

**ITPro**<sup>TM</sup>  
SERIES

WindowsITPro  **eBooks**

# Business Process Automation

Managing Cost in Your Enterprise

by David Chernicoff

sponsored by



**NETWORK  
AUTOMATION**



## Contents

### Business Process Automation—Managing Cost in Your Enterprise

<b>Chapter 2: BPA and IT</b> .....	1
Executive Overview .....	1
Benefits of BPA to IT .....	1
Reducing the Impact of Human Error .....	2
Transforming Data into Information .....	2
Improving Collaboration and Information Sharing .....	2
Optimizing Workflow Processes .....	3
Business-Level Workflow Processes .....	3
IT-Level Business Processes .....	3
Improving IT Response Times .....	4
Getting Control of SOA .....	5
Delivering on SLAs .....	6
IT and BPA: A Competitive Business Advantage .....	6

## Chapter 2:

# BPA and IT

### Executive Overview

*In chapter 2 we look at the many benefits that business process automation (BPA) brings to IT operations. By implementing BPA to control, integrate, and automate business workflow processes, IT managers can turn inefficient IT departments into streamlined operations that increase ROI and free up time and resources for higher-value business targets.*

### Benefits of BPA to IT

As traditional IT roles expand to cover more business services, IT departments face unprecedented challenges to “do more with less and do it faster.” Increasing workloads and higher performance expectations often lack a corresponding increase in manpower or budgets. IT managers must constantly scramble to find ways to boost productivity without driving up costs. They must also meet the challenge of bridging the gap that often exists between the IT department and the business side of the organization by ensuring that IT workflow processes reflect the correct business logic to deliver maximum business value.

In fact, delivering business value is more critical than ever before for IT shops, most of which are coming under increasing scrutiny as management seeks additional ways to cut costs. While consolidating hardware is often viewed as the best way to reduce costs, the reality is that services, not hardware, make up the largest percentage of most IT budgets. Therefore, improving the delivery of services, in terms of both efficiency and response times, may deliver a greater ROI.

Today’s IT organizations have taken on new responsibilities that far transcend their traditional role of managing and storing data. IT operations are now more defined by, and held accountable to, higher-level business processes. An IT manager whose only worry in the past might have been the failure of a key network server may now have to face off with customers or suppliers who can’t access the company’s Service Oriented Architecture (SOA). As the lines between business and IT processes continue to blur, both sides need tools that allow them to collaborate in creating effective new workflow processes and re-engineering or abandoning inefficient ones.

Business process automation (BPA) provides a key strategy for streamlining workflow processes and integrating business-side logic with IT tasks. For example, using BPA to automate error-prone manual processes enables IT to save time and reallocate resources to higher-value business targets. As you’ll see in the sections that follow, automating manual tasks is just one of the many ways that BPA drives value for IT.

### **Reducing the Impact of Human Error**

Where human interaction meets automation, BPA offers great potential for improving quality and accuracy. Many business processes depend on human input to perform critical steps at specific times to complete one or more tasks. Identifying and automating repetitive and error-prone manual tasks with BPA has multiple benefits. First and foremost, BPA removes human participation in the process, which is the source of many errors. Automated tasks do not skip steps, get distracted, bored, or tired. Automating tasks with BPA also frees up personnel whose time was previously occupied with rote tasks and allows them to refocus on higher-value activities that do require human input. In some cases BPA releases a resource entirely, thus saving the cost of an FTE.

### **Transforming Data into Information**

Most organizations have vast quantities of data from which surprisingly little useful information is typically harvested. With BPA, IT can create automated workflow processes that go beyond collecting and storing data; a well-conceived BPA solution can also analyze data and make it available in a form that is useful for decision-making—and can do so using a rule-based, case-based, or hybrid methodology. Good BPA tools use a GUI interface that enables BPA designers to view data collection, processing, and distribution as one process, thus eliminating the task-level thinking that often interferes with successful process re-engineering. Harvesting and distributing data with BPA can also improve delivery under Service Level Agreements (SLAs) (see “Delivering on SLAs” later in the chapter).

