White Paper

Maturing Beyond E-mail and Spreadsheets: How to Effectively Manage Business Processes

"...the true creator is necessity, who is the mother of our invention"

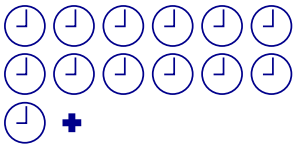
REPUBLIC, II, 369C

opentext™

Table of Contents

page

11+ Hours
Time the average person spends per week reading and responding to emails.



The Necessity of Business Process Management Suites

In business organizations, we find ways of solving problems when it becomes necessary or mandatory to do so. A common way of creating a solution to a problem is to define a business process that solves the need at hand.

Roadblocks to Success

A business process coordinates the behavior of people, systems, information, and things to produce business outcomes in support of a business strategy. A company defines a business process to accomplish a specific organizational goal. However, simply defining and implementing a set of business processes does not ensure success. Several inherent problems must be overcome first.

Inefficient Manual Processes

Think of a customer purchasing an item through a vendor's website. The process could include the customer browsing a catalog of offerings, making a choice, entering billing and shipping information and finally approving the purchase. On the vendor side, the customer's purchase must be tracked through Finance and Fulfillment while ensuring that a replacement is created for the next customer. If a new product is to be offered, the catalog must be updated. If the customer encounters an issue with their purchase, a customer service process needs to be followed. The process for each step is likely defined and hopefully adhered to by those involved. However, even when processes are well-documented, organizations quickly find these manual processes do not scale.

Lack of Consistency, Visibility, and Agility

The next level of maturity leads to implementing fit-to-purpose solutions to address a specific vertical need like Human Resources, Application Development, IT Operations, Public Relations or Facilities. However, stakeholder participation and transparency can be challenging, even with fit-to-purpose solutions:

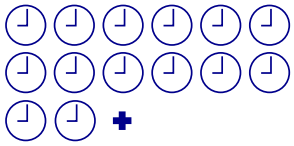
- **Your HR tool tracks all your employees.** Does it enable Facilities, IT and Security to stay involved in the process when onboarding a new employee?
- **Your agile development tool calculates how many engineers you need to reach a milestone.** Does it help find contractors to supplement your full-time engineering staff?
- **Your Computer Security Incident Response tool alerts IT immediately when there's a hacking attempt.** Does it track public relations, legal and law enforcement action items?

And when there is no process, people fall back to the old way of doing things:

- My new developer started today. Does he have a desk assigned and a phone?
  - I'll e-mail Facilities and check the status.
- My agile planning tool says I need 5 more developers to finish this project.
  - We have a list of contractor companies. I'll call and see who they have available.
- We found several defects in staging that must be fixed before deploying to production.
  - I'll use a spreadsheet to list the defects and we'll go through with QA.

While these methods can produce short-term results, they typically become unsustainable due to a lack of business continuity and ownership.

12+ Hours
Average time spent per month updating, consolidating, combining, and correcting spreadsheets.



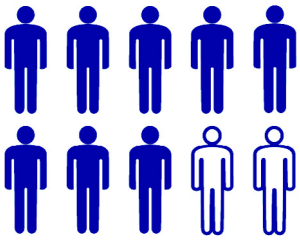
Shadow IT and Rogue Utilities

To try and move away from manual processes, individual departments may succumb to something referred to as Shadow IT, which can happen as follows:

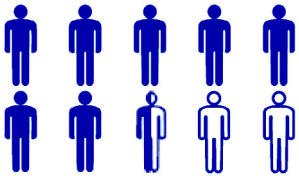
- With the best intentions, an organization like Legal, Human Resources or Facilities will request an application or service needed to address new business needs.
- IT Operations, having limited resources for development, will pass the request on to a development team.
- That development team, already inundated with other work requests, likely will not have the time and resources needed to create this new one-off utility.
- Frustrated, the requesting organization will then take it upon themselves to do a technology search and buying decision for something to fit their needs. Many times this will be a low cost, freeware or open source solution that IT is not prepared to support.

