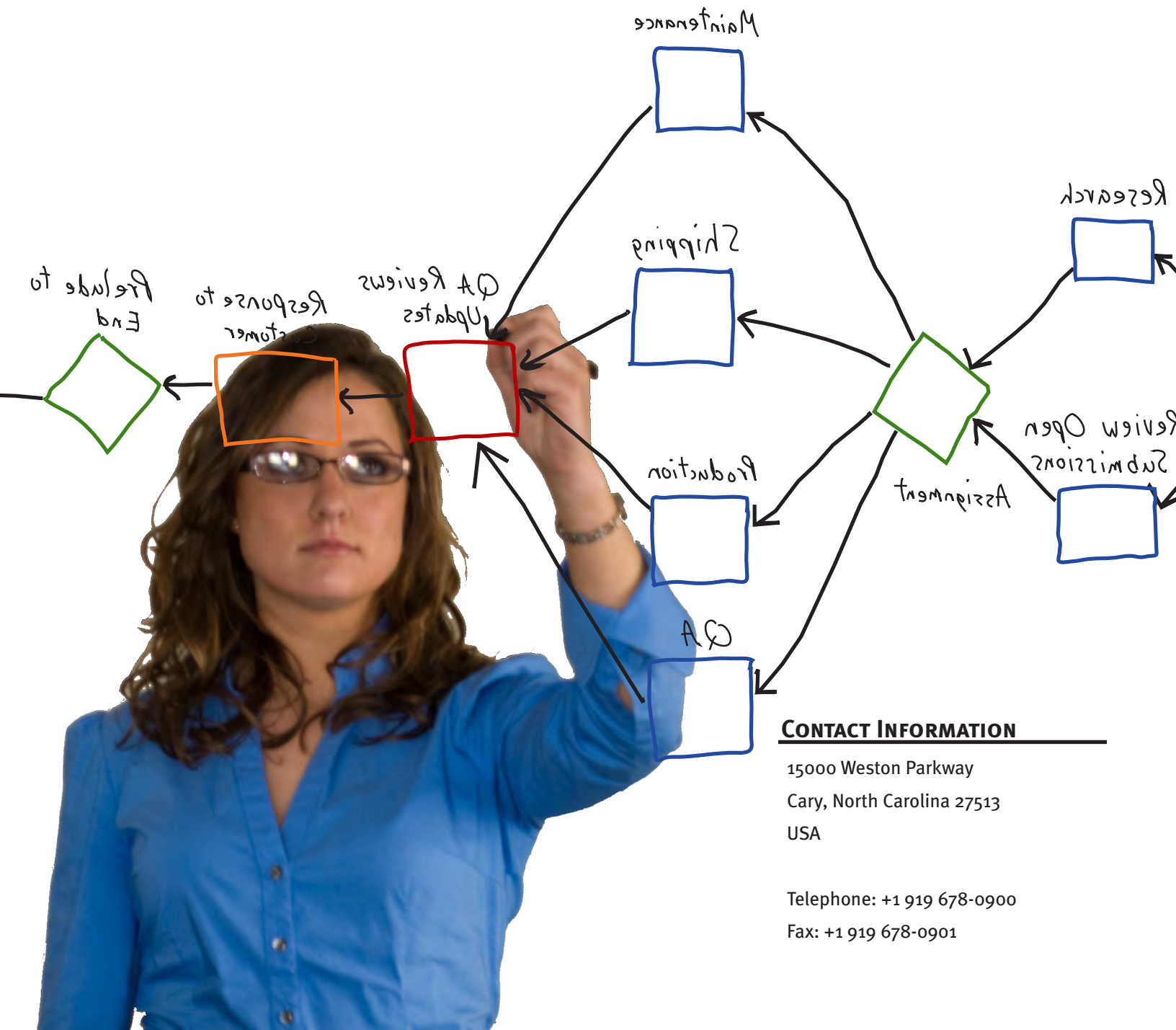# Ultimus Adaptive BPM Suite 8 Product Overview

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Contents

Product and Company Overview

This section outlines a high-level product overview, including architecture, components and features, and the value of BPM in the market.

Product overview

The Ultimus Adaptive BPM Suite is a complete, enterprise software application designed to create an operational environment that empowers people in the organization to drive process automation and improvement. The product is made up of multiple modules, seamlessly integrated together and is designed to support the needs of all BPM stake-holders in the company including management, work teams, IT teams, and business analysts. Modeling, analysis, and optimization capabilities are deployed in easy-to-use graphical interfaces for business analysts. Reporting and Business Activity Monitoring (BAM) are tailored to management and presented through performance dashboards, email, desk-top gauges or within process forms. Work teams gain convenient access to workflow and forms through e-mail, portals, or collaborative clients. IT teams collaborate on the design, development, and administration of BPM through modules that accelerate deployment through the use of graphical interfaces, while also providing for sophisticated custom development when necessary.

The Ultimus V8 architecture is scalable, extensible, secure and is 100% SOA-based, meaning all interactions with Ultimus clients and third-party applications are through XML, SOAP, and WSDL. The execution engine has dynamic multi-threading; the product is fully Unicode compliant and is localized into 16 languages. Ultimus is deployed on Microsoft Servers.

Company overview

Business Process Management has emerged as a key management practice that provides for governance of a business' process ecosystem toward the goal of driving efficiencies and optimization. Ultimus BPM provides organizations with the tools needed to effectively model, automate, manage and optimize their core processes.

Ultimus targets processes that include decisions and often include documents. With the SOA architecture Ultimus is also able to support the vast majority of system to system processes. Ultimus was founded in 1994 and has delivered BPM solutions to over 1,900 customers worldwide in virtually every industry vertical and the product is deployed in every major horizontal functional area. Ultimus sells direct and through the channel and the solution is available in over 80 countries.

Ultimus provides complete end-to-end software and services solutions to implement business process management projects quickly and efficiently. A proven BPM deployment methodology including; BPM Visioning, Process Discovery, Solution Architecture, Visual Prototyping, Process Implementation, Solution Evaluation and Rollout uses best practices and aligns process goals to the company strategy.
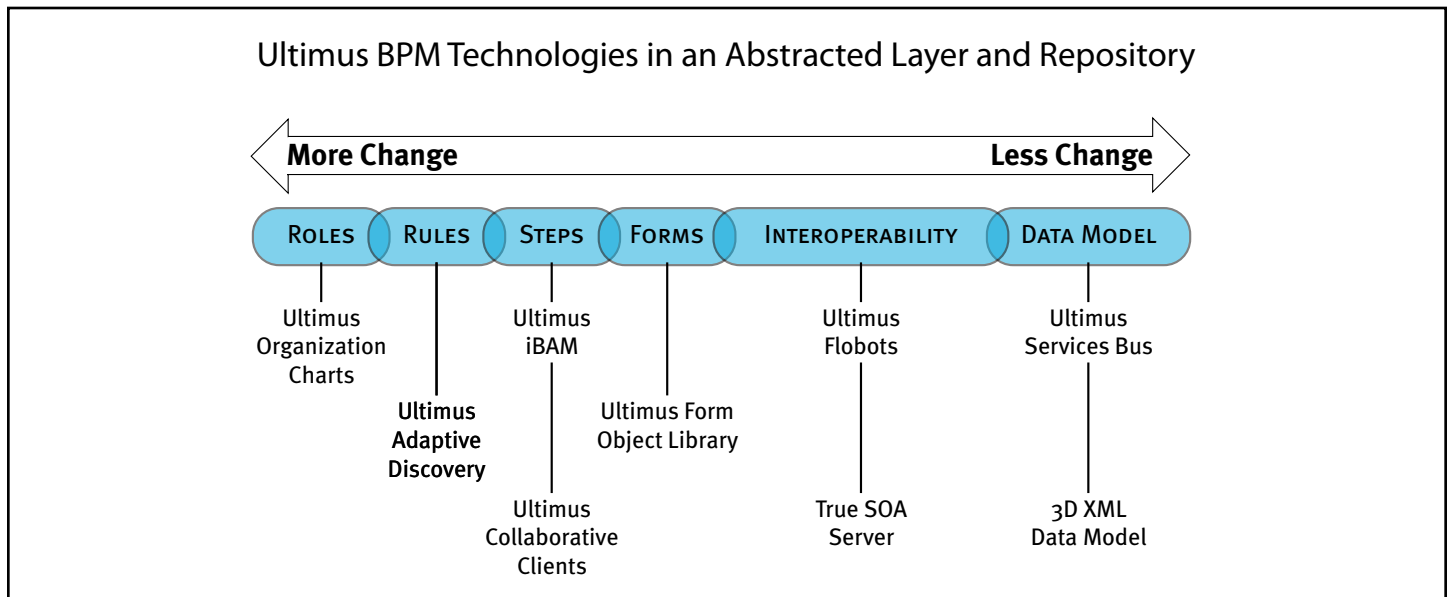
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Adaptive BPM strategy

When it comes to delivering lifetime value for enterprise software, applications must adapt, be replaced, or rewritten at great cost. A BPM system must be flexible enough to handle exceptions, manage change, and deliver on the evolving collaboration and usability requirements of the entire user community: including management, work teams, IT teams, and analysts. This need to support change creates an "Adaptive Imperative."

