtually any organization in any industry. AX Workflow Manager brings improved speed, accuracy, and efficiency to every one of the four primary steps in AP processing: capture; cost distribution and coding; invoice routing and approval; and archival.

Step One: Capture

Via QuickScan™ Pro for ApplicationXtender, AX Workflow Manager electronically captures invoices and other paper documents. QuickScan Pro supports image

enhancement, optical and zonal character recognition, barcode and patchcode recognition for automatic document separation, and the advanced document features of most commercially available scanners. Critical information such as vendor, date, and amount are extracted automatically, reducing human intervention and error.

Step Two: Cost distribution and coding

AX Workflow Manager enables account codes to be imported from existing systems and selected using pull-down menus. This accelerates cost distribution and improves accuracy.

Step Three: Routing and approval

Once an invoice has been coded, AX Workflow Manager automatically routes it to the appropriate individuals for approval. Routing schema can include separate approval steps for particular line items, invoice threshold amounts, and exception items. Once an invoice is approved, AX Workflow Manager can update an external AP or ERP system with cost distribution data.

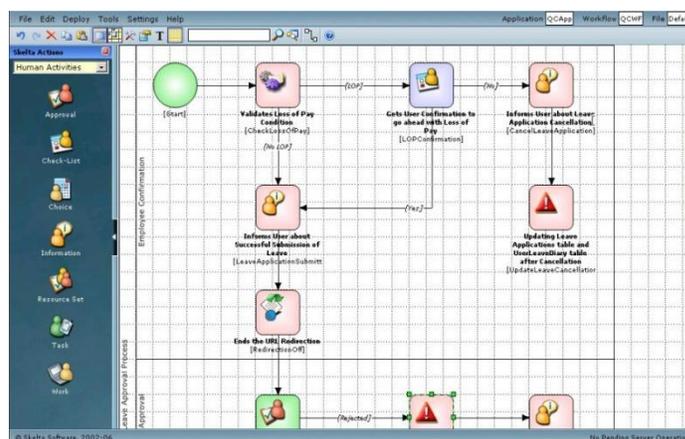


Figure 1. AX Workflow Manager's graphical process designer

Step Four: Archival

AX Workflow Manager creates a summary report, which is attached to invoice images for storage. An index record points to the same image invoice for each invoice line item, including amounts, general ledger account number, and approving authority. The invoice and all associated documents can be stored securely in the AX repository, which will enforce the organization's record-keeping, information governance, and retention policies.

ApplicationXtender Workflow Manager delivers end-to-end visibility and control over every step of the AP process. It helps AP managers maximize resource utilization while:

- Reducing process cycle times
- Optimizing the supply chain through integration with customer and vendor systems
- Streamlining information flow between AP and enterprise applications

- Enhancing the overall value of AP to the business

ApplicationXtender Workflow Manager—a functional overview

ApplicationXtender Workflow Manager provides a strong collaborative platform for designing, executing, managing, and monitoring automated processes. AX Workflow Manager includes four modules:

- Process designer
- Forms designer
- Management console
- Workflow analytics

Process designer

AX Workflow Manager's graphical process designer is a 100 percent web-based tool similar to Microsoft Visio and requires no client software installation. Business users can employ the process designer to model simple or complex process flows with drag-and-drop ease. The process designer also offers wizards to simplify process modeling and definition for the average user.

AX Workflow Manager follows industry standards such as Business Process Modeling Notation (BPMN), ensuring that process models are interoperable and easily understood. Processes can be created, modified, and maintained throughout the process life cycle in the process designer environment. AX Workflow Manager offers a superior platform for developers and knowledge workers to collaborate on highly complex applications. Developers can also enhance AX Workflow Manager's capabilities by creating custom activities that can be exposed to knowledge workers when desired.

Human workflow capabilities

AX Workflow Manager's modeling environment allows creation of interactive human workflows right out of the box. It provides comprehensive support for more than 40 patterns of work allocation and task performance. Tasks can be assigned directly to users, Active Directory groups or roles, to a custom user directory, or via business rules associated with a task.

