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Business Process Lifecycle Management with Savvion BusinessManager

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Executive Summary

Every business is governed by a set of business processes that are somehow defined, implemented, executed, and maintained. The success of every company depends on *how well it manages the lifecycle of its processes.*

Business processes are often not explicitly and formally captured, automated or managed. Some processes are completely implicit and manual. They are carried out through meetings, phone, e-mail, mail, fax, and documents without any automation. Others may be partially or fully automated by packaged applications, homegrown proprietary systems, and integration.

Such business processes are manual and inefficient, or they are partially hard-coded or locked up in systems that IT owns and controls. Business people have little control and visibility into their workings. What is even worse is that the processes often need to change. And changing such processes is no easy feat. It is cumbersome and may impact multiple systems. Hence, the disconnect between business and IT, and the pressure of constant change makes managing the process lifecycle quite challenging.

While there are various process-related software to help with managing various phases of business process lifecycle modeling and analysis, workflow, EAI and B2B, BPM, BAM there is a need for a uniform and comprehensive process system that

- manages any type of process end-to-end, and
- can manage the entire process lifecycle.

Savvion BusinessManager (SBM) is a comprehensive Business Process Management System (BPMS) that helps organizations to manage the entire lifecycle of their business processes from modeling and design, to integration and automation, to deployment and execution, to measurement and optimization. SBM provides its own fully integrated tools for every stage of the process lifecycle.

Savvion's leadership in BPM is validated in the marketplace by organizations that use it to manage many of their mission-critical business processes, and by industry analysts who consider Savvion a leader in the BPM market.

The Need for Managing the Entire Process Lifecycle

Every process has a lifecycle: At some point in time it is created and defined (either implicitly or explicitly). Then it is implemented (manually or automatically through some software) and executed. Hopefully, data from its execution is collected and analyzed to identify and alleviate inefficiencies in the process. Whether because of process inefficiencies or due to changes in the business or market, acquisitions or mergers, the process often needs to be modified or redefined. Hence the process often must be modified and redeployed. And at some point the process may be retired and potentially replaced with a whole new process.

Business people understand and know their business processes (that they own) at some conceptual level. This knowledge may be implicit or it may be in some document form, but the process implementation may be all manual and its execution may take place by simple people interactions (meetings, emails, phone calls). They may outsource the well-defined and common processes to external agencies.

Alternatively, some companies may have their IT organization "automate" their processes. Somehow the knowledge of these processes is communicated to IT. IT may prepare detailed requirements for the process and acquire and deploy systems and software that provides functionality for carrying out the processes. Ironically the unique processes that differentiate a business from others are less well-defined and there may not be out-of-the-box solutions for them. In such cases, IT may build proprietary systems and perform integration to implement such processes. At this point IT, rather than the business group, takes control of the actual processes. It is not clear if such an implementation is optimized, how well the process automation is achieved, and how the "automated" processes will perform. The result is a piecemeal, heterogeneous, complex system that the business people may have difficulty in understanding and controlling.

But things can get worse. Change is constant in every business. Economy, markets, business strategies, company goals and objectives, organizations, products and their positions, services, employees, customers, partners, suppliers, etcetera are all subject to change. And every change means changes in some business processes. Processes then must change accordingly and be redeployed. Business must communicate the new requirements to IT and IT must implement the new changes. Lack of a common language and terminology makes matters worse. After all, business and IT speak different languages. Thus, the process of change management itself becomes quite complex and cumbersome.

In recent years, companies are acquiring and deploying various "process" technologies to help with managing the complexities in dealing with their business processes. Here is a list of such tools and systems:

- Process-modeling and analysis (BPA) tools that allow users to draw process maps and document them. Certain process modeling tools also provide process simulation and analysis functionality.

- Document-centric and departmental workflow systems that allow the automation of human workflows.

- EAI systems for integration of enterprise systems and databases in straight-through (no human) processes.

- B2B systems that automate extended enterprise processes across a value chain.

- Business rules and event management systems for capturing and processing business events and policies as they relate to business processes.

- Pure BPMS that provide the core functionality for process design and automation, and may also provide some modeling and some post-deployment monitoring and analysis functionality.

- Business Intelligence (BI), business performance management (the other BPM), and/or business activity monitoring (BAM) systems for monitoring, analysis, and measurement of the "automated" processes.

