> UNDERSTANDING USAGE PATTERNS AN ENTERPRISE BPMS MUST SUPPORT

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EXECUTIVE SUMMARY

BPM is one of the key drivers for the success of your business. Business Process Management Systems (BPMS) provide you with tools and technology to deliver the values of BPM. Effective enterprise deployment of BPMS requires an understanding of different usage patterns. An enterprise class BPMS must support these usage patterns, in addition to being scalable and highly reliable. This whitepaper discusses seven important and frequent usage patterns. Progress® Savvion™ BPMS addresses all these usage patterns to meet needs of your enterprise.

INTRODUCTION

Most of the current BPM solutions have the same basic functionality set. This set has been specified as the capabilities of a BPMS by Michele Cantara in her June 20, 2008 Gartner report "Four Paths Characterize BPMS Market Evolution" (G00158118).

These capabilities are:

- Model-driven development environment
- Process component registry or repository
- Document and content management
- User and group collaboration
- System connectivity
- Business event, business intelligence, and business activity monitoring
- In-line and offline simulation and optimization
- Business rules management
- System management and administration
- Process execution and state management engine

While most of the leading BPM systems would address this functionality set at some level, they have some intrinsic differences that make them more suitable for one usage pattern versus the others. This

difference often comes from the underlining architecture and the genesis of that particular BPMS. It may also be the consequence of the key customer segment that they target.

Understanding your usage pattern is very important, not only for selection of your BPMS but also for the design of your solution.

The BPM community understands some of the common usage types of BPMS—often referred to as human-centric business processes, system-centric (integration), and document-centric processes. Most of the business processes have all three elements—humans, systems, and documents—in them, but some are more heavy on one versus the other two.

In this paper, we first look into these three usage patterns and then identify and describe other equally important usage patterns that are not very well understood yet.

HUMAN-CENTRIC PROCESSES

People are a very important part of a business process. Some processes require a lot more human involvement than others. The participants can belong to different functional groups in an organization or even be external to the organization. Some processes could involve the whole ecosystem of your customer—people from your sales team, legal, finance, operations and your partners who must join hands to deliver products or services and, most importantly, an integrated customer experience. A human-centric process management solution would focus on automating the human activities and gaining operational efficiencies by making the human participants more efficient. End of period financial closing or new account opening would be more people centric, where there are a multiple participants from different functional areas working together by participating in the execution of the process. Some of the key features required for human-centric processes are good task management, role-based dashboards, delegations and collaboration capabilities.

DOCUMENT-CENTRIC PROCESSES

Processes such as residential lending are document intensive. Even though the process involves the interactions of many people, it needs special document management capabilities like managing the loan documents, home inspection records, home insurance records, etc. All of these documents need to be reviewed and stored in order to make a decision on the loan, which makes the process document-centric. A BPMS in this situation needs to be able to manage the documents along the way and have the necessary functionality to check in and check out the right documents from the document repositories. These documents could be text-based or images that need to be processed correctly. Some of the key features needed in this process are integration with imaging systems, document management systems, viewing of documents in task forms, etc.

Many companies have already adopted a DMS and will want to continue to use their enterprise DMS, but some may want to have DMS as a part of their BPMS. Therefore, a BPM must support out-of-thebox interoperation with existing DMS, as well as provide a native DMS.

SYSTEM-CENTRIC PROCESSES

The main focus of a system-centric process is integration of different systems and applications into the process to orchestrate their execution based on the definition of the process. The process could be triggered by an external system, a human task, or another process. It will often interact with a number of systems to complete the tasks and bring the process to completion with human participation required for exception handling and especial circumstances. Take, for example, a network provisioning process in communications in which 80% of the steps are performed by OSS/BSS systems and BPMS is running on the top of these systems, orchestrating the activities and raising exceptions when needed. In such cases, because most of the process tasks are done by systems, exception handling has to be quite advanced, and visibility is quite critical. If one of the systems in the chain fails, the BPMS should be intelligent enough to take the next best action or call for human intervention. The system dashboards should be able to tell the status of the process, i.e., what activities have been completed and where

the process is stuck and why. Some of the features required are strong integration capabilities, capability to interoperate with the varieties of SOA infrastructures, and ability to raise and route exceptions to human performers.