Multiply this situation by several organizations with dozens of unique requests and soon the problem begins to spiral out of control. Invariably, IT Operations is asked to resolve configuration, error conditions or security vulnerabilities found in these unapproved applications. The IT Operations team that didn't have the bandwidth to create a solution for the business is now asked to spend even more time supporting an unfamiliar network of rogue utilities.

80%
of workers admit to using applications at work without IT approval.



75%
of professionals say that spreadsheets would be more useful if they contained real-time connections to company data.



Finding Something Better (the Solution to Your Solution)

Many companies stay trapped in this business mode, unable to govern and enforce the processes needed to connect Line-of-Business (LOB) systems, enable employee communication and provide procedural transparency. Those that search for a solution typically discover a Business Process Management Suite (BPMS) approach. A BPMS provides the technology for designing, implementing and improving an activity or set of activities that will accomplish a specific organizational goal. In other words, it is a tool to enable the original promise of BPM. To be considered a BPMS, a solution must provide the following capabilities:

Benefits	Standard
Process Orchestration Engine	Coordinates the interactions of people and devices for structured workflows, enables transitions between defined states, updates priorities based on input (human or machine), schedules future work.
Business Rule Processing	Infers logical consequences from a set of data, manages and executes rules that represent business policies, and provides decision points and connections to other processes.
Graphical Model-Driven Composition Environment	Enables low-code/no-code development processes using a visual user interface that provides model validation, version comparison, and identification of potential inconsistencies in workflow.
Connectivity	Supports integration technologies like HTTP, REST, SOAP, WSDL, and ODBC or JDBC.
Content Handling	Manages documents, links to intra or internet resources, and enables updating of content managed by third-party repositories.
Human Interactions	Provides a rich and interactive experience using HTML5 and mobile-based technologies tailored to a team, group or individual including personalized dashboards, fit-to-purpose views and optionally enabled UI widgets.
Process Intelligence and Business Activity Monitoring	Uses active analytics to monitor the health of processes, orchestrations and business intelligence through either an interactive user interface or remote alerting technologies like E-mail or mobile.
Management and Administration	Includes ability to configure all facets of the BPMS platform including user administration, security, starting/stopping of resources, and auditing of administrative actions.
Registry Repository	Stores and manages developed versions of processes enabling deployment into differing environments including hybrid cloud configurations.

Once an organization decides to implement a BPMS, a wide range of controlled solutions become available. Because BPM suites are not tied to a specific vertical, they can be used to enforce processes within a given department or even between departments. Since they are approved for use by IT Operations, they can also be centrally managed and supported while providing benefit across the entire organization.

Ensuring the entire release cycle is enforced, audited, and communicated is made possible and efficient by a BPMS. A BPMS does this by:

- Automating interactions with LOB Systems through integration and orchestration
- Enabling designers to create repeatable business workflow based on BPM models
- Creating an easy-to-use interface for on-premise and mobile users that requires their participation to move an issue forward
- Providing visibility into process execution data

In this way, a BPMS automates the process—driving work through the organization according to the model, manages interactions with people and applications, and provides historical and real-time data to stakeholders.

The Rise of the Citizen Developer

For even more efficiency, processes can be created by what the industry refers to as citizen developers. A citizen developer is a user not in Development or IT who creates new business applications for consumption by others using development and runtime environments sanctioned by corporate IT. In the past, end-user application development has typically been limited to single-user or workgroup solutions built with tools like Microsoft Excel and Access. However, today, end users can build departmental or enterprise process applications using a low-code/no-code BPMS offering. Because they are not limited by Development or IT bandwidth, and since they are the most familiar with the desired process, a citizen developer can respond faster to user comments and react more quickly to changing business requirements.

A citizen developer is a user not in Development or IT who creates new business applications for consumption by others using development and runtime environments sanctioned by corporate IT. End users can build departmental, enterprise and even public applications using shared services, low-code/no-code BPMS development platforms and cloud computing services.

