

# IBM business process management for SAP implementations

*Optimize the business value of your SAP implementation with  
IBM business process management software*



## Contents

- 2 Introduction
- 2 Typical SAP implementation challenges
- 4 Value in combining IBM business process management with SAP implementations
- 5 Key capabilities of IBM business process management for SAP implementations
- 9 Case study: Leading toy company reduces SAP process cycle times by 80 percent
- 10 IBM business process management: Summary of business value
- 10 Why IBM business process management?
- 11 Planning your path to value

## Introduction

In the last few decades, globalization has made operations more complex at many companies. Companies focus on cutting costs and increasing the efficiency of operations to improve profitability. Packaged business applications for ERP, CRM and other targeted business functions help companies aim for higher efficiency and improved competitiveness. SAP is a market leader in packaged business solutions and the solutions help companies streamline processes, standardize business operations and integrate systems throughout multiple locations. By making information easily available and standardizing processes, SAP implementations help organizations make improvement in many important business metrics.

Considerable costs and many hours of employee training are required for implementing the SAP platform or for upgrading to newer versions SAP applications. Naturally, there will be great expectations regarding the business value of an SAP implementation. According to a Panorama Consulting Solutions report, only 50 per cent of ERP users realized more than 50 per cent of the expected benefits of their ERP implementations.<sup>1</sup> In the SAP implementation lifecycle, you might face these questions:

- Can the SAP implementation be completed on time?
- Can you achieve the targeted return on investment in the planned timeframe?
- Can the SAP platform be implemented or upgraded within your budget?

The key question is how do you ensure that you are getting the most out of your SAP implementation?

By using packaged enterprise applications for efficiency, you are just trying to catch up with the competition. To outpace the competition, you have to focus on process innovation. For driving process innovation, you would require capabilities to discover and monitor processes, change processes quickly and identify which process changes are likely to positively impact business performance. Most SAP processes are non-differentiating. However, to gain a competitive advantage, you must differentiate. Additional tools and techniques that can complement your SAP implementation are often necessary to differentiate. When you consider the costs and effort that go into your SAP implementation, it is preferable to avoid further disruptive, multiyear technology investments to obtain the potential value of your SAP implementation.

This white paper looks at the challenges you might face with your SAP implementation and examines the reasons. It explains how you can help enable the optimization of the business value of your SAP implementation by using a business process management (BPM) approach. It then suggests how IBM business process management tools are designed to integrate with your SAP implementation to help enable process innovation and optimized business value.

## Typical SAP implementation challenges

To control costs and to achieve return on investment on your SAP implementation in a planned timeframe, you must reduce SAP application customizations. Whether you are planning a new SAP implementation, upgrading to a new version of SAP software or you have already implemented the SAP platform,

at any stage of the SAP implementation lifecycle, you might require solutions that complement your SAP implementation to identify actual SAP processes, gain visibility into the SAP processes and to integrate, orchestrate and automate the SAP processes. Business leaders at most large organizations might find it difficult to run their entire operations on SAP implementations alone.

#### Identifying actual processes can be difficult with static documentation

The typical approach that is used to implement and run SAP can be called documentation-centric. A process is designed using documentation from a standardized library as a starting point and then customized according to the specific needs of the business. The documentation is used to customize and configure the SAP platform. A high level process blueprint, including transactions, is defined in Microsoft PowerPoint, Microsoft Visio or another modeling tool. For the implementation, users are expected to read, understand and comply with the documentation by entering the proper sequence of transaction codes. Most SAP implementation documentation is thus static and the documentation might not reflect the processes that are actually being used. You might not be able gain insight into the real processes used in production. Initiating and constructing a process innovation program or upgrading to new versions of SAP software could become difficult without insight into the real processes used in production.

The documentation-based approach to SAP implementations raises the following questions:

- How can you know the status of key processes quickly?
- How do you always ensure that the processes you designed are the processes that are being run?
- How can you have real-time visibility into where workload or other bottlenecks cause business issues?
- How do you assign work to less experienced workers to reduce bottlenecks?

- How do you identify which process changes are most likely to help improve business performance?
- How do you quickly rollout SAP process changes?

#### Blueprinting cycles can become lengthy with the traditional waterfall approach

Most users who implement SAP software use a *waterfall* approach for process blueprinting. A *waterfall* approach starts with goal setting and then moves on to process analysis, design, testing and concludes with deployment. Most users at businesses use a general purpose documentation tool such as PowerPoint, Visio or Aris for SAP process blueprinting. These process flows are maintained in the SAP Solution Manager, which is the primary repository for processes in the SAP environment. However, SAP Solution Manager is a documentation-only repository and you cannot run processes directly from SAP Solution Manager. This documentation-centric approach can lead to lengthy blueprinting cycles. Although modeling tools such as Aris can provide enhanced blueprinting options and it can be integrated with the SAP Solution Manager, the process models are typically optimized for analysis, not execution.