Ultimus Adaptive BPM Suite's architecture comprises a unique set of technologies that provides a BPM platform with the agility to readily adapt to the changes required to keep the BPM system up-to-date. Specifically, Ultimus adapts to:

• **People:** the needs of the people involved in making decisions and driving workflow;

• **Ecosystems:** the front-end and back-end systems in the company, and

• **Change:** the inevitable changes to roles, responsibilities, policies, procedures, regulatory requirements, and to new or modified IT systems.

Key to driving the adaptive capabilities, Ultimus has extracted many of the process components such as roles, rules, steps, forms, interoperability, and data models out of the process definition and stored them in adaptive process repositories, as shown below. Then, whenever possible, Ultimus provides a usable, code-free interface that makes it easier and faster to access and deploy changes to the process components.

Ultimus BPM Technologies in an Abstracted Layer and Repository

More Change ⟵ ⟶ **Less Change**

| ROLES | RULES | STEPS | FORMS | INTEROPERABILITY | DATA MODEL |

Ultimus Organization Charts

Ultimus Adaptive Discovery

Ultimus iBAM

Ultimus Collaborative Clients

Ultimus Form Object Library

Ultimus Flobots

True SOA Server

Ultimus Services Bus

3D XML Data Model

Adaptive BPM strategy (continued)

Adapting to people

Ultimus empowers people (managers, business, and IT) by providing access, visibility, and collaboration that enables them to embrace process improvement in a natural way:

- **Access:** Workers have the flexibility to handle work the way they want to: through Ultimus Clients, e-mail, portals, or custom clients.

- **Visibility and control:** Ultimus iBAM (interactive Business Activity Monitoring) not only displays KPIs, it allows managers to change the flow of a process in real time with a desktop control that provides feedback to the business rules.

- **Innate collaboration:** Ultimus has numerous powerful collaboration capabilities built into the DNA of the product. Ultimus Collaborative Clients support parallel routing, allow for shared views, ad hoc routing, sending memos and conferring with others, returning and disowning tasks, and reassigning tasks to others on an ad hoc basis. The Ultimus Collaborative Development Environment enables multiple developers to work on different parts of the process simultaneously using: shared repositories, object level versioning, rollbacks, and joint rules development with secure check in/check out.

Adapting to ecosystems

Ultimus accelerates process deployment and readily integrates with diverse IT systems through a flexible, open architecture and the use of adaptive technologies:

- **Adaptive SOA and Ultimus True SOA server:** Ultimus consumes and exposes process artifacts through: BI Services, Ultimus Client Services, and abstraction layers.

- **Ultimus Flobots™:** This patented technology delivers rapid, code-free third-party integration.

- **Ultimus Human Services Bus:** This patented capability provides rapid process design using open XML standards.

- **Ultimus abstracted connectors:** This enables connections to be externalized from the process map so they can be built once, stored in a reusable repository, and deployed in multiple instantiations within and across business processes.

- **3D XML data model:** Ultimus Adaptive BPM Suite can natively import and reuse complex, hierarchical data and schemas from third party applications such as ERP/CRM systems and Web services.

Adaptive BPM strategy (continued)
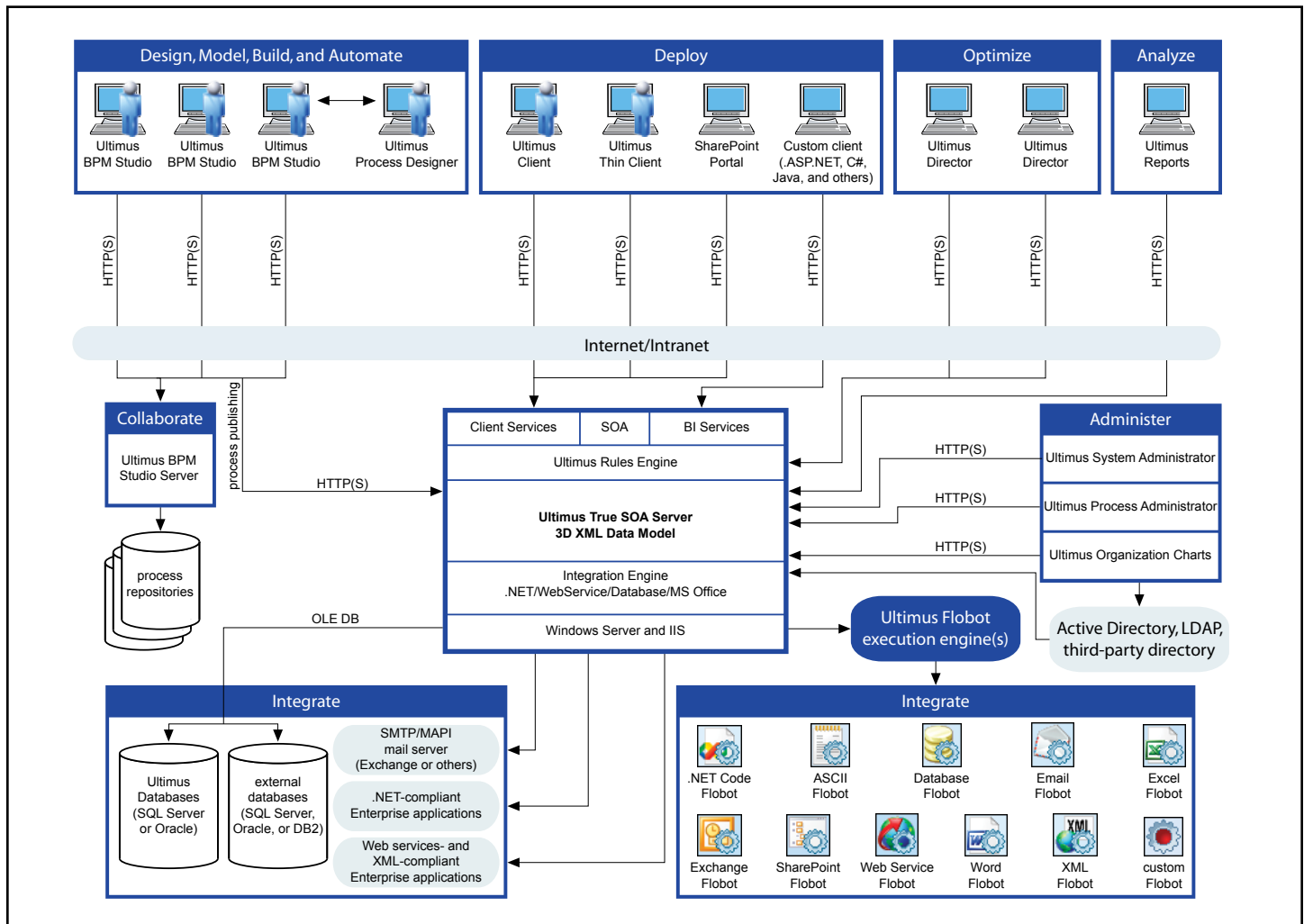
Adapting to change

Ultimus' adaptive capabilities readily handle process changes such as exceptions, escalations, and changes to roles, rules, steps, flows, forms, and data models:

- **Role change:** Ultimus Organization Charts enables role-based routing, support for matrix organizations, and dynamic updates with directory services.

- **Rule change:** The patented Ultimus Adaptive Discovery™ technology allows real-time rule change by IT or Business Unit Champions and sends proactive notifications for "unruly" events. Rules can be easily changed using drag-and-drop tools and simple logic skills. The tools are tailored to the skills and needs of the user. IT teams use the fully functional Ultimus BPM Studio module and Business Analysts use the simplified Ultimus Director module.