The BPMS solution

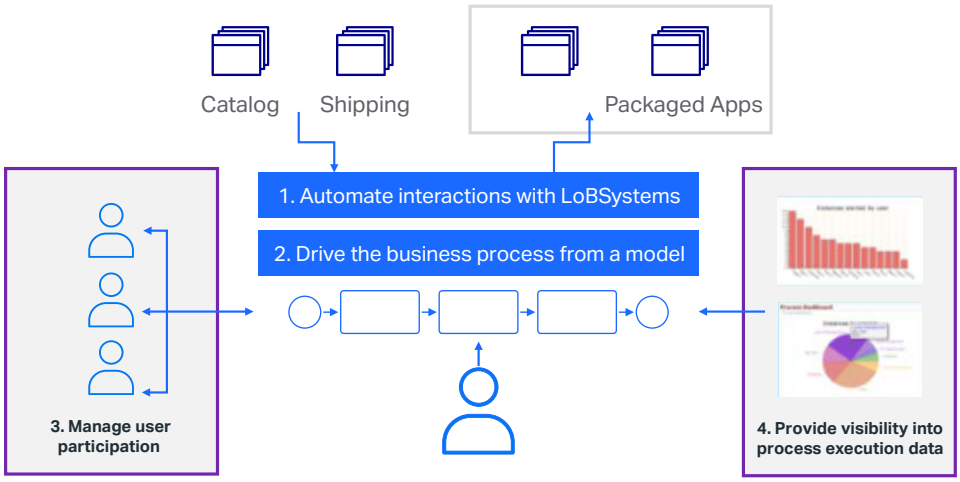


Figure 1. A BPMS integrates LOB Systems using a well-defined workflow that enables users to work together from a common platform while providing visibility to stakeholders

The benefits of leveraging BPMS technology to drive business processes include:

- Reduced internal costs due to increased efficiency
- Improved business agility when reacting to changing demands
- Ease of implementing compliance mandates with better visibility of metrics
- Increased focus on user experience to drive consistent process usage
- Decreased burden on technical administrators

Connecting the Dots

A BPMS can provide initial value in one of two ways. First, individual departments can now create applications that fit their unique business goals quickly and without the need to disturb Development or IT engineering resources. Processes can be put in place to address specific needs like tracking status of tasks, ensuring prerequisites are met prior to moving forward, or keeping stakeholders well informed. However, the power of a BPMS is amplified when used to connect and orchestrate individuals across functional silos. By coordinating actors across a cross-functional process, a BPMS not only automates the process but also grants consistency of experience since each individual is now using a common, fully supported platform. Building this bridge between disparate departments and solutions is achieved by utilizing the broad integration capabilities of the BMPS that uses technologies like REST, SOAP/Web Services, JDBC/ODBC or custom API integrations. By combining this integration capability with orchestration and the low-code/no-code environment provided by a BPMS, designers can create complex interactions between people and LOB systems easily and quickly using the visual workflow editor.

Building on a Solid Foundation—Governance, Risk and Compliance

The next level of maturity in the use of a BPMS is to use it to fulfill Governance, Risk and Compliance (GRC) goals for an organization. Rather than invest in another set of LOB systems to meet these needs, the inherent capabilities of a BPMS can be tapped to provide execution and oversight of a GRC initiative. Because the features and functionality of a BPMS already represent everything needed, organizations need only define the business models and reporting deliverables to execute a GRC strategy.

Governance

Governance is likely already in place in a well implemented BPMS environment, but formalizing the business model is typically required to properly achieve governance goals. This involves using the group, team and individual privilege model to define an organizations structure and associated roles, responsibilities and accountabilities. Because the business workflows can be designed to mandate required information prior to changing status, process is enforced. Once the enforceable process is defined, the stakeholders involved can be trained on how to participate in the process using convenient anywhere access through a web browser, mobile client or even standard E-mail to review, transition or approve items to move forward. Communication and awareness is heightened and becomes a self-service action.