#### Processes can become opaque over time with traditional workflow

In a traditional SAP implementation workflow, process designers create the SAP process documentation and users are trained how to use the documents. These documents could be in the physical form such as printed copies or in the electronic form such as in Microsoft Word or HTML. The success of the process depends on human compliance with the documentation; therefore, processes can become opaque over time. Visibility into backlogs and bottlenecks can be limited and process throughput can also be affected.

#### Process integration and orchestration can involve risky application customization

The documentation-centric approach to SAP implementation can also involve a lot of customization. For process orchestration and integration in the SAP environment, SAP users often find

that they have to customize and streamline the SAP interface or the SAP process flow. They might also be required to add complimentary functions to SAP applications and integrate non-SAP systems to SAP systems. Although SAP provides IT developer tooling to meet each of these requirements in separate tools, customizations are often bound to the specific version of the SAP application in which the customizations were developed. Upgrading to the future releases of SAP applications can become difficult, costly and risky. Excessive application customization can also lead to exceeded budgets and deployment delays.

Yet another challenge lies in the use of what SAP calls SAP Enterprise Services. Because many of the enterprise processes involve complex choreography and orchestration, SAP introduced SAP Enterprise Services to facilitate the end-to-end choreography of processes, reduce customization and to adapt SAP applications to a particular business environment. SAP Enterprise Services is the term used by SAP for its own web services, all of which can be used to automate business processes or simplify process execution. There could be hundreds or even thousands of SAP services that are required in an SAP environment. Finding and deploying the right SAP Enterprise Services required for a particular process optimization task can be challenging. You require additional tools to simplify these technical tasks. To reduce the time and cost required for the end-to-end choreography of SAP processes and for SAP customization you must simplify these technical tasks.

#### **Limited decision automation can affect process consistency and responsiveness**

Though certain SAP applications use business rules and business events extensively, the utilization of operational decision management principles is generally low in SAP applications. Operational decision management helps line-of-business personnel to directly define how their business policies are being run and more importantly, enable change in an easier and more reliable manner. The low utilization of inline operational decision management in SAP applications can reduce productivity by limiting process consistency and responsiveness.

#### **Human intervention can extend process cycle times**

SAP processes sometimes require human intervention. Despite using a variety of enterprise applications, employees at customer-facing divisions of businesses often end up relying on phone calls, faxes and emails to support the work they do within an SAP process. The possibility of errors is high in such circumstances. When frequent human intervention is required for running processes, process cycles get extended.

Most of the challenges described here are more about process and less about technology. Although SAP provides a robust platform, you realize that to help drive process optimization and to unlock the potential business value of your SAP implementation you must deploy additional business process management tools.

#### **Value in combining IBM business process management with SAP implementations**

According to a Gartner survey, process improvement is the number one priority for chief information officers globally.<sup>2</sup> Contrary to popular belief, introducing new IT-led products or services to customers comes only after process improvement in their list of priorities. You can take two different approaches for process innovation. One way of doing it is to rely on packaged applications, as most companies do. With this approach you can improve hundreds of processes at a time, replace traditional systems and catch up with competitors. The projects taken up with this packaged application approach would usually be multiyear projects.

The other approach to process innovation involves using business process management tools and a service-oriented architecture (SOA) framework. The second approach gives companies the flexibility to adapt quickly to changes and to try to outpace competition. This approach provides increased visibility and control over most application systems and the projects are smaller and incremental. Although many enterprises depend on either one of these approaches, the most appropriate path is

in fact a middle path, which is a balanced IT strategy of SOA, business process management and packaged application consolidation.

IBM introduced IBM Business Process Manager and IBM Business Monitor to make business process management easier for your organization. IBM Business Process Manager is a business process management platform that is designed to help enhance the visibility and management of your organization's business processes. IBM Business Monitor provides active near-real time monitoring for SAP and other packaged applications and custom solutions. Both IBM Business Process Manager and IBM Business Monitor are designed to easily integrate with your SAP implementation. With IBM business process management software, you can upload and download processes to the SAP Solution Manager, monitor and mine SAP Business Events and orchestrate SAP services.