- **Step change:** Ultimus Clients enable task sharing, queues, and the use of conditional, iterative, and ad hoc steps.

- **Flow change:** Ultimus iBAM allows dynamic process optimization based on hitting KPI thresholds while Adaptive Discovery supports conditional routing changes.

- **Form change:** The Ultimus Form Object Library is a repository where form objects are changed in one place and deployed broadly.

- **Data model change:** The Ultimus 3D XML Data Model provides flexibility when defining and modifying data models by supporting both global and local variables and providing rich, flexible calculation capabilities through the use of XML standards.

Product Architecture and Description

The Ultimus Adaptive BPM Suite architecture is scalable, extensible, secure and is 100% SOA based, meaning all inter-actions with Ultimus Clients and third-party applications are through standard XML, SOAP, and WSDL. The execution engine has dynamic multi-threading, the product is fully Unicode compliant and is localized into 16 languages including the client. Ultimus deploys on Microsoft Windows Servers and IIS and leverages SQL and Oracle databases.

Processes are designed and modeled in Ultimus Process Designer (for Business teams), or designed, modeled and developed in Ultimus BPM Studio (for IT teams). Work teams access their task lists through the Ultimus Client, Ultimus Thin Client, portals, or custom clients. Ultimus Client Services expose all client functionality for Ultimus Clients and for third-party applications such as portals. Roles can be accessed directly from the company's Active Directory or LDAP.

Ultimus has a true SOA Server that interacts with Ultimus clients and third-party applications through SOA using XML, SOAP, and WSDL standards. Ultimus also exposes all business data to Ultimus Reports and to external reporting applications through Ultimus BI Services. Ultimus Flobots accelerate integration with many third-party applications. Process repositories store process artifacts so they can be readily accessed, modified, and redeployed.
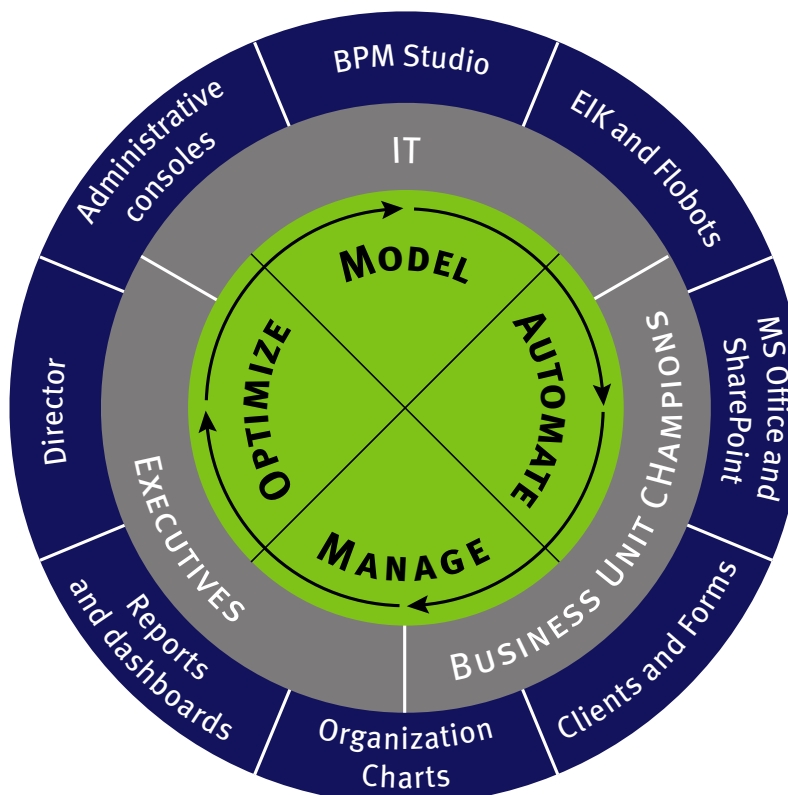
Product Modules and Components

Ultimus Adaptive BPM Suite is a complete suite of seamlessly integrated modules and components to manage the complete BPM lifecycle. Each module is designed to fit the needs of each group of BPM stakeholders:

• Executives are looking for visibility and control over core business processes.

• Business Unit Champions want intuitive usability and the ability to collaborate with colleagues. Furthermore, Business Unit Champions need a rich, but code-free set of capabilities that allow them to conduct root cause analysis and then design and deploy process improvements as part of a BPM team.

• IT wants a reliable, scalable, secure platform that supports rapid development, robust administration, and the ability to leverage the existing infrastructure.

This is illustrated below.

Ultimus modules and components empower BPM teams as follows:

• Executives: Ultimus Reports, Ultimus iBAM Suite and Ultimus Enterprise Performance Manager (as an add-on capability)

• Business Unit Champions: Ultimus Collaborative Client, Ultimus Process Designer, Ultimus Director

• IT: Ultimus True SOA BPM Server, Ultimus Process Repositories, Ultimus BPM Database, Ultimus BPM Studio, Ultimus Organization Charts, Ultimus FloStation, Ultimus System Administrator, Ultimus Process Administrator
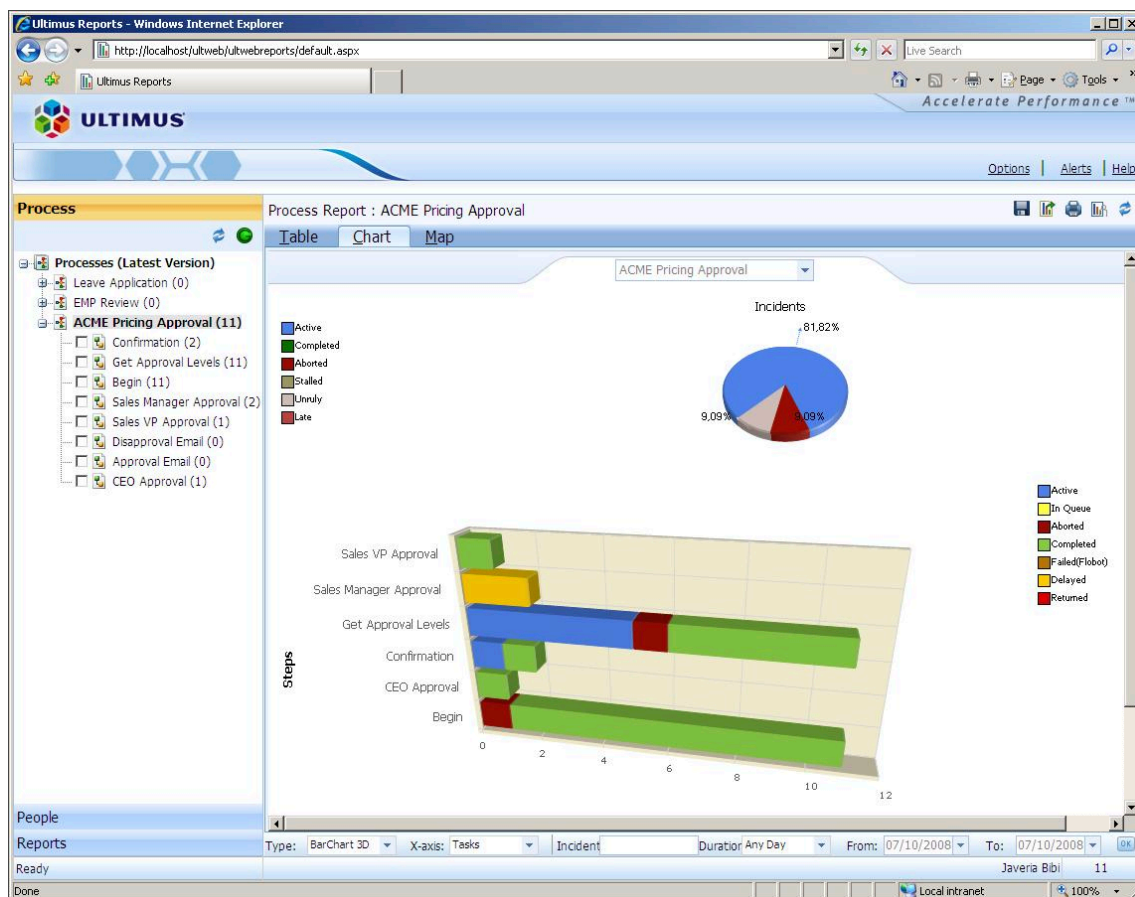
Ultimus for Executives

Ultimus Reports

Ultimus Reports is a comprehensive, Web -based report generation module that allows the design, generation, and access of reports securely from virtually anywhere over the Internet. Ultimus Reports allows the creation of power-ful reports to analyze the effectiveness of processes, steps, users, departments, queues, and more. Results can be displayed in tabular format or in one of many different types of graphical formats including bar and pie charts. Many process and step level reports are available out-of-the-box, and custom reports can also be generated. Drill-down reports are accessed by clicking directly on the chart in order to see more detailed analytics associated with a particular step or process.