A BPMS commonly provides a way to visually represent the business workflow and provide in-process documentation on what each status or transition represents. In this way, users can easily understand the requirements for each step and which role is involved. Collecting these self-documenting workflows together makes it easy to review each process, or policy, on a regular basis. If any changes are needed, the ability for citizen developers to make changes without requesting outside help makes it fast and efficient

to react to changing business needs. Coupled with defined policy and standards, these processes can be easily communicated, and enforced, across an organization.

Risk

The Risk component of GRC comes in two primary areas: risk analysis and risk mitigation. Risk analysis requires historically accurate data that can be used to determine trends in continually performed actions. A BPMS provides this capability through a combination of always-on auditing to record the data and a robust reporting engine with the ability to identify trends using advanced graphing models like heat maps. This helps policy managers define Key Risk Indicators (KRI) and Key Performance Indicators (KPI). A BPMS can also use this data to identify a preferred path to success for a given task. This could include choosing the employee resource who has resolved the issue the quickest in the past or recommending the best day of the week to perform an action. Coupled with machine learning, it can even begin to provide self-service assistance to provide decision guidance; indicating to the user which workflow path has the highest change of being successful given the parameters entered so far.

Risk analysis interleaves with risk mitigation in an attempt to reduce errors and ensure a process produces a positive result as often as possible. The first and easiest way to mitigate risk is to build an enforceable process that mandates required deliverables at each step before allowing the task to transition to the next status. This may involve checking if a document or link has been attached to the task, ensuring the right stakeholders have approved the action or checking inventory to determine if server resources are available.

The second way to lower risk is through automation and integration with other data sources. A BPMS should connect human and machine based processes to enable automation where possible and facilitate stakeholder oversight where desired. Using the integration abilities of the BPMS, a process can be designed that both reacts to events from other systems or polls outside applications to gather information used in a decision. In either case, the workflow engine will use the data to decide if the next transition can be done without human intervention and if so, will perform the action exactly as designed. If input is needed from a user, the BPMS can send out a notification in the browser, by mobile or through an e-mail. The user will be able to respond through any of the three paths to provide the workflow engine what is needed to resolve the decision. The workflow engine will then return to autonomous execution until the task is complete or input is needed again. This light touch approach ensures that the risk of human error is kept to a minimum.

Compliance

Compliance mandates can come from both outside a company and from within. For highly regulated entities, compliance may be required to do business within a particular geography or vertical marketspace. For example, a healthcare organization is typically required to conform to Health Insurance Portability and Accountability Act (HIPAA) to ensure patient confidentiality and information security. This requires not only the enforcement of process but auditability to prove that compliance is consistently achieved. A BPMS shines in this area by providing both always-on auditing and a reporting engine that enables auditors to review compliance at any time.

Rather than invest in another set of LOB systems to meet Governance, Risk and Compliance needs, the inherent capabilities of a BPMS can be tapped to provide execution and oversight of a GRC initiative. The benefits echo those of the overall BPMS through enforced process, transparent Key Performance Indicators (KPI) and nimbly staying up to date with changing standards and laws.

Robotic Process Automation (RPA) technology automates and integrates any repetitive administrative task. This solution reduces labor-intensive processes by imitating human effort to complete tasks, thereby boosting the capabilities of companies that perform high-volume transactional processes. Operating non-invasively on the surface (UI layer) without compromising the underlying IT infrastructure, RPA bridges the technology gap between fragmented, semi-structured legacy systems.

For internal compliance, departments like Human Resources or Facilities (Security) can design processes to both enforce and confirm compliance for assigned tasks. Human Resources may require that each employee take a course in employee benefits and then track each employee to ensure that they did indeed take the course. Reports can be easily run to identify who did and did not take the course and automatic notifications can be sent to those who still have not completed the course. Operational Level Agreements (OLA) can also be set up to notify managers when their employees still have not taken the course by the communicated deadline.