While there are overlaps across these software product categories, typically different vendors play in each segment. There are players focused on business or process modeling, simulation, and analysis without an execution engine. Workflow, EAI, business rules, and pure-play BPM vendors cover the process execution. BI and performance management that has little ties to process, is a well-established market segment in its own

right and has its own leaders. BAM seems to be an emerging category that links up process with BI and performance management.

Because there are still no widely adopted process standards, implementing a complete process platform for managing the process lifecycle end-to-end becomes yet another IT challenge: integrating heterogeneous process products from various vendors.

For companies to reap the full benefit of process management, there is a need for a fully integrated and uniform process product suite. In an attempt to offer such an integrated product set, some vendors may choose partnerships. For example, there have been several alliances between BPM and BPA providers. Others may go the acquisition route. And yet others attempt to build their own solution.

The Requirements for Process Lifecycle Management

For a BPMS to address the end-to-end process needs of a company it must include modeling, simulation, analysis, design   generation of process applications or composite applications, execution, and management (real-time monitoring, metrics, and optimization).

The process lifecycle is one complete cycle of a business process, from its initial modeling to implementation, deployment and execution, management, to revision and optimization. As the process runs in an execution environment, business managers can gather information about process efficiency and optimize the process to improve performance in an iterative manner. This BPM lifecycle can form the basis for developing dynamic, complex processes that can quickly respond and adapt to change. Process lifecycle management is a combination of change methodology and technology tools to manage process change from creation to retirement.

The Business Process Lifecycle includes a series of discreet steps:

- **Articulate:** A business analyst determines initial process design, flow, logic, and rules and communicates it to an IT counterpart.

- **Enhance:** Technical staff adds rules, performs application integration, and creates portal interfaces. At this stage, the design has been built into an executable process according to business specifications.

- **Execute:** The process is tested and deployed in a production environment.

- **Measure:** Process data is gathered using performance monitoring tools; business executives can view and interact with real-time data through a portal interface; scorecards automatically gather relevant data for analysis.

- **Optimize:** Over time, a need for process improvement or changing business conditions force a process redesign, beginning with re-articulation of the process objectives at the business level.

Articulate > **Enhance** > **Execute** > **Manage**

Optimize
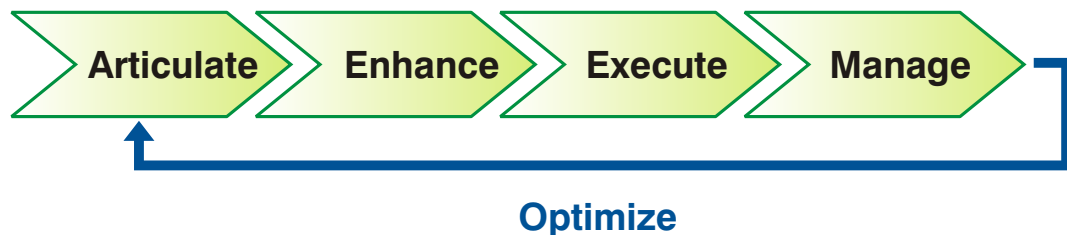
Savvion BusinessManager

Savvion BusinessManager is the first BPMS to deliver complete process lifecycle management, the full end-to-end delivery of business processes from modeling to deployment to management to change and improvement. Savvion BusinessManager accomplishes this by offering comprehensive functionality through well-designed, cohesive product components that are based on proven, standards-based, open technologies.
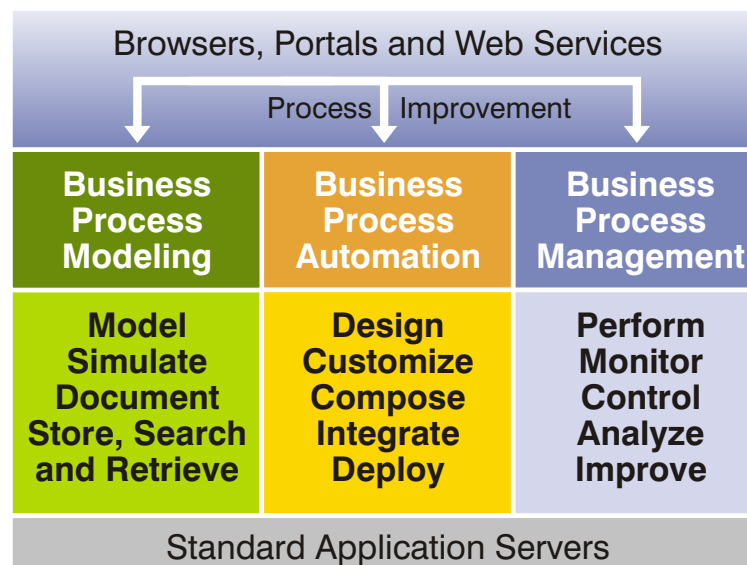
Unique in the industry, Savvion BusinessManager places role-specific tools directly into the hands of those closest to the process at the appropriate phases. These tools include:

- An easy-to-use modeling and simulation system for business analysts
- A collaborative process design tool for defining processes along with business events and rules, and integration for IT developers
- A scalable and failsafe process (including rule and integration) execution system
- Business performance scorecards, business intelligence analytics, and process improvement tools for business managers

This tight integration of all phases of process lifecycle, enables Savvion customers to quickly move from process discovery to production, from process concepts to fully managed processes, thus realizing significant ROI.

Savvion BusinessManager is a standards-based open system that consists of the following main components:

- **Savvion Process Modeler -** Process modeling and simulation environment that contains a documentation and process repository
- **Savvion BPM Studio -** Collaborative IT workgroup system where rules, integration, Web services, and Web UI are developed
- **Savvion BPM Server -** Scalable, failsafe test and deployment of systems in an execution environment
- **Savvion Process Asset Manager -** the web application for business managers and process owners; it includes a set of business tools to monitor and analyze process data and take corrective actions

Browsers, Portals and Web Services		
Process	Improvement	
Business Process Modeling	**Business Process Automation**	**Business Process Management**
Model Simulate Document Store, Search and Retrieve	**Design Customize Compose Integrate Deploy**	**Perform Monitor Control Analyze Improve**
Standard Application Servers		

Each component is described in more detail below.

Savvion Process Modeler

Savvion Process Modeler provides business analysts an easy-to-use tool for modeling and simulating processes. Models created in Savvion Process Modeler seamlessly and transparently interchange with the Savvion BPM Studio development environment. Hence, Savvion BusinessManager has the unique capability to support collaborative design between business analysts and technologists.

Savvion Process Modeler enables business analysts to:

- **Model** business processes using an intuitive graphical notation.
- **Simulate** the process models for assumed data set, generate reports, analyze the data, and identify the potential bottlenecks.
- **Document** the process models as the modeler generates automatic documentation for the models. The visual model with optional annotated notes is itself process documentation.
- **Store** process models in a process repository that can be searched for processes. It also provides process check-in/check-out and versioning.
- **Optimize** the models based on simulation results, to incrementally improve operational efficiency.

Savvion BPM Studio

Savvion BPM Studio offers a visual, drag and drop development environment for creating executable processes for the Savvion production environment, BPM Server. Through an intuitive interface, BPM Studio enables visual process and business rule definition. BPM Studio is based on standard Java development IDEs and supports collaborative design among IT professionals, business analysts, and web designers.

Specifically, Savvion BPM Studio enables IT professionals to:

- Access Process Modeler models from the Process Repository and complete or change the models. Processes can also be modeled and simulated right from BPM Studio as it includes Process Modeler capabilities.
- Define data flow through data slots used throughout the process.
- Integrate with external systems and Web Services through various adapters, which can be third party or built based on Savvion's Adapter Development Kit.
- Define event-based business rules for managing dynamic aspects of the process, defined using the Rule Editor or the easy-to-use Rule Wizards.
- Design web-based forms for human steps if custom forms are to be used.

Savvion BPM Server

Savvion BPM Server is comprised of the servers that execute and manage the process applications that are built and composed using BPM Studio. BPM Server consists of a versatile business process engine, a business rule and an event management engine, and an integration engine:

- **BizLogic Server:** The heart of Savvion BusinessManager, a highly scalable, cluster-able, and fail-safe event-based state machine that executes the process flows defined in BPM Studio. An activation of a process becomes a process instance in the process server. So at any time there may be thousands of process instances of each process template in the server.
- **BizPulse Server:** An event correlation engine that can take action, based on an event pattern based on a user-defined set of rules. It can listen to any number of event sources (the process server and other external event sources), check them against the active rules and "fire" the applicable rules, producing the desired side effects. The rules and policies around escalation, priority and deadline management and task assignment can be easily managed. This can also be used for generating

and collecting business metrics such as KPIs.