The following are a few examples of the type of management questions that can be addressed and answered by process reports:

• How long does it take my company to process a purchase order?

• What does it cost our company to produce a custom quotation?

• How long does it take the Engineering Department to process a change order?

• If a customer files a quality complaint, how long does our company take to respond to it?

• How many orders are currently being fulfilled?

Ultimus for Executives (continued)

Ultimus Reports (continued)

Ultimus Reports provides powerful and flexible capabilities, including:

• preconfigured process level and step level reports and an easy to use report generation wizard;

• rich reporting displayed in tabular, graphical, or process maps views;

• alerts that can be configured to send e-mail notifications that trigger a call to action;

• flexible options to save, export, print, and publish reports in order to increase the transparency of business performance. Drill-down reports are accessed by clicking on the report to access more detailed analytics associated with a particular process or step.

Ultimus Reports provide many benefits for Business Managers interested in optimizing business efficiency:

• By knowing the cost of a business process, business managers can make knowledgeable decisions about the economic benefit of the process.

• By knowing the completion time of a business process, business managers can set realistic expectations among internal and external customers affected by the process.

• By knowing the elapsed time for each step in a process, managers can find bottlenecks in the process.

• By knowing the cost of each step, managers can make decisions about how to optimize the process.

• By knowing the performance of individual users, managers can better reward, train, and evaluate employees.

• By including automated steps, process metrics can be extended to other applications included in the business process.

• By including both business process and external data, the effectiveness of the process can be measured against business parameters.

• By including monitoring reports, process status can be easily captured and distributed over the Internet.
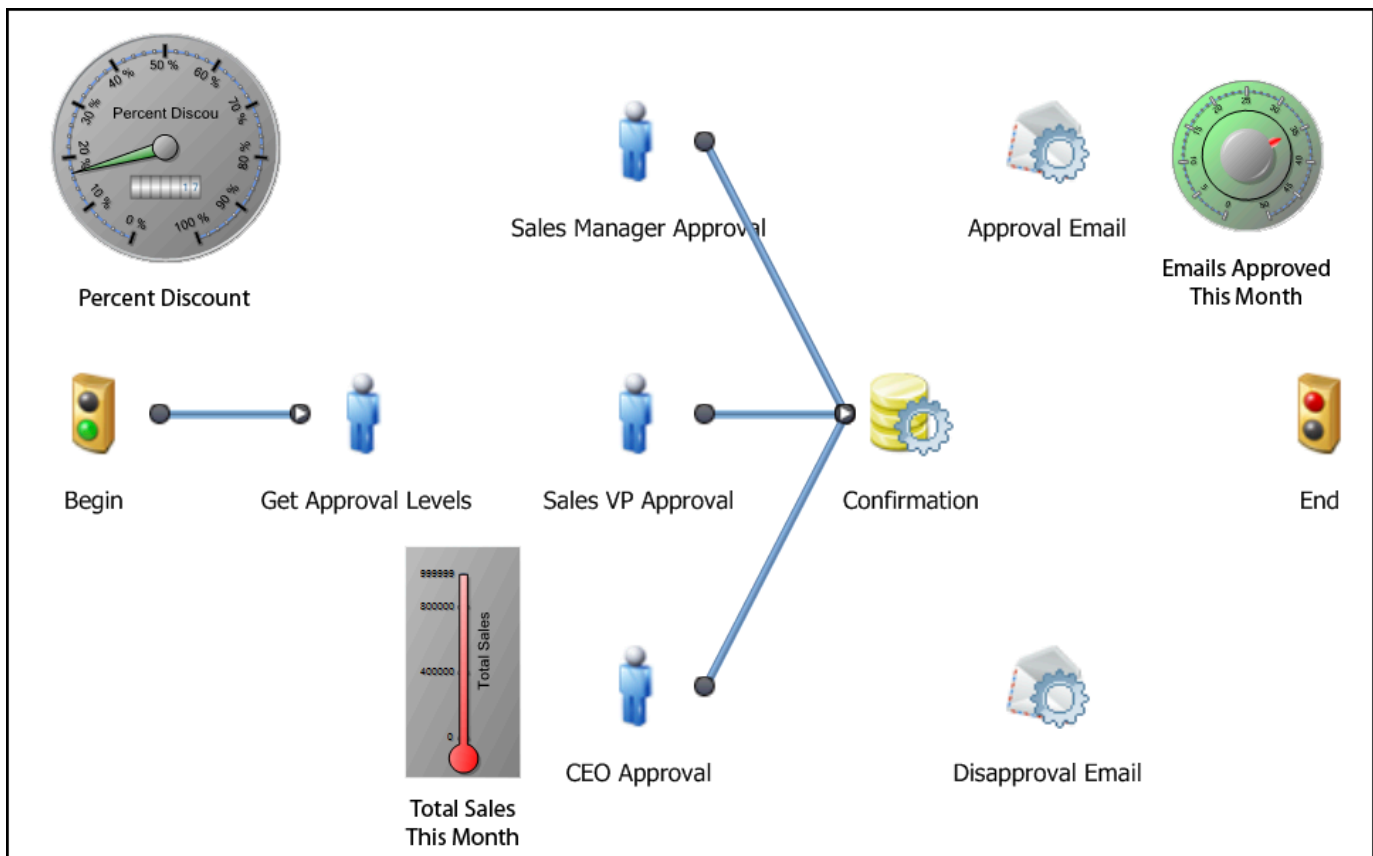
Ultimus for Executives (continued)

Ultimus iBAM Suite

The Ultimus iBAM Suite for interactive Business Activity Monitoring provides a user friendly, yet powerful way for IT or business professionals to create and visually monitor key performance indicators of their choice and place them on their desktops, portals, or in key workflow documents. Managers can use iBAM's interactive desktop controls to adjust the process flow in real time. When a KPI threshold is achieved, managers can adjust the desktop control to a new level. This change provides feedback into the process and a rule is adjusted based on the new setting, thereby optimizing the process flow to the current business conditions.

Ultimus iBAM:

• can monitor processes and react to events according to defined guidelines;

• provide KPI dashboards on the desktop, or in portals or documents;

• empower managers with desktop controls that enable them to instantly change process flows to handle exceptions or changes in business conditions.
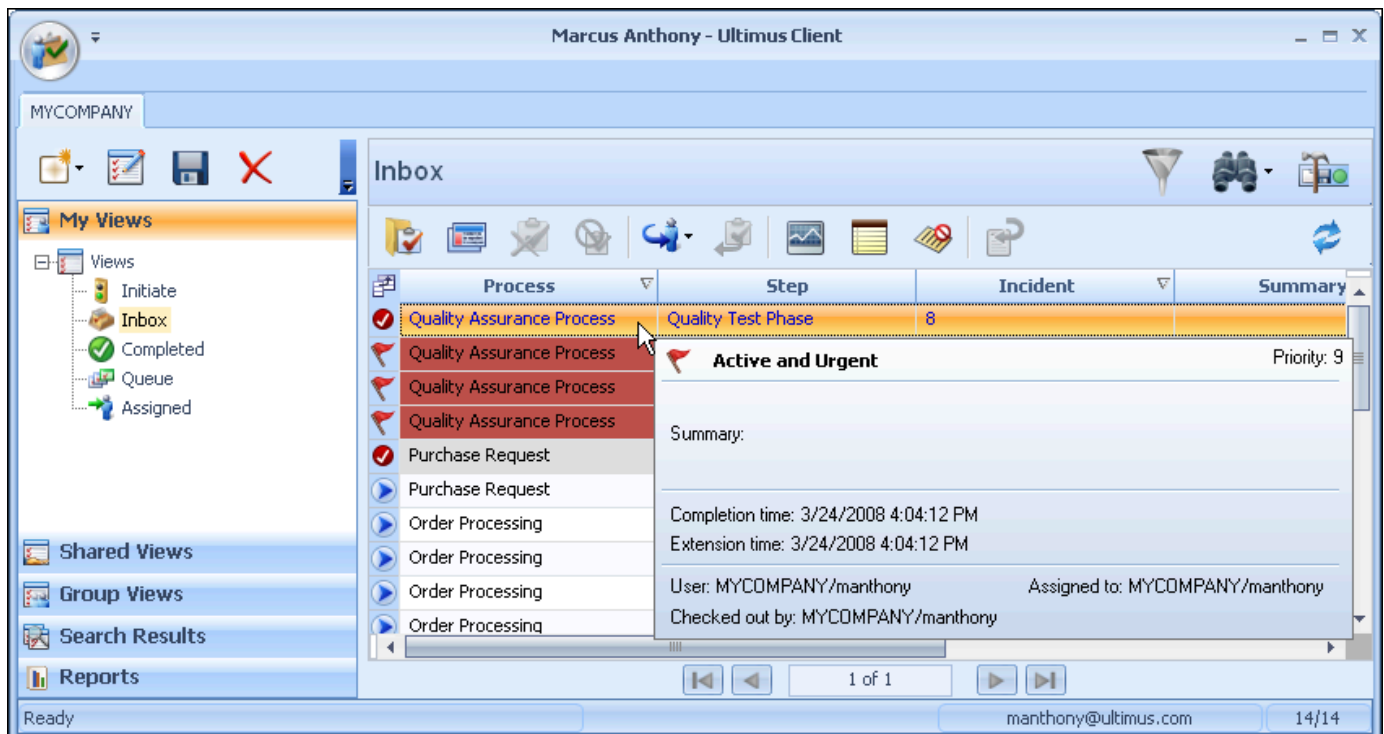
Ultimus for Business Unit Champions