The non-differentiating processes of SAP generally help you catch up with competition that runs SAP. IBM provides you the additional tools that can help enable the flexibility to innovate and outpace competition. IBM Business Process Manager provides capabilities to streamline or customize the SAP user interface or the SAP process flow, add complementary functions and to integrate your SAP environment with non-SAP systems, all in a single tool. The combination of these capabilities in a single tool can help you reduce SAP application customizations and minimize the scope of changes required when you upgrade to a new SAP release. Reduced customizations can help enable you to target ROI within a reasonable timeframe.

The IBM solution uses iterative, playback-based modeling to help make the definition of SAP processes transparent and to help accelerate process blueprinting. As opposed to the traditional waterfall documentation-centric approach widely used today, iterative playback-based process blueprinting can enable process workers and other business experts to directly develop and test an SAP process. The ability to directly develop and test an SAP process can help enable a clearer understanding of packaged SAP processes and the gaps between a standardized SAP practice from the business process library and the processes actually required to support the needs of the business. IBM Business Monitor is designed to monitor SAP processes, including the processes you draw in the SAP process diagram tool and those SAP processes that are not under the control of the business process management solution, without intrusion.

With IBM Business Process Manager, you can also provide a way to help simplify the orchestration of SAP and heterogeneous processes through SAP Enterprise Services. The business process designer can drag and drop these services into the SAP process diagram to help reduce the amount of technical intervention that is normally required.

### **Key capabilities of IBM business process management for SAP implementations**

IBM business process management software provides you the capabilities to model, run and monitor SAP processes. An advantage of the IBM business process management platform is that it can help enable near-continuous process improvement in a single environment.

**Helping discover and monitor actual SAP processes**

IBM Business Monitor is an active near-real-time business activity monitoring solution that is part of the business process management suite of IBM software products. IBM Business Monitor is designed to mine SAP Business Events for discovering actual SAP processes. By discovering actual SAP processes, you can help determine where your current SAP processes differ from your logical process design. Because SAP process documentation is static, to build an effective process innovation program, or to upgrade to newer versions of SAP software, you require insight into the real SAP processes in a production environment. Process innovation must be preceded by process discovery. IBM Business Monitor has capabilities designed to automatically generate a process diagram from a monitor model based on SAP Business Events. This capability can provide you a process view of the actual SAP transactions which are running and how the processes work together inside your SAP environment. You can utilize this capability without the processes being orchestrated. You can create shadow process views of SAP Business Events by associating milestones with changes in business state. The process discovery is non-intrusive to SAP because you only have to turn on the SAP Business Event that is in demand to discover the process.

IBM Business Monitor also provides an easier-to-use set of tools to actively monitor your SAP environment in near-real time. After the basic technical connections have been made by your IT department, your business users can more quickly design and build a sophisticated set of dashboards, alerts and reports that provide useful analytics to help you respond faster to important business needs. While your data warehouses, operational data stores, the SAP Business Warehouse and your business intelligence reporting tools provide access to historical and trend-centric data, you can help enable complementary insights into operational data by using IBM Business Monitor. With IBM Business Monitor you can not only help react to business events faster, but you can also use the same set of capabilities to

help build robust predictive analytic models. With the predictive analytic models, you can help identify problems and reduce the occurrence of problems. Because IBM Business Monitor is designed to work seamlessly with SAP Business Events, you can help provide your business users access to the full range of SAP transactions for monitoring, gathering insights and for resolving problems.

**Helping accelerate SAP process blueprinting**

IBM Business Process Manager is designed to facilitate the two-way exchange of process models with SAP Solution Manager by mapping process elements directly to SAP Solution Manager. Using IBM Business Process Manager, you can design, build, refine and run processes in a single integrated toolset while keeping your SAP Solution Manager repository up to date for related configuration and customization work. With IBM Business Process Manager, you can automatically access SAP screens, more effortlessly reverse engineer SAP screens, design customized SAP screens and iteratively call the SAP screens as part of the process definition exercise. From the design environment you can play back SAP or heterogeneous process regardless of the level of detail and completion at almost any time. This iterative method of blueprinting is designed to help you view the actual process as it is being run. By playing back SAP processes, you can design SAP processes experientially and open up the blueprinting process to a broader range of participants while helping reduce blueprinting time and costs. Before deploying the process into production, playback-based blueprinting can help enable you to empirically understand how the process can meet KPIs and SLAs and simulate changes without changing the process model you are planning to deploy into production. You can use live process execution to design and test SAP business processes and then implement your SAP process inside the same tool. This approach to blueprinting can help you to position your SAP implementation for enhanced process optimization using orchestration and continuous process improvement techniques.