These servers provide a rich set of services for executing and managing business process applications.

Savvion BPM Server can integrate with any LDAP-compliant directory to track the identities of individuals and groups involved in the processes, including employees, customers, partners, and suppliers. It can also integrate with and support other user management realms. It is just one more way Savvion BusinessManager can ensure process participants are receiving timely and appropriate access to information, without compromising the security and privacy of your critical business data.

BPM Server Web Interface and API

BPM Server also includes web applications for end-users (process performers from a user management realm) and administrators.

- **Operational:** An out-of-the-box customizable web application that provides process performers with to-do list and access to the process applications they are authorized to initiate.
- **Administrative:** Provides complete remote administrative functionality such as system configuration, server start and stop, server logs, system monitoring, user management, application deployment, and archiving.

BPM Server also includes an open API set, so that a completely customized operational web application with a different look and feel and layout from the default one can be built. Alternatively, various components of these interfaces task list, application list, status page, and some admin functionality can be incorporated as portlets into other portals or web applications.

This interface also supports mobile and wireless technologies. A process participant, for example, can receive tasks through email, on cell phone or a PDA and perform them from those devices; a major plus for the mobile staff. Alerts and metrics can also be published for such devices.

BizLogic Server

The BizLogic Server delivers a powerful set of management tools that enables business analysts and managers to analyze process metrics and respond to problems and changing business conditions. These tools enable real-time reporting of time, volume, and informational data from a variety of applications, to determine if your business processes are running at peak efficiency and meeting strategic goals.

BizLogic Server enables managers to:

- Monitor business activity in real time through a Web portal interface.
- Measure performance with pre-built scorecards; or define new scorecards and KPIs.
- Analyze real-time data with many out-of-the-box reports; or build reports using the report builder.
- Drill down into data with a visual query tool, or use complementary business intelligence tools for further granularity of data analysis.
- Control and change the active process instances by changing their data or their flow.
- Optimize a process by providing the visibility and metrics to make decisions.

Savvion's Closed-Loop Process Lifecycle Management

Savvion BusinessManager provides the necessary tools to cover the entire process lifecycle while empowering organizations to continuously improve their processes.

Business analysts use the Process Modeler to model, simulate, and analyze their processes before any IT design and implementation starts. Process models are fully documented and stored in a common repository so that others can view them, reuse them in their models, and use them for training purposes.

IT and business people, using the BPM Studio, collaborate to enhance the process application based on the process model. Once the application is adequately tested, administrators deploy it onto a BPM Server in a production environment and release it to the user community.

Intended process performers can then engage in process execution. They get their tasks and perform them over the web, email, mobile devices, or by a custom application, using the interfaces of the BPM Server.

In the mean time, managers in charge of the process have complete visibility into its execution. They use BizLogic Server to closely monitor the execution of the instances of the process, receive reports, and analyze it using KPIs and other metrics. When necessary, they can change and influence the automated execution of the process instances by changing the instance data (such as priorities, performers, and due dates) or further change the actual process flow per instance.

Based on the observed behavior of the process, the analysis, and other changing business conditions, business managers may provide feedback to business analysts and IT, who in turn can modify the process model and its associated process application and build and release a new version of the process. This new version can either substitute the old version, or be available in addition to the old version until existing instances complete.

Besides the process, the event rules that act on the process can also change independent of the process. In fact, such rules can change in a more dynamic fashion often without any change in the process itself.

Therefore an organization can improve the process and achieve process optimization iteratively and continuously. Over time, the process evolves to a highly streamlined, efficient, and well-managed process.

Conclusion

The different stages in the lifecycle of a business process are articulation, automation, execution, measurement, and optimization. It is important to have tightly integrated, role-specific process tools at every stage for the end-to-end management of process lifecycle.

Savvion BusinessManager is the only BPM solution on the market today that addresses all phases of the process lifecycle. With sophisticated tools for collaborative process modeling and simulation, design, extensive integration functionality, scalable execution servers, and a comprehensive real-time management toolset, BusinessManager is a powerful framework for the end-to-end management of today's dynamic and complex business processes.

For more information on Savvion BusinessManager and process lifecycle management solutions, visit www.savvion.com.

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