Ultimus Collaborative Client

The Ultimus Collaborative Client enables users to participate seamlessly in business processes using their e-mail or a Web browser without the need for any additional client-side software. In addition to accessing and working on their tasks, workers can collaborate, monitor their workload, return tasks, share work with co-workers, and perform many other administrative capabilities. Ultimus provides several versions of the client for different platforms and applications:

• Ultimus Client

• Ultimus Thin Client, hosted in any HTML 3.2 Web browser

• Outlook Client, which appears as a folder in Microsoft Outlook

• Custom clients that users develop for their unique needs

• SharePoint Web Parts, which display workload in a portal

Ultimus Client manages all the communications with the process server and provides a simple, prioritized, and customizable task list for the user. Whenever the user selects an item from the task list, the electronic form for the task is displayed. Users can simply fill out the form and "send" it. The task is complete and the process moves forward. Ultimus Client has dozens of collaboration features built into the product that enable ad hoc routing, conferring, sending memos, returning tasks, sharing workload, providing shared views, reassigning work, and much more.
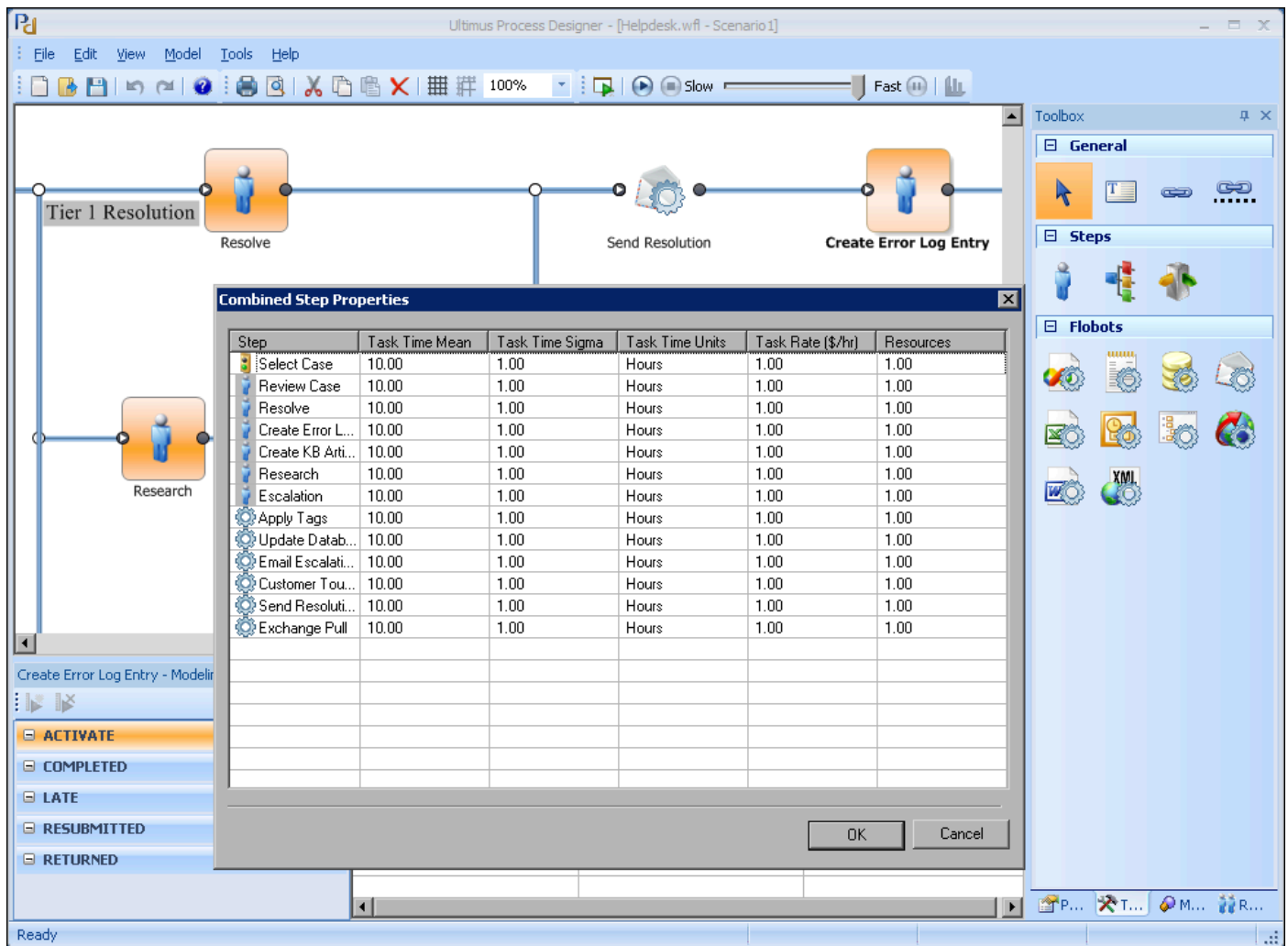
Ultimus for Business Unit Champions (continued)

Ultimus Process Designer

Ultimus Process Designer is a business process modeling tool for business owners, analysts, and process managers that provides modeling capabilities identical to those provided in Ultimus BPM Studio, but without the development and integration requirements. Ultimus Process Designer is available both as a stand-alone application and as an integrated part of Ultimus BPM Studio. Ultimus Process Designer allows you to graphically design a business process and perform the activities that are essential for the successful modeling, analysis, and automation of business processes. Processes designed here are saved in the Ultimus WFL file format and, as such, are fully compatible with Ultimus BPM Studio.