### **Improving Collaboration and Information Sharing**

It often seems as though IT and business are separate islands in a vast sea, interconnected only at the fringes, with much effort expended to perform identical or similar tasks. BPA can enable improved collaboration and information sharing across the organization to improve business insight and overall efficiency.

Processes created with BPA that span logical or physical business units are by definition more conducive to collaboration and sharing. When your organization uses BPA to connect business logic with IT processes, both sides benefit. This is especially true when business managers are brought into the BPA process, a task made easy when the BPA tool uses a common interface. And a common interface is best implemented with a user-friendly GUI, which graphically represents workflow process concepts and the underlying operations but doesn't require programming skills.

With a common interface from which all tasks are performed, a good BPA tool can greatly simplify task automation and the integration of business logic into IT workflow processes. And processes designed through a collaborative interface mean IT can integrate its processes with the business-side logic that drives day-to-day operations. The result is a best-of-breed solution that employs the best from both business and IT.

## Optimizing Workflow Processes

No single application can support all processes, so most IT organizations find themselves managing a large number of standalone applications that serve varying business needs. However, these applications frequently cannot interoperate or even communicate with other applications or services. The IT staff is burdened with the task of creating workflow processes that connect heterogeneous applications and services, and the result is frequently a hodge-podge of disparate solutions that are both difficult and time-consuming to manage.

BPA provides a means to optimize workflow processes by automating and connecting discrete applications, services, and tasks. A workflow process may be as simple as delivering a report to an end user, or as complex as employing multiple automated systems that perform intelligent order routing and confirmation with little or no user input. A common misconception is that BPA applies only to task-oriented processes, such as keeping servers running or performing data backups. It is true that BPA does address these kinds of task- or micro-level operations, but it also encompasses much higher-level workflow processes at the business process or macro level. Organizations frequently need BPA solutions to address hybrid process models that comprise a combination of rule-based and case-based scenarios. Some examples of the wide range of workflow processes that can be improved through BPA include:

### Business-Level Workflow Processes

- **HR administration**—such as adding/removing employees from the Active Directory (AD), can greatly reduce the need for IT involvement each time a new employee is hired or someone moves to a different department.
- **Reporting services**—consolidate data from a variety of sources, systems, and locations to deliver custom reports on schedule with little or no human intervention.
- **ERP**—automates updates of various data such as sales, accounts receivable, and inventory to ERP systems.
- **Regulatory compliance**—achieved by implementing BPA processes to improve conformity with internal data retention policies or external regulatory requirements such as HIPAA and Sarbanes-Oxley.
- **Application development**—using GUI-based BPA tools that simplify complex tasks dramatically reduces application development time.

### IT-Level Workflow Processes

- **Database access and changes**—provide access to data via ODBC connections, data updates, file transfers, and text and XML data parsing.
- **File replication and data backup**—protect valuable data by backing up databases and key systems.
- **Systems and event log monitoring**—review and analyze the event log and critical systems, and create multistep corrective action, such as restarting a server service. With BPA, these processes run automatically when certain events occur.
- **Job scheduling**—automates processes that perform a variety of daily or nightly tasks.

- **Application integration**—automates IT and business processes by combining applications that drive business. Complex processes such as database queries, data transformation, and spreadsheet integration can be automated.
- **File transfers**—can be automated to deliver and retrieve data on set schedules.
- **Printing**—automation and keystroke emulation simplify print job interaction.

Whether the workflow consists of higher-level business processes or lower-level, task-oriented processes, or a combination of both, optimized workflow should provide an efficient, automated sequence that performs a specific task or set of tasks with as little user intervention as possible. A well-implemented, rule-based workflow process can reduce errors by improving accuracy and consistency. And identifying and eliminating bottlenecks in the workflow process can improve overall performance.

It bears repeating that a good BPA tool should offer a common integration infrastructure from which any number of systems or workflow processes can be deployed over a uniform interface. With this common interface, or GUI, IT managers can optimize the delivery of services throughout the organization to save both time and resources.