BPM USAGE PATTERNS NOT VERY WELL SUPPORTED!

Case Management

Case management is a usage pattern that is very common, but not delivered by BPMS with the specialized out-of-the-box functionality needed. This usage pattern demands a lot more sophistication for work management. It must support customer contact centers with hundreds or thousands of agents working and resolving cases, trouble tickets, orders, inquiries, or fraud reports. Process instances are generally short-lived, possibly ending with one call, but the volume is daunting.

Volumes of cases to be processed are even higher for business process outsourcers who manage the processes of multiple customers. In such usage pattern features such as intelligent task routing and task routing through multiple channels, communication and integrations become very important. Providing an integrated, 360-degree view of the customer is very important too. You need to know who is calling, what she might be calling about, what she has called about in the past, and what the value of her business is to your company—even before you pick up the ringing phone. Some of the key requirements for case management are efficient agent portals, advanced task-management capabilities, search across systems, advanced routing engine, ad hoc processes, collaboration, and integration abilities with business insight software, as well as telephony technologies, to deliver a compelling solution.

Rule-based Processes or Decision-intensive Processes

If there are processes, there will be rules. If you are applying for loans, there are rules to determine your eligibility for a loan, rules to determine which agent gets to process your loan, rules to determine which loans you can even apply for, rules to escalate, rules that determine which process path an instance would take. These rules are not the same and require different sets of functionalities to describe and use with processes.

Decision-intensive processes require the process participants to make business decisions based on data and on business rules engine output. Decision making becomes even more challenging when these rules change frequently and managers need to keep updating their decisions based on the rules and regulations.

Some of the simple rules can be described as part of your process description via the decision gateways. But there could be rules that are more complex, hierarchical in nature, and need to be maintained outside your processes. In that case, you need a BPMS with a strong Business Rules Management System (BRMS). With BRMS you can define your rules independently of your processes and can use them in any process. You can change the rule parameters at runtime to have the agility that keeps your business relevant with changing markets and regulations, without changing your process.

In addition to data-based rules there are event-based rules that need complex event processing and correlation to make a meaningful conclusion about the process after a rules engine detects certain events. For example, if a cellular phone service provider customer has generated a couple of trouble tickets, has not sent her payment, and has declined the offer for a new free phone, the system can conclude that the subscriber is an unhappy customer, and her churn propensity is high. You can use this information either to provide her with incentives to continue her service or to let her go if the lifetime value is low. Some of the key feature requirements for a rules-based usage pattern are a solid data-based and events-based rules engine, rules development environment, rules repository, and rules management at runtime from a portal.

Project-oriented Processes

How often have you wondered whether to use project or process management tools? Or in an attempt to make projects executable, you have implemented in BPMS—only to find out that you have lost the functionality you have become comfortable with in project management tools. Such processes that need project management features are called "Project-oriented Processes" (POP). Some of the examples of such processes are new product introduction, cell tower construction for communications or new DVD release processes.

Traditional BPM and Project Portfolio Management (PPM) systems each address the requirement of managing POP only partially. A solution that provides the combined functionality of both BPM and PPM is needed to meet the requirements fully. Hence, there are significant benefits in extending a BPM System to include PPM functions.

A project-oriented process is one that needs to complete its execution by a certain target time and date (deadline) using a set of pre-allocated resources. It is monitored for meeting pre-defined milestones while it is in execution to ensure that the completion by the target time and date is on schedule. The process is typically partitioned into phases where completion of each phase is an indication of the progress toward completion of the process. The total resources used to date are also monitored while the process is in execution to ensure that the cost of the completion of the process does not exceed the expected amount.

Existing BPM systems do not meet the requirements of these processes because they do not provide a convenient way that is familiar to project managers to define, analyze, and manage such processes.

Furthermore, in existing BPM systems, project concepts such as milestones, phases, and resource allocation are generally missing.

It must be noted that there are also projects that have alternative paths of execution that depend on certain decision points in the project. Some paths may involve reworking of the tasks previously completed. It is dynamic and requires near real-time monitoring of the project. The project is not a one-off project and there maybe multiple similar projects (instances of the process) in execution at the same time, and at different times.