Ultimus Process Designer is available as a separate download and is ideal for those who want to design the basic flow of a process, then pass the process file to a process developer for full automation.
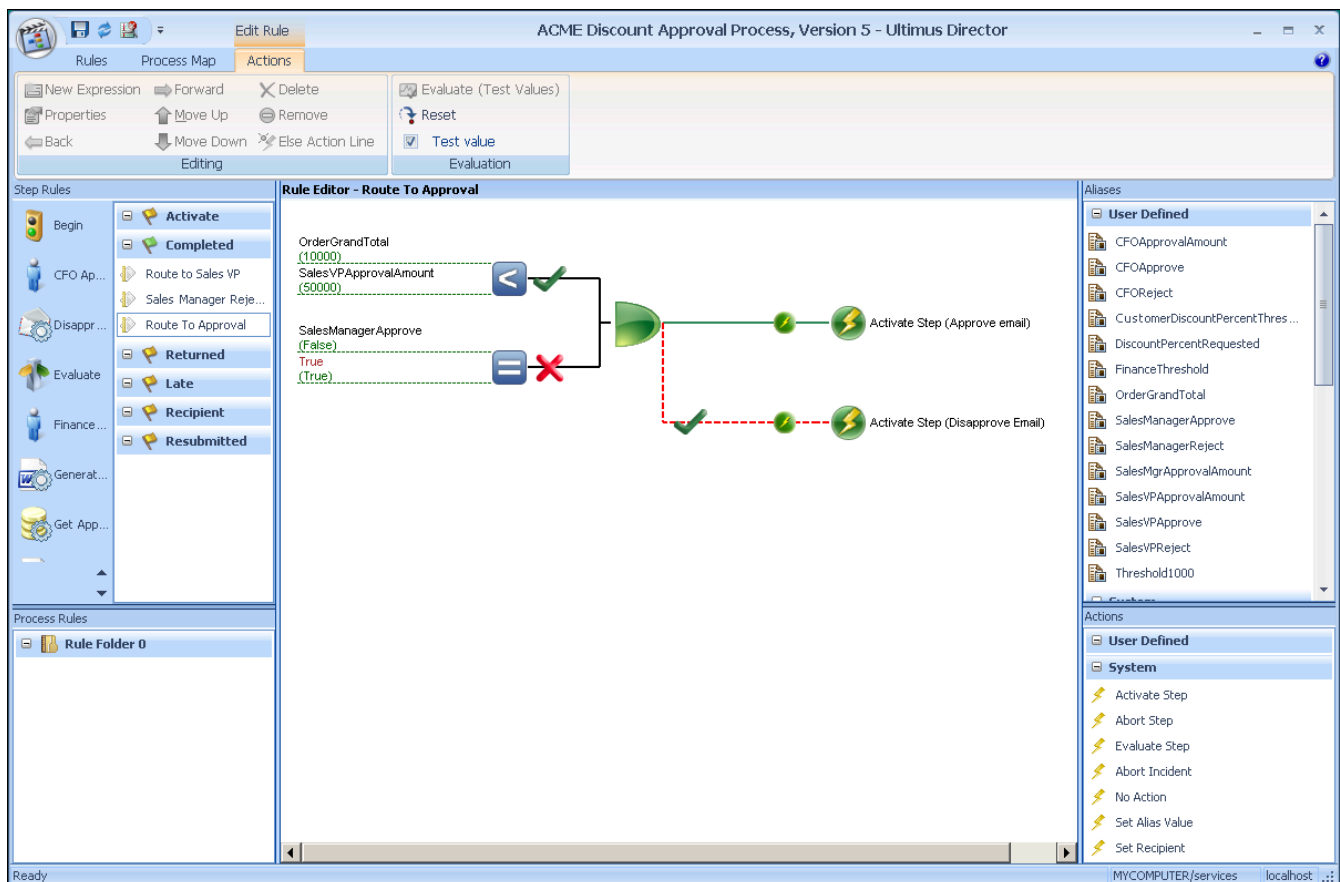
Ultimus for Business Unit Champions (continued)

Ultimus Director and Adaptive Discovery™

Ultimus Director is used to create and manage the business rules associated with an automated process within a graphical user interface. Adaptive Discovery is a patented technology innovation that sends a proactive notification to the process owner when an undefined or new scenario, known as an "unruly event," occurs and the process does not know how to route the incident. The process owner can troubleshoot the incident in minutes by creating, testing, and deploying a new business rule using a graphical user environment and without coding. When the new rule is applied, the process "learns" from these decisions and utilizes the new rules for future matching cases without repetitively involving the process experts. In this way, processes are defined and enhanced the same way they evolve in business: in response to real world business decisions and requirements.

Adaptive Discovery fosters a new level of cooperation between IT and business: one that is consistent with the way both groups should work today. Since Ultimus Director is an easy-to-use interface, either business or IT can be assigned as the process owner. In this way, IT "owns" the infrastructure and develops, deploys, and manages the consistent, technical aspects of processes-such as data, forms, and integration. This is similar to traditional application projects and an area of strong expertise for IT professionals. At the same time, business "owns" the process and manages the dynamic business aspects of processes such as flow, rules, exceptions, and user-roles.

Ultimus for IT teams

Ultimus True SOA BPM Server

The Ultimus True SOA BPM Server is a powerful process execution engine that monitors and controls business processes. It is responsible for the orchestration of events within and across multiple business processes, and also manages integration with existing enterprise systems for manipulation of process-related data. Human interaction with Ultimus BPM Server is supported through a robust client interface, which is leveraged by the Ultimus Client modules. Back-end integration is supported through open technologies such as OLE DB, .NET, XML, Web services, and Ultimus Flobots which facilitate connections with third-party systems.

Ultimus BPM Server consists of scalable components based on the Microsoft .NET architecture and enterprise data-bases to provide transactional integrity, security, scalability, redundancy, and dynamic load distribution. Ultimus also supports clustering, component load balancing, fail-over redundancy, and network load balancing for enterprise-level scalability.

Ultimus Process Repositories

To support adaptability and faster time to change, Ultimus provides a number of repositories that store process artifacts and data. Flexible user interfaces provide access so that these artifacts can be modified, reused, tested and redeployed from one central location. These repositories include:

- **Ultimus Business Organization Database:** This is a central repository for business charts created in Ultimus Organization Charts, enabling job roles and responsibilities to be readily modified.

- **Ultimus Rules Repository:** Process rules have been extracted from the process logic and stored in a repository. The rules are exposed through the Ultimus Director graphical interface which allows rule changes to be made, tested, and deployed in minutes using simple logic skills and without additional coding.

- **Ultimus Form Object Library:** Form objects are stored in the Form Object Library where they reside independently from the process and can be readily accessed, changed, and reused from one central location.

- **Abstracted Connector Repository:** Connectors for third-party applications are abstracted from the process logic and stored in the repository where changes are made through the connectors user interface.

- **Ultimus BPM Studio Server Database:** This repository is used to store the state of every process and user.

- **Ultimus BPM Studio Repository:** This repository functions in conjunction with Ultimus BPM Studio to maintain data pertaining to process design.
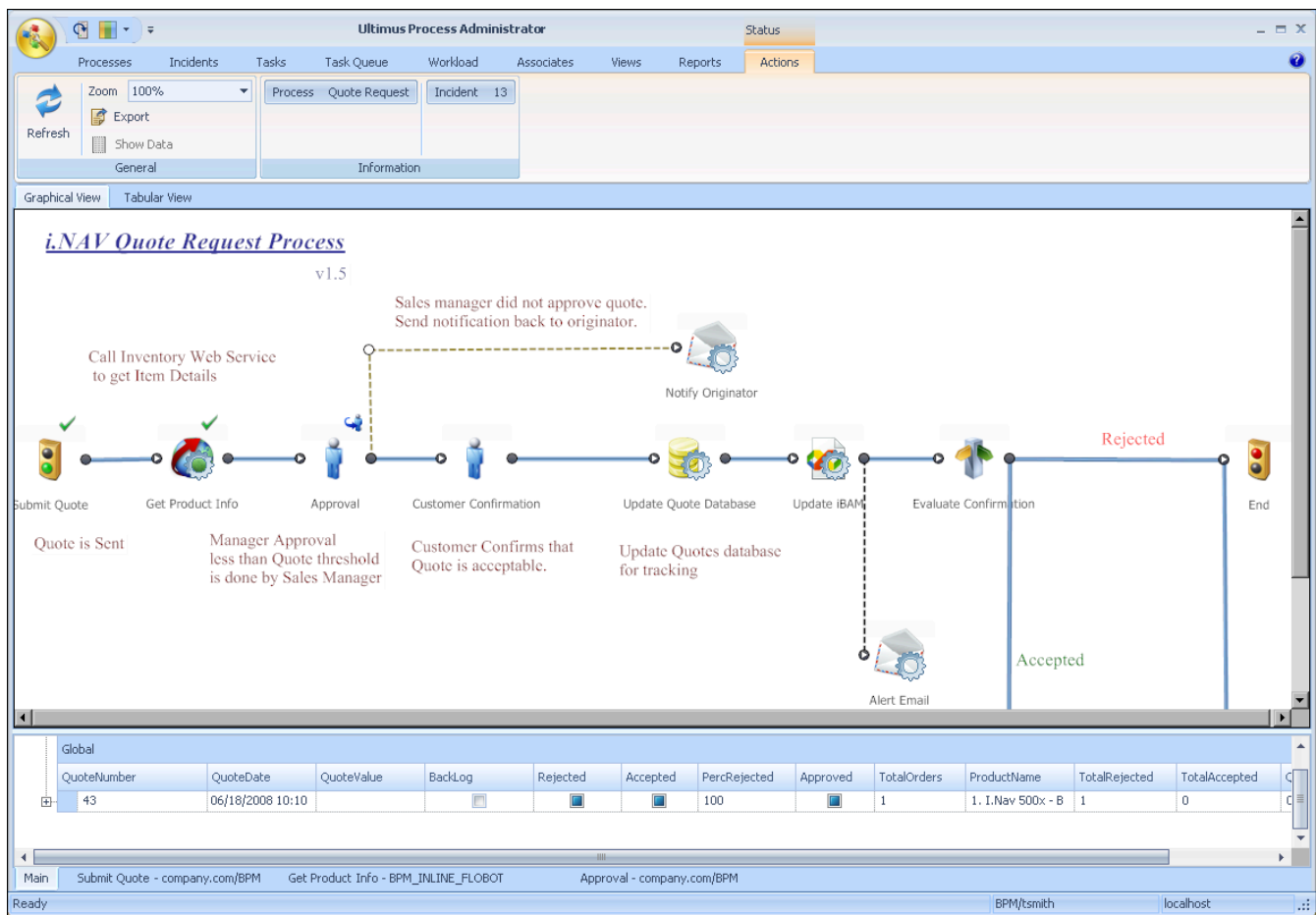
Ultimus for IT teams (continued)