The screenshot displays the IBM Business Process Manager interface. The top section shows a table of 'Individual Order Instances' with columns for Sales Document, Status, Delivery Date, Quotation Validity Period, Total Order Price, Document Currency, Telephone Number, and Sales Order Item. Below the table is a process flow diagram for a 'Sales Order' process. The flow starts with 'Start', followed by 'Order Created', 'Order In Progress', and 'Order Complete' (highlighted with a red box). A vertical bar on the left indicates 'SAP Order Processing' with 'Orders' and 'Items' sections. The 'Order Items' section shows 'Total Items: 3, Total Price: \$3819.22'.

Sales Document	Status	Delivery Date	Quotation Validity Period	Total Order Price	Document Currency	Telephone Number	Sales Order Item
0000058762	Complete	October 9, 2011 2:30:00 PM	3 d, 0 h, 0 m, 0 s	\$0.00	EUR	900-674-0001	
0000058763	Complete	April 8, 2011 5:46:23 AM	3 d, 0 h, 0 m, 0 s	\$3,819.22	USD	900-674-0003	
0000058765	Open	January 1, 2011 12:00:00 AM	2 d, 4 h, 16 m, 0 s	\$1,256.64	EUR	900-674-0005	
0000058765	In Progress	January 1, 2011 12:00:00 AM	3 d, 0 h, 0 m, 0 s	\$1,701.00	USD	900-674-0006	
0000058767	In Progress	January 1, 2011 12:00:00 AM	1 d, 0 h, 30 m, 0 s	\$906.24	USD	900-674-0007	
0000058768	Complete	September 10, 2011 3:44:15 AM	4 d, 12 h, 0 m, 0 s	\$1,516.42	GBP	900-674-0008	
0000058769	In Progress	January 1, 2011 12:00:00 AM	1 d, 0 h, 12 m, 0 s	\$163.99	EUR	900-674-0009	

### Helping enable near-continuous process improvement with guided workflow

IBM Business Process Manager is designed to interactively guide users through default SAP screens according to the SAP process hierarchy. Because IBM Business Process Manager is designed to call the correct SAP screen and transaction sequence for each process instance, you can obtain a set of building blocks that can help you to effectively orchestrate virtually any SAP process hierarchy with minimal technical work. You can also help enable insight into business performance issues and opportunities as they happen. With IBM Business Process Manager you can also help support an in-process collaboration environment that can reduce the reliance on informal communication platforms such

as e-mail, instant messaging and voice mail. With IBM Business Process Manager, you can capture dialogues, comments and attachments at the process instance level to help provide improved visibility into how, when and by whom process work gets done and into which process steps typically incur the highest levels of exception activity. With guided workflow, you can more effortlessly convert *documented* SAP processes into *orchestrated* SAP processes. Using guided workflow can help you detect bottlenecks, re-route process instances with capacity overload, escalate problem processes and initiate and track exception processes to help enable near-continuous process improvement.

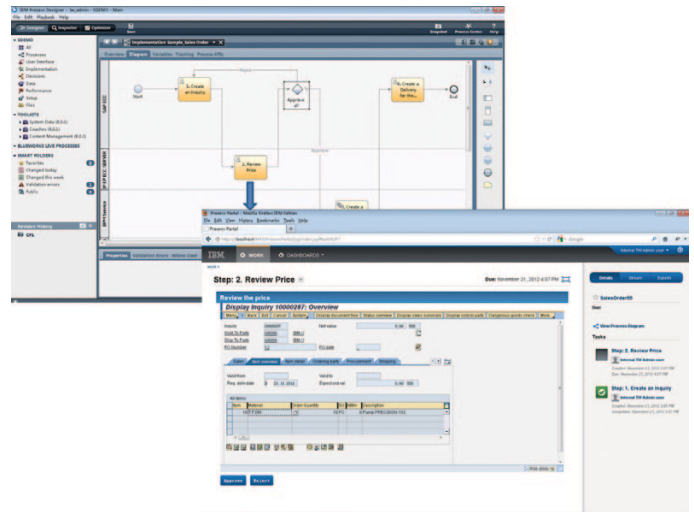
### Helping reduce customizations with process orchestration and integration