PPM systems do not meet the requirements of these projects. A process execution tool is needed that generates the necessary tasks, keeps track of who has done what and when, provides real-time visibility into the execution of the processes, and allows reporting and analysis of the processes that have been completed.

In the absence of a tool that provides both BPM and PPM functionality, project managers responsible for these projects may resort to BPM systems. However, since BPM systems do not meet PPM requirements out of the box, managers of these projects end up spending a lot of time and

effort enhancing BPM systems, foregoing their requirements, or settling for partial inferior solutions.

The Savvion BPM Suite of products has been enhanced to support POP. A project-oriented process can be defined using the Tabular Process Definition provided in Savvion Process Modeler. Project milestones, phases, and resource allocations can be specified as part of the definition. Once the process is defined, it can be made executable. Once it is made executable, project participants will receive their project tasks as specified in the process. Up-to-date project status, including information about resource utilization and bottlenecks, will be available to project managers automatically and in real time through dashboards and reporting tools. Extensive analysis of the various aspects of the completed projects, as well as active projects, are made possible because Savvion BPM System will maintain the information about who did what and when during the execution of the project.

Event-centric Process Management

You should not be forced to re-implement your process to improve it. This is breaking away from the notional idea that "Model, Deploy, Execute, Monitor and Improve" is the only cycle for achieving process management and improvement nirvana. Why would you re-implement your processes if you are satisfied with your current implementation in the ERP, CRM, SOA, or SCM systems? The problem is that if the processes are spanning multiple systems and there is no visibility into what the actual process is and how it is performing, you cannot improve it. The solution is to model that process endto-end (even though it is actually multiple processes spanning multiple applications) and monitor that composite process via a consolidated dashboard with intelligent event correlation and data mining that would allow you to improve your process. Savvion MMI (Model Monitor Improve) provides this capability. You get the explicit view of your process in modeling, and you can monitor your process and improve it without the need for re-implementing and making it executable in BPMS.

Take an example of a company processing orders in their order management system. The process is already implemented but they want to have better visibility and improve the process. They can model the process and tie that model to the underline order management system events and

gather important information in context of the process. Now they can analyze the performance of the system like how many orders are delayed, where are the bottlenecks, resource utilization etc. With this information they can make improvements without re-implementing the process in BPMS. Some of the key features that are needed for this usage pattern include easy-to-use modeling tool, ability to connect to different systems and listen to their events, complex events correlation engine, advanced dashboarding and charting abilities, and business-intelligence capabilities.

CONCLUDING REMARKS

As BPM becomes better understood and the capabilities of BPMS advance, businesses are looking for the BPMS functionality to support additional usage patterns. These usage patterns have not been well supported by BPMS until now.

It is important to understand these usage patterns and make sure that your enterprise BPMS meets all of them. This allows you to future-proof your BPMS investment and avoids the expense for new tools when the need for other usage patterns arises. No enterprise wants to have a different BPMS for each usage pattern. That is not practical.

Progress offers a comprehensive BPMS that meets all of these usage patterns. You can build very compelling business process applications and solutions based on these usage patterns with the least amount of effort and cost of ownership using Savvion products.

PROGRESS SOFTWARE

Progress Software Corporation (NASDAQ: PRGS) is a global software company that enables enterprises to be operationally responsive to changing conditions and customer interactions as they occur. Our goal is to enable our customers to capitalize on new opportunities, drive greater efficiencies, and reduce risk. Progress offers a comprehensive portfolio of best-in-class infrastructure software spanning event-driven visibility and real-time response, open integration, data access and integration, and application development and management—all supporting on-premises and SaaS/cloud deployments. Progress maximizes the benefits of operational responsiveness while minimizing IT complexity and total cost of ownership.

WORLDWIDE HEADQUARTERS

Progress Software Corporation, 14 Oak Park, Bedford, MA 01730 USA
Tel: +1 781 280-4000 Fax: +1 781 280-4095 On the Web at: www.progress.com

For regional international office locations and contact information, please refer to the Web page below:
www.progress.com/worldwide

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