Ultimus System Administrator

Ultimus System Administrator provides powerful, centralized capabilities and conveniences for managing and administering Ultimus BPM Server. Ultimus BPM Server details are maintained in Ultimus System Administrator, including license information, BPM database configurations, and organizational connections. Additionally, tools are provided to manage exceptions in the system and applications that are common in every organization.

Ultimus Process Administrator

Ultimus Process Administrator provides powerful capabilities for managing and administering processes for small or large organizations. It includes an advanced user interface to manage and configure associates, client views, and workload-related capabilities. While Ultimus System Administrator is more often used by IT, Ultimus Process Administrator is used by Process Owners and Process Experts. Ultimus Process Administrator can also offer visibility to all process incidents and tasks on Ultimus BPM Server.
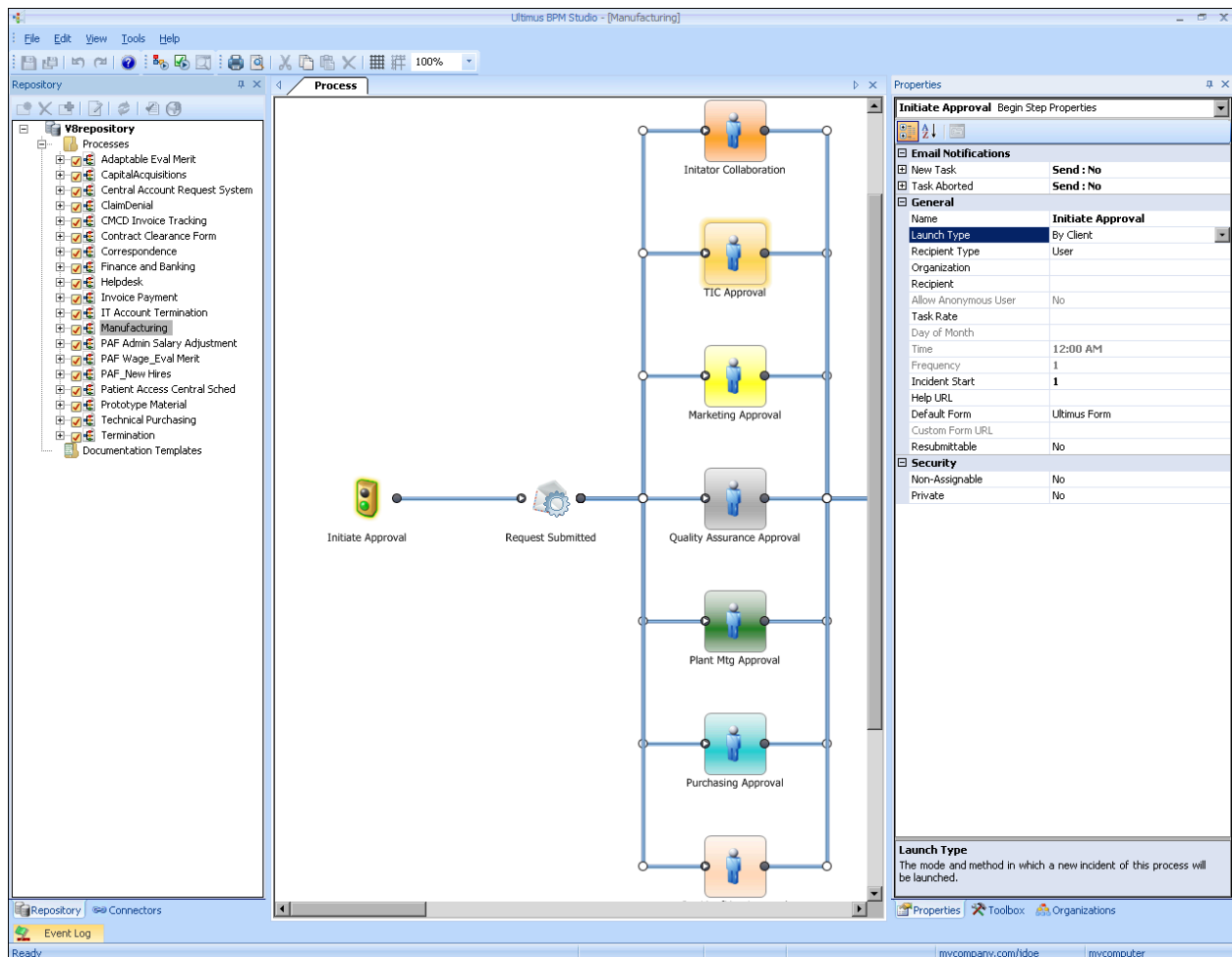
Ultimus for IT teams (continued)

Ultimus BPM Studio

Ultimus BPM Studio is a collaborative Integrated Development Environment (IDE) used to design, model, develop, simulate, and test every business process. Ultimus BPM Studio includes a client application, as well as a server that manages security and collaboration.
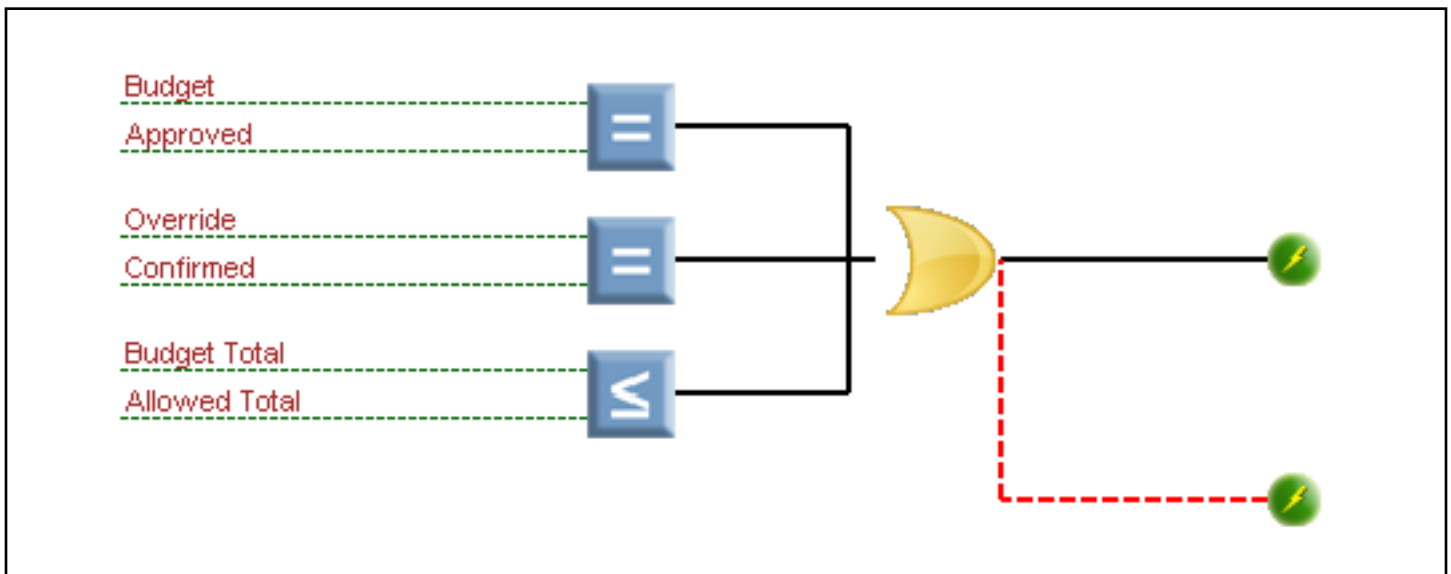

Ultimus BPM Studio changes the way teams work on business processes. In the past, the parties involved in BPM development (process analysts, owners, designers, and developers) all worked independently using their own tools. Collaboration occurred off-line in conference rooms and through e-mail. With Ultimus BPM Studio, these parties now have a unified environment that supports multiple editing tools (such as Ultimus Form Designer, Ultimus Rules Editor) appropriate to the user role, providing a shared repository that improves process integrity, and enables on-line collaboration. This results in more efficient and effective process teams and reduces total cost of ownership.

