ULTIMUS
ENTERPRISE SOLUTIONS

ULTIMUS ADAPTIVE BPM SUITE

ENTERPRISE BUSINESS PROCESS MANAGEMENT

SOFTWARE PLATFORM

Ultimus Product Brief

www.ultimus.com

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 stakeholders 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, desktop gauges or within process forms. Work teams gain convenient access to workflow and forms through email, 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, and 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 people-centric 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 2,000 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.

Adaptive BPM Strategy

When it comes to delivering lifetime value for enterprise software, applications must adapt or 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 is designed and architected with a unique set of Adaptive 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: 1) *People* - the needs of the people involved in making decisions and driving workflow, 2) *Ecosystems* – the front-end and back-end systems in the company, and 3) *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.
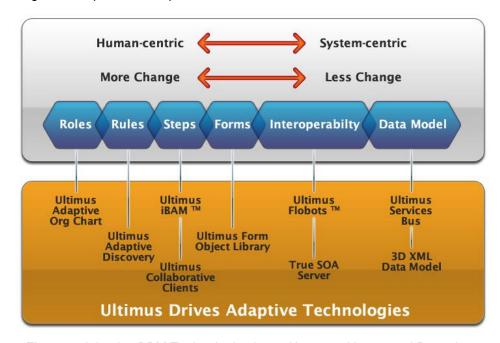

Figure 1: Adaptive BPM Technologies in an Abstracted Layer and Repository

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, email, portals, or custom clients.
- *Visibility & 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 process 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^{TM}* – 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* – 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 processes.
- *3D XML Data Model* – Ultimus V8 can natively import and reuse complex, hierarchical data and schemas from 3rd party applications such as ERP/CRM systems and Web Services.

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 Adaptive Org Chart enables role-based routing, support for matrix organizations, and dynamic updates with directory services.
- *Rule Change* – The patented Ultimus Adaptive Discovery^{TM} technology allows real-time rule change by IT or business 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 functioned BPM Studio module and Business Analysts use the simplified Ultimus Director module.
- *Step Change* – Ultimus Collaborative Clients enable task sharing, queues, and the use of conditional, iterative, and ad hoc steps.
- *Flow Change* – Ultimus iBAM allows dynamic 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 V8 architecture is scalable, extensible and secure and is 100% SOA based, meaning all interactions with Ultimus Clients and 3rd 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 and the documentation. Ultimus deploys on Microsoft Windows Servers and IIS and leverages SQL and Oracle databases.
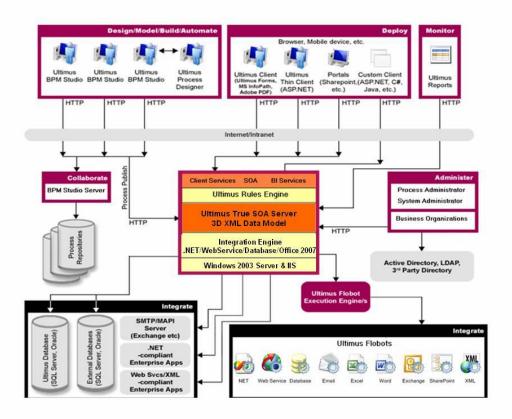

Figure 2: Ultimus Product Architecture

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 workflow through the Ultimus Client, thin client, portals, or custom clients.   Ultimus Client Services expose all client functionality for Ultimus Clients and for 3rd-party applications such as portals. Roles can be accessed directly from the company's directory or LDAP.

Ultimus has a True SOA Server that interacts with Ultimus clients and 3rd-party applications through SOA using XML, SOAP, and WSDL standards. Ultimus also exposes all business intelligence data to Ultimus Reports and to external reporting applications through Ultimus BI Services. Ultimus Flobots accelerate integration with many 3rd party applications. Process repositories store process artifacts so they can be readily accessed, modified and redeployed.