### Improving IT Response Times

Whatever their size, organizations depend on timely and accurate execution of numerous tasks to ensure operational efficiency. These tasks can include human input, such as customers filling out forms or sales managers signing off on a deal; other tasks can be IT-related, such as automatically sending customers an invoice on the first of each month, or updating new customers to the database nightly. Whether manual or automated, all such processes must be performed efficiently to deliver the response times that management, end users, and customers expect.

However, because of budget constraints and lack of sufficient manpower, many IT organizations may not be able to deliver a full complement of services with optimum response times. Although keeping core infrastructure up and running is paramount in any organization, the business focus may often shift to other priorities, such as system response time to end users.

Many factors come into play in determining IT response times. Any process is only as strong as its weakest link. State-of-the-art applications and world-class hardware—or even legions of IT staff—cannot overcome weaknesses that may be lurking in the process cycle. These weaknesses could boil down to a single point of failure, such as a task that does not complete before the next one starts. Failure of a single task could potentially create a domino effect that ends up causing a failure of the entire workflow process cycle and thus results in delayed response times. The challenge then is to develop a mechanism to root out potential bottlenecks in what could amount to hundreds or even thousands of individual workflow processes.

To streamline existing processes or create new ones and achieve the best end-to-end solution, you must first get a snapshot of the big picture. This overview will include evaluating existing processes for potential obstructions, such as delays or improper sequencing of workflow. Improving response times overall may require a focused effort to automate all workflow processes that can be reduced to simple logic and therefore assigned to computers, and to leave to humans those processes that require more advanced analysis.

Repetitive tasks, in which the logic is predetermined and one or more computers make decisions based on this logic, are excellent candidates for automation. For example, you might design an automated process to merge current sales data stored on spreadsheets with historical data from a SQL database. Once this logic is in place, automated, and tested, end users can generate reports on demand that seamlessly combine the data and improve response times without involving IT staff or additional resources. On the customer side of the equation, your IT department can set up the automated workflow process to send status emails to customers throughout the ordering process. With this process in place, customers are automatically kept in the loop regarding the status of their order, which will result in fewer support calls.

By automating workflow processes such as these, IT can provide faster response times to both end users and customers and so improve the overall efficiency of IT operations without additional manpower.

## Getting Control of SOA

Service-oriented architecture (SOA) is a broad term that refers to one or more groups of processes packaged together to provide interoperability between disparate systems through standard interfaces. The distinguishing factor in SOA is loose coupling, which means that the services made available under an SOA are independent of other services.

Web services, which communicate with clients through a set of standard protocols and technologies, have become the most common way to implement an SOA. Many software vendors support these standards across a broad spectrum of operating systems and platforms. A key benefit of SOA is the capability it offers to reuse services. Because they are independent, Web services can operate across other processes and geographical boundaries however and whenever they are needed. Consumers of services can dynamically discover and use services published under an SOA.

As flexible and powerful as SOA is, it tends to sprawl as more services are added. BPA is a very useful tool for integrating and organizing services under an SOA; it can help SOA teams ensure that every service has at least one purpose, and that services are not duplicated. For example, your business can use BPA to set up one or more workflow processes that employ new or existing Web services such as opening a customer account, initiating a sales order, checking

inventory levels, and generating an order and invoice. Under SOA, different “consumers” can use the same services; for example, both the accounting department and customers who order a product can use the service that checks inventory levels.