From the Old to the New: Robotic Process Automation

But what if your legacy LOB systems do not have well established APIs to enable a BPMS to bridge the gap between departments or complex processes? This is where a technology called Robotic Process Automation (RPA) can come into play. While not inherently part of a BPMS, an RPA solution dovetails nicely into the business process compliance goals of any organization. An RPA solution consists of two primary components: A screen capture technology and a software robots. The screen capture tools found in an RPA solution have many similarities to graphical user interface testing tools. These tools also automate interactions with the GUI, and often do so by repeating a set of demonstration actions performed by a user. What differentiates the RPA solution is the software robot, that then takes the captured data, converts it into a well known format, and transfers it to a BPMS or similar orchestration technology using standard APIs. The BPMS can then either process the data using its own defined workflow or transfer the data to another LOB system for processing.

This entire process can itself be automated using the BPMS. The process may gather data from outside sources using traditional APIs and, when no API is available, the BPMS will utilize the RPA technology to obtain the data from legacy systems. The decision of when to use RPA and when to use modern APIs is fully controlled by the BPMS.

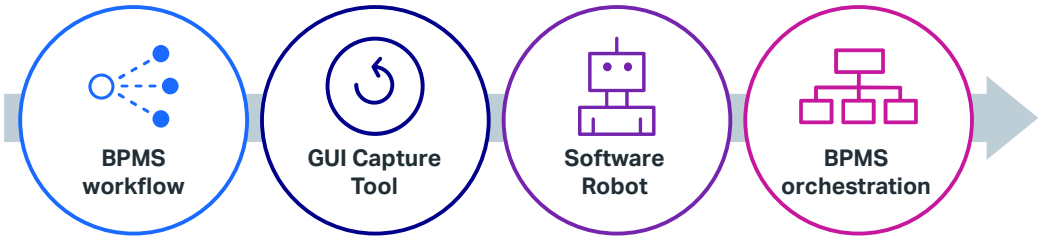


Figure 2. A BPMS can both control the entire process and participate in the orchestration of results

Summary

A BPMS enables development and operations teams to orchestrate, integrate and enforce processes in support of fit-for-purpose applications. In just minutes, citizen developers can create automated workflows with always-on auditing that provide governance, lower risk and ensure compliance across organizations like Development, Operations, HR, Legal, Program Management and Security. With its built-in orchestration engine, a BPMS seamlessly connects human and machine based processes to enable automation where possible and facilitate stakeholder oversight where desired. Where necessary, a BPMS can integrate with an RPA solution to integrate legacy LOB systems. A BPMS also contains a powerful reporting engine for both historical and predictive business insight, and user defined dashboards and views (e.g. Kanban) to provide transparency into the status of tracked items. A BPMS includes mobile clients alongside a responsive based browser interface with additional interactions possible through e-mail.

With its built-in orchestration engine, a BPMS seamlessly connects human and machine based processes to enable automation where possible and facilitate stakeholder oversight where desired.

Whether automating a standalone process or integrating multiple LOB systems across several departments, a BPMS can scale and grow with the expanding business needs of any organization. As the maturity of your organization advances, your BPMS can expand to fulfill GRC policy management as well as addressing legacy solution orchestration through RPA. Once in place, a fully embraced BPMS delivers efficiency, cost savings, agility and accountability into any organization.

How OpenText Can Help

OpenText™ created Solutions Business Manager (SBM), a leading BPMS, to address customer challenges around Business Process Management and GRC. In conjunction with other portfolio offerings, SBM can also provide the Business Process Management component for an organization's RPA needs. OpenText™ Solutions Business Manager provides a no-code platform on which to document and enforce business processes, integrate with 3rd party applications, and provide visibility and insights in to those business processes. Solutions Business Manager has been used for over 20 years in many different industries, including Financial, Insurance, Healthcare, and many others. The SBM platform enables the flexibility to adapt to your industry and your ever-changing business processes.

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