Users can perform tasks on the web (through SMS, instant message systems, and mobile devices) and, on or offline, with Microsoft desktop applications such as Outlook. In addition, AX Workflow Manager supports group-based task allocation for help desks and sales teams and allows varying levels of automated task allocation based on business rules.

Queue management

AX Workflow Manager also provides queue management, which allows groups of users to be identified as a common pool for task allocation. AX Workflow Manager queue management has the following features:

- Support for push-pull patterns
- Classification of participants by role or user
- Definition of access rights
- Queue level escalation
- Automated or manual allocation of tasks

Forms designer

Custom forms are integral to process workflows. They capture critical information, facilitate collaboration and approvals, and often trigger new workflows. The Workflow Manager forms designer helps users achieve a better fit between their needs and the business purpose of a form. Like process designer, forms designer is 100 percent web-based. It is a WYSIWYG editor that enables rapid design of even complex forms and provides a range of design controls including text input, Boolean inputs, drop-down menus, grids, panels, and tabs. In addition, a form can display any document that resides in the AX repository. With forms designer, it is easy to link forms to processes and even call forms from within workflows. Forms designer can also apply validation rules to form fields to eliminate data entry errors.

Management console

ApplicationXtender Workflow Manager offers centralized process management through a unified console interface and enables administrators to group processes via multi-level categories. The management console functions as a repository for all process types—ApplicationXtender processes, manual processes, and other automated processes. Through the console's task list interface, managers can also coordinate tasks assigned to teams. In addition, the console provides:

- Customizable process documentation templates
- A consolidated view of all process attributes such as implementation status and process owner
- Version control, tracking, and auditing for process changes
- Workflows for process automation requests

Business activity monitoring

AX Workflow Manager's business activity monitoring (BAM) capabilities deliver powerful analytical tools for process optimization. These tools enable administrators to control process execution through realtime notification of exceptions and SLA violations and support improved business decision making. They can identify and

monitor process bottlenecks, identify star performers, and dramatically improve resource allocation.

AX Workflow Manager allows workflow execution to be displayed in three views—analyst view, process view, and execution view. BAM reporting features include:

- 3-D graphs with drill-down capabilities
- Comprehensive statistics on process performance
- Detailed productivity and trend analyses

AX Workflow Manager dashboard

The dashboard provides immediate insight into how IT events at the process execution level will affect business transactions. The dashboard has two views:

- The workflow status view gives details of workflows finished successfully, workflows finished with errors, and workflows in pending mode.
- The workflow instance view shows the details of workflows running concurrently.

AX Workflow Manager analyzer

The analyzer delivers detailed productivity and trend analyses through two reports:

- The transaction analysis report gives details of activity, work item, and transaction type.
- The execution analysis report defines the execution status of workflows according to five categories: in process, waiting, completed, failed, and aborted.

AX Workflow Manager key performance indicators

AX Workflow Manager also lets business users define key performance indicators (KPIs) and business activity thresholds for the purposes of process reporting and productivity monitoring. Further, KPIs and thresholds can be used to trigger automated alert e-mails.

Conclusion

Next steps

All transaction-intensive businesses can benefit from a content management system that bridges the gap between paper and electronic documents. Yet many departments and midsize companies do not need the functionality of a large-scale, enterprise solution in order to improve process efficiencies. Nevertheless, with EMC ApplicationXtender, these organizations can still find robust capabilities for managing paper documents, electronic files, large print reports, and electronic forms; apply sophisticated workflow to business processes; and leverage powerful records and retention management and archival features. ApplicationXtender is quick and easy to deploy in Windows environments. Its web- and Windows-based interfaces enable users to be productive immediately—with virtually no learning curve. Best of all, ApplicationXtender delivers rapid return on investment while staying well within budget and IT infrastructure constraints.

To learn more ApplicationXtender and ApplicationXtender Workflow Manager, call your EMC account manager or EMC partner today.