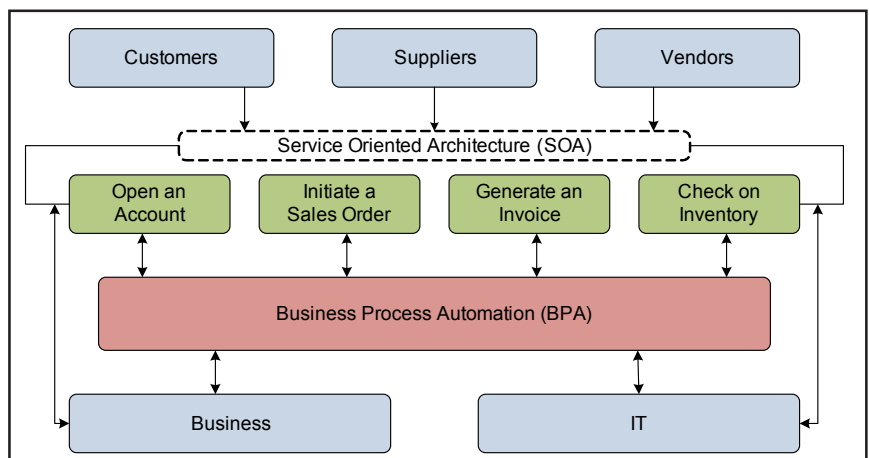


Figure 1:  
SOA Concept

BPA tools that have an integrated GUI offer the greatest benefits because SOAs tend to have multiple connections. These interconnected elements are best represented graphically to greatly simplify the development process.

Using BPA to design these types of processes to run as Web services allows maximum flexibility and power. BPA and SOA have symbiotic models; both can view processes independently, and both offer a means for integrating business processes with IT processes.

### Delivering on SLAs

An SLA is a contract between a service provider and a customer that specifies a level of service the provider agrees to deliver. SLAs typically specify the metrics that will be used to measure and guarantee the delivery of specific services, such as system availability, incident response times, service windows, and so on. SLAs are becoming more common, not only between IT-based businesses such as ISPs and their customers, but also between IT departments and other departments within an organization.

By specifying the service responsibilities of IT and the performance expectations of the business customers receiving IT services, SLAs can demonstrate in measurable terms the value IT adds within the organization. SLAs should differentiate between goals that are related to equipment and goals that are related to people and work performance (e.g., database server availability is 99.5 percent and desktop support requests are resolved within 8 hours).

Delivering on SLAs may pose a challenge for IT departments that have undergone staff or budget cuts. One solution to this potential limitation is to automate some of the tasks that comprise the workflow processes of SLA services. These tasks can include jobs such as

- Order processing
- Incident routing and escalation
- Data subset creation for end-user queries
- Data backup duplication to offsite servers
- Data synchronization between servers
- Hourly, daily, or weekly report runs

Automating repetitive tasks helps IT managers with limited staff improve SLA performance and frees up the IT staff to solve more complex problems for various departments throughout the enterprise.

### IT and BPA: A Competitive Business Advantage

Today's businesses are faced with an increasingly competitive marketplace and a need to adapt to fast-changing environments; in fact, the bar for delivering a wide array of highly optimized IT services has never been higher. Responding to new business trends and changes in customer demands with precision and agility is a must. To ensure success, seamless interoperability to the extent possible between IT operations and the business side of the organization is essential.

As we've seen in the examples above, BPA opens up a whole new set of possibilities compared with non-BPA approaches. With BPA, you can create new processes in much shorter time and with better collaboration between IT and business managers. BPA lets you play out different

scenarios that were not feasible in more traditional application development environments. It can improve existing processes by eliminating delays caused by human error/interaction and by improving the application development lifecycle.

BPA transcends the traditional IT role of maintaining e-mail and servers and gives IT workers more time and resources to focus on strategic initiatives that span departments. This makes IT more valuable within the organization as the team manages and participates in more core business processes across the board. With more tasks centralized and automated, the IT department can refocus its time and resources on higher-value targets within the organization, thus better aligning IT services with strategic business goals.

A properly planned and deployed BPA solution delivers benefits far beyond the mere automation of a given workflow process: It allows for orchestration of multiple, complex, interconnected business processes that span departments, applications, and computing resources. With enterprise-level orchestration, your organization can focus on the macro-level business processes that deliver value to your customers, partners, and employees. You can leverage BPA to quickly and efficiently streamline business processes and gain a true competitive business advantage.