Product Modules and Components

Ultimus 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. Management is looking for visibility and control over core business processes. Work teams want intuitive usability and the ability to collaborate with colleagues. IT teams want a reliable, scalable, secure platform that supports rapid development, robust administration and the ability to leverage the existing infrastructure. Business analysts 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.
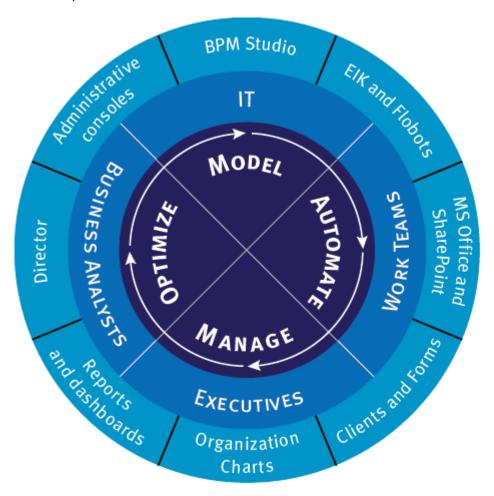

Figure 3: Ultimus Empowers all BPM Stakeholders with Personalized Tools

Ultimus modules and components empower BPM teams as follows:

- *Management*: Ultimus Reports and Ultimus iBAM Suite
- *Work Teams*: Ultimus Collaborative Client
- *IT Teams*: Ultimus True SOA BPM Server, Ultimus Process Repositories, Ultimus BPM Database, Ultimus BPM Studio, Ultimus Org Chart, Ultimus FloStation, Ultimus System Administrator, Ultimus Process Administrator
- *Business Analysts*: Ultimus Process Designer, Ultimus Director

Ultimus for Management

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.

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?

Figure 4: Ultimus Reports with One Click Drill Down Reporting

Ultimus Reports provides powerful and flexible capabilities as shown in Figure 4 including: 1) preconfigured process level and step level reports and an easy to use report generation wizard, 2) rich reporting displayed in tabular, graphical, or process maps views, 3) alerts that can be configured to send e-mail notifications that trigger a call to action, and 4) 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 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.
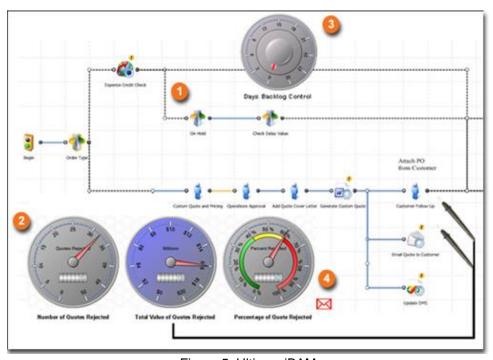

Figure 5: Ultimus iBAM

Figure 5 shows how Ultimus iBAM: 1) monitors processes and reacts to events according to defined guidelines, 2) provides KPI dashboards on the desktop, or in portals or documents, 3) empowers managers with desktop controls that enable them to instantly change process flows to handle exceptions or changes in business conditions, and 4) triggers events and alerts when thresholds are reached.

Ultimus Collaborative Client

The Ultimus Collaborative Client enables users to participate seamlessly in business processes using their email 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 on their work. Ultimus provides several versions of the client for different platforms and applications including:

- *Thin Clients* - to be hosted in any HTML 3.2 browser
- *Outlook Client* - which appears as a folder in Outlook
- *Custom Client* - allowing users to develop their own client.
- *SharePoint Web Parts* - so the workload can be presented in a portal.

The 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.   The Ultimus Client has dozens of collaboration features built into the product that enable ad hoc routing, conferring, sending memos, returning tasks, sharing workload, provide shared views, reassigning work and much more.
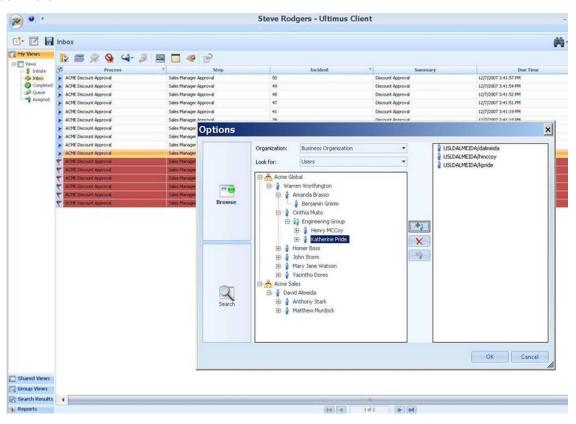

Figure 7: Ultimus Collaborative Client Showing Task Forwarding

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 the BPM Server is supported through a robust client interface, which is leveraged by the Ultimus Client modules and back-end integration is supported through open technologies such as XML, Web Services and Ultimus Flobots which facilitate connections with 3rd party systems.