Ultimus for IT teams (continued)

Ultimus BPM Studio (continued)

Ultimus BPM Studio supports collaborative design and deployment, whereby multiple users are able to work on processes at the same time by connecting to a central process repository. These are the main capabilities of Ultimus BPM Studio:

- Collaboratively design processes
- Check-in/check out objects
- Model and automate processes
- Define business logic
- Make electronic forms
- Link forms to databases
- Create reusable components

- Design-time simulation for testing
- Leverage external editors
- Integrate with third-party systems
- Create and modify rules
- Perform calculations and logic operations
- Develop process documentation
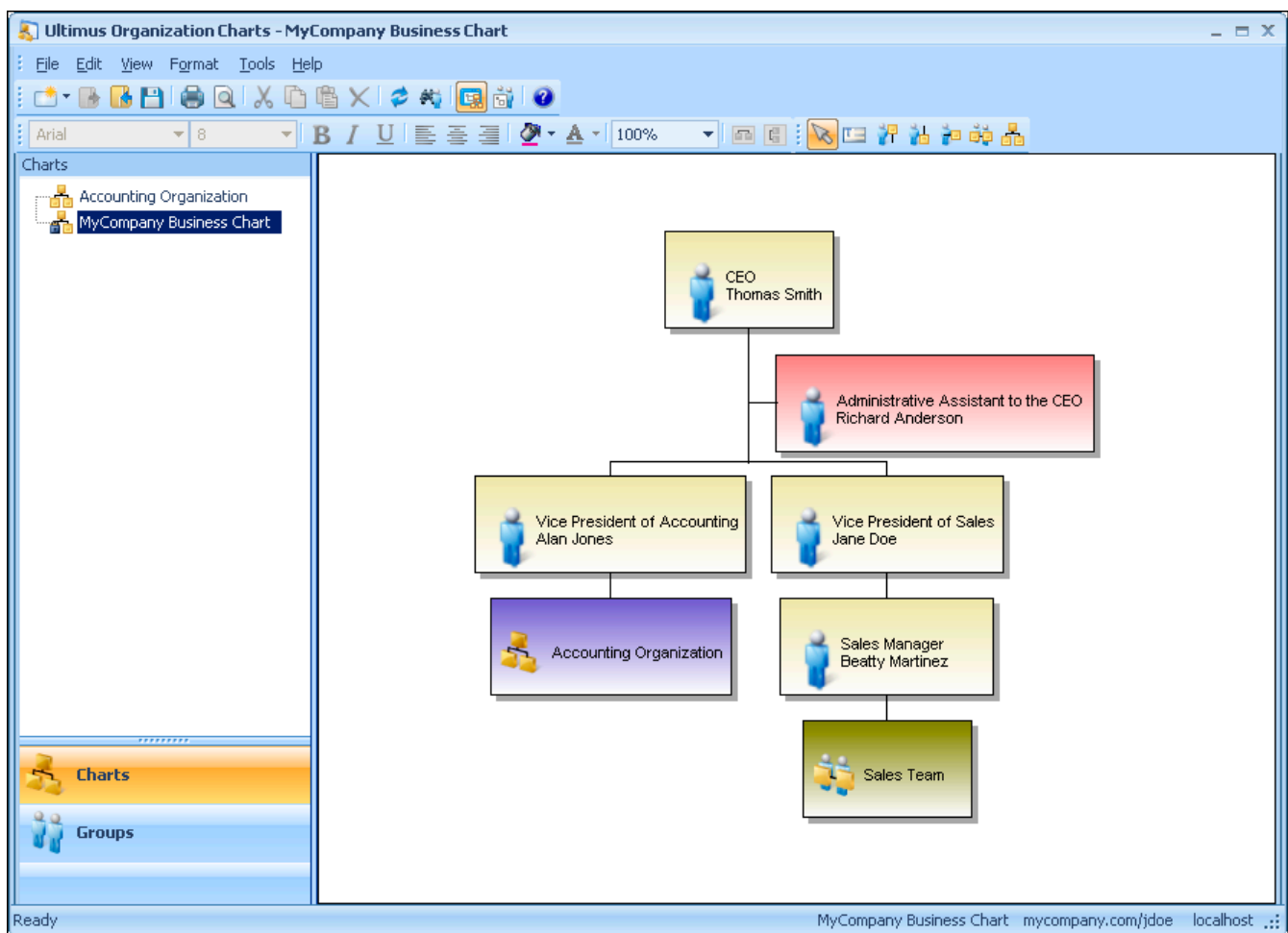- Publish/deploy processes

Ultimus BPM Database

Ultimus BPM Database is an essential part of the Ultimus BPM environment and contains the process and business level data that is critical for the BPM environment. This data is used to execute process steps, populate forms with relevant data, route workflow, send notifications or escalations, trigger business activity monitoring, and generate reports.

Ultimus for IT teams (continued)

Ultimus Organization Charts

Ultimus Adaptive BPM Suite enables you to create two types of organization charts: business charts and directory charts. Business charts are graphically designed and represent the reporting structure of your organization and its divisions, departments, and sections. Ultimus Business Charts are powerful in matrix organizations where people can have multiple job roles. This is because it can intelligently route processes on a conditional basis by using the knowledge of the job function of the individual with respect to a specific process.

Ultimus Directory Charts can be easily created by tightly integrating with Microsoft's Active Directory or the company's LDAP directory. Ultimus can automatically reference users in your Active Directory or LDAP directory for task assignment and group information. Changes to the directory are reflected immediately in the Ultimus BPM engine for proper task routing. With Active Directory, all relevant process organizational information resides in one location: making administration low maintenance, fast, and easy.

Ultimus for IT teams (continued)

Ultimus FloStations and Flobots

Ultimus Flobots, a term for "Workflow Robots," are rapid integration agents that allow processes to be integrated with existing applications using simple point-and-click, negating the need for writing code. These Flobots can be trained to readily interoperate with .NET, Web services, databases, e-mail, Microsoft Exchange, XML, Microsoft SharePoint, Microsoft Excel, and Microsoft Word. Ultimus FloStations host the Flobots and can operate as a stand-alone Windows application or as a service.

Practical applications for Flobots include:

- Word Flobots can be trained to automatically produce reports, documents, letters, forms, printouts, and faxes using Microsoft Word.

- Excel Flobots can automatically insert or extract data from Microsoft Excel spreadsheets, perform analysis, create graphs, and run Excel macros.

- The SharePoint Flobot provides tight integration with Microsoft Office SharePoint Portal 2007 and Windows SharePoint Services allowing new teamsites to be created, documents automatically saved into document reposi-tories, and user management for SharePoint Web sites.

- .NET Code Flobots can allow a process to automatically pass variables and call managed code developed in VB, C#, or any other .NET-compliant language. The code may perform calculations, invoke executables, objects, DLLs, or interface with legacy systems.

- Web Service Flobots can invoke Web services in third-party applications through an automated step.

- Email Flobots automatically and easily send messages and attach documents to business process incidents.

- XML Flobots exchange information with any XML-compliant application. The XML Flobot is an ideal way to inte-grate EDI and e-commerce applications with a business process.

- In addition to the numerous "out of the box" Flobots Ultimus provides, custom Flobots can be created and added as part of the Ultimus BPM Studio toolbox. Expanding the Ultimus BPM Studio Toolbox with custom Flobots allows the business process designer to have all the common integrations needed for rapid process design.