The BPM Server consists of scalable components based on the Microsoft .NET architecture and enterprise databases 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 coding.
- *Ultimus Form Object Library* - Form Objects are stored in the Form Object Library where they reside independent from the process and can be readily accessed, changed and reused from one central location.
- *Abstracted Connector Repository*– connectors for 3rd 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* – Ultimus uses this as the repository 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 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, and a server that manages security and collaboration.
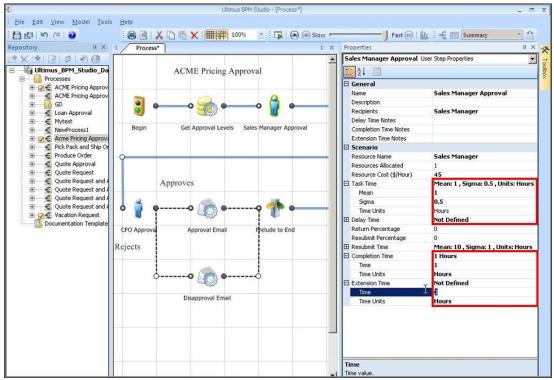

Figure 8: Ultimus BPM Studio

Importantly, 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 (e.g. Ultimus Form Designer, Ultimus Rules Editor) appropriate to the user role, providing a shared repository that improves process integrity, and enables on-line collaboration (e.g. multiple users working on different parts of the same process through the new Ultimus Inlets capability). This results in more efficient and effective process teams and reduces total cost of ownership.

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
- Segment processes through inlets
- Design-time simulation for testing
- Leverage external editors
- 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 Organization Charts

Ultimus 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 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 routing of tasks. With Active Directory, all relevant process organizational information resides in one location making administration low maintenance, fast, and easy.
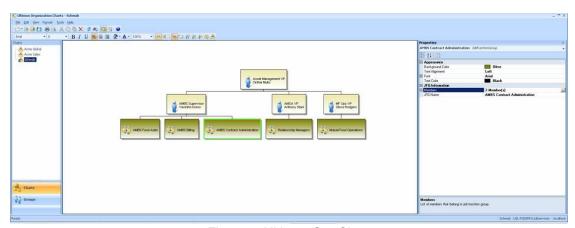

Figure 9: Ultimus Org Chart

Ultimus Flobots and FloStations

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, Email, Exchange, XML, SharePoint, Excel and Word. Ultimus FloStations host the Flobots and can operate as a standalone Windows application or as a service.
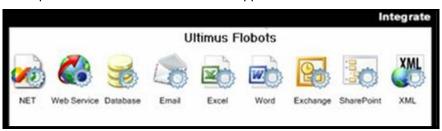

Figure 10: Ultimus Flobots

Practical applications for Flobots include:

- *Word Flobots* - can be trained to automatically produce reports, documents, letters, forms, printouts, and faxes using Word.
- *Excel Flobots* - can automatically insert or extract data from Microsoft Excel spreadsheets, perform analysis, create graphs, and run Excel macros.
- *.NET 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, DLL's or interface with legacy systems.
- *Web Services Flobots* - enable the Ultimus BPM Suite to invoke web services in 3rd party applications through an automated step.
- *Email Flobots* - automatically and easily send messages and attach documents to workflow.
- *XML Flobots* - enable Ultimus to exchange information with any XML-compliant application. The XML Flobot is an ideal way to integrate EDI and e-commerce applications with your process.

Ultimus System Administrator

Ultimus System Administrator is one of three modules used to configure the Ultimus BPM environment. Along with Ultimus Process Administrator, and Ultimus Organization Charts, these three modules are used to control and configure the Ultimus BPM Server. Ultimus System Administrator provides powerful, centralized capabilities and conveniences for managing and administering the Ultimus BPM Server. It also provides the tools necessary to manage exceptions in the system, applications, and in business processes 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, 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.
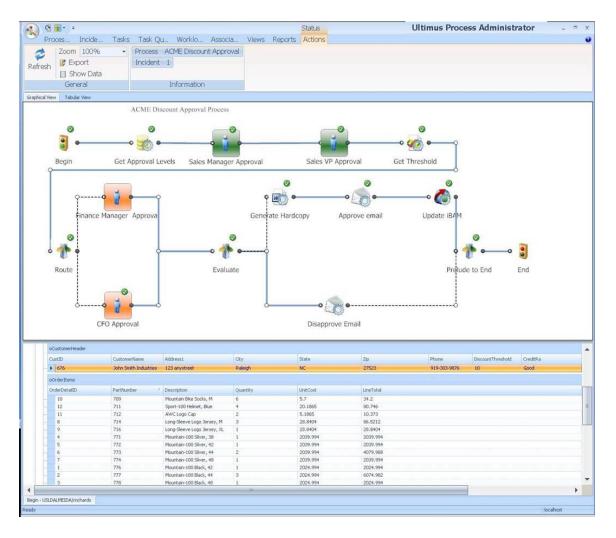
Figure 11: Ultimus Process Administrator

Process Administrator allows you to install a new process version and transition to the new version seamlessly and painlessly, without having to do anything to manage the transition. Ultimus makes sure that all new incidents of the process use the new definition and Forms and all "in-process" incidents use the old version. The old version is un-installed when it is no longer needed. Additional functions for monitoring processes include:

- View the workload for any user.
- Define queries to search for business process data.
- Define Client Views for Users or Groups from a centralized location.
- Monitor logs and track license violations.

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 capabilities. 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, and then pass the process file to a process developer for full automation. A Roundtrip optimization wizard allows live process data to be run through the model to identify inefficiencies. Models can be compared in a side-by-side manner to support optimization. All documentation is captured in Process Designer and is available for use by the IT developer team.
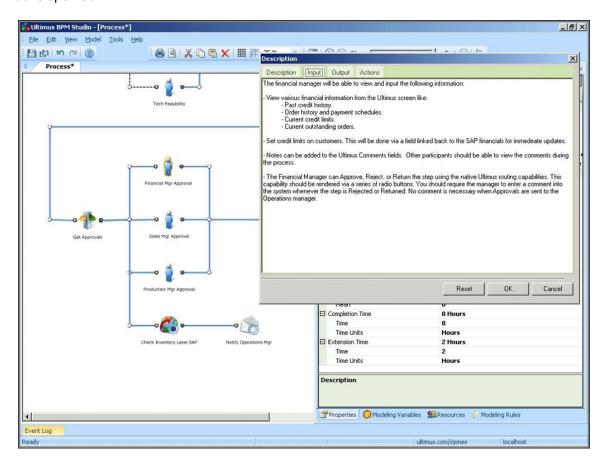

Figure 12: Ultimus Process Designer

Ultimus Director and Adaptive Discovery^{TM}

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, know as an "unruly event", occurs and the process doesn't know how to route the incident. The process owner can troubleshoot the incident in minutes by creating, testing and deploying a new rule using a graphical user environment and without coding. When the new rule is applied, the process "learns" from these decisions and follows them automatically for future matching cases, without 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.
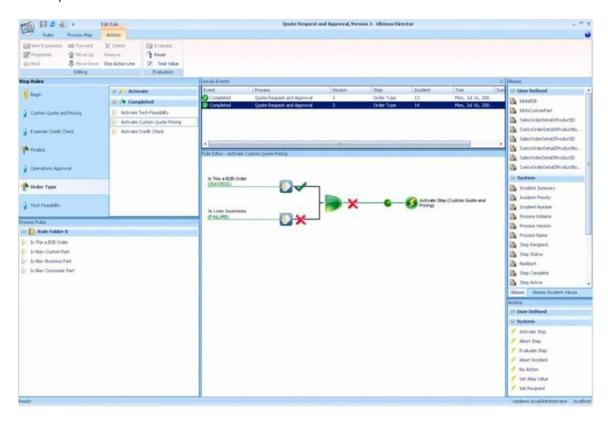

Figure 13: Ultimus Director with Adaptive Discovery Technology

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-through process experts.

To learn more about the Ultimus Adaptive BPM Suite V8, visit us at www.ultimus.com.