IBM Business Process Manager provides capabilities to meet requirements such as customizing and streamlining the SAP interface or the SAP process flow, adding complimentary functions to SAP applications and integrating non-SAP systems to SAP systems in a single tool that utilizes process definitions to reduce SAP customizations. IBM Business Process Manager can help you simplify the usage of SAP Enterprise Services and Business APIs (BAPIs), so that SAP services can easily be used by process designers without requiring them to know the complex technical details of the service itself. With IBM Business Process Manager you can easily browse the SAP Enterprise Service repository and encapsulate and bind any SAP service according to the standards of the technical environment. The process designer can drag and drop these reusable service modules into an SAP, heterogeneous or end-to-end process diagram. The key advantage that this capability helps enable is that process designers who do not have technical knowledge of SAP Enterprise Services can use these services directly in the process diagram. For business users, this feature can help simplify the process interactions with the SAP environment and speed time to deployment while reducing SAP customizations. Process orchestration techniques can also be used to simplify user interactions with the SAP implementation and to improve

process flexibility. Using IBM Business Process Manager you can replace complex flows of multiple SAP transactions with a highly optimized single screen to help improve process cycle time, reduce errors and to help simplify the operational environment.

### Supporting higher process consistency and responsiveness by automating complex decisions

You can increase the consistency and responsiveness in SAP processes by using operational decision management principles extensively. For enhanced management, you can externalize decisions from business processes. By combining IBM Business Process Manager, IBM Business Monitor and IBM Operational Decision Manager, you can automate both immediate and long term decisions or at least reduce the amount of manual intervention required for both routine and exception decisions. IBM Business Process Manager and IBM Operational Decision Manager share a common business rules language. Using IBM Operational Decision Manager you can also help separate business process management and decision governance life cycles. By separating business process management and decision governance life cycles you can make business policy changes, which usually happen every few days or weeks, independent of the process changes which usually happen every few weeks or months. IBM Business Process Manager provides integrated business rule authoring capabilities to help enable enhanced decision management using a syntax that is closer to natural language compared to technical languages such as Java Script. For more robust rules authoring and management, you can effortlessly upload these rules to IBM Operational Decision Manager as part of your enterprise business decision strategy.



### Helping enable reduced process cycle times by automating processes

By using IBM Business Process Manager for your SAP implementation, you can also more effortlessly automate highly repetitive process steps by using the same SAP Enterprise Service calls used by custom user interfaces. By automating some or most of these repetitive SAP processes you can help reduce process cycle time, improve process reliability and enable process workers to focus on improving exception scenarios and complex non-repetitive process steps.



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## Case Study: Leading toy company reduces SAP process cycle times by 80 per cent

### Company

The company is a US-based toymaker that is a worldwide leader in children's toys, family entertainment products and services. The company designs, manufactures and markets games and toys.

### Challenges

The company had started an enterprise-wide initiative to improve supply chain processes and to reduce costs. The company wanted to develop new processes to support outsourced manufacturing while optimizing the value of its investments in enterprise applications.

The company's vendor order management process requires interaction between the offices in North America, Hong Kong and customers and vendors. When a customer order arrived, it would be processed through the company's SAP system and then go through to the Hong Kong office where inquiries were created. Request for quotes would then be sent to several of the approximately 100 vendors in the Far East. After a quote was generated, the quote would be sent back to the company's Hong Kong office and then back to the customer. The company's employees used faxes, emails and phone calls to run the whole process and the cycle time was usually around 12 days.

Order processing was time-consuming and the process involved multiple parties. Moreover, employees at the Hong Kong office had to manually check and review all of the responses from the vendors. Tasks such as flagging exceptions and delivery delays were slow and tedious.

Because employees used faxes, emails and phone calls to communicate with vendors, it was difficult to have a complete picture of any given order or request. Documentation of orders and responses was time-intensive. To be compliant with

US Customs regulations, the company had to maintain bill of lading documents and associated exporter invoices. Information stored in multiple systems was pulled together to gather this documentation, resulting in processing delays.

### IBM solution

The company considered SAP portal technology and other web solutions before opting for business process management software from IBM. Using IBM software the company was able to take the following actions:

- Automate task management for more than 1000 users and provide near real-time process visibility for employees and vendors
- Automate the reconciliation tasks required for the US customs documentation such as gathering the bill of lading from freight forwarders and the corresponding invoice data from the SAP system while updating the SAP system at each milestone
- Improve and unify communication with a web interface that reduced the dependence of the employees on faxes, emails and phone calls
- Improve exception handling by sending employees an electronic process coach that provides them the required information and guides them through the steps to resolve the problem
- Automate the vendor inquiry and response process so that 80 per cent of process went straight through the system with minimal use of faxes, emails or phone calls

### Benefits

The company reported a 250 percent productivity increase without investing in additional resources. The toymaker also reported an 80 percent reduction in cycle time from 12 to one to two days. After the success of the project, business process management software from IBM was deployed in other areas of the company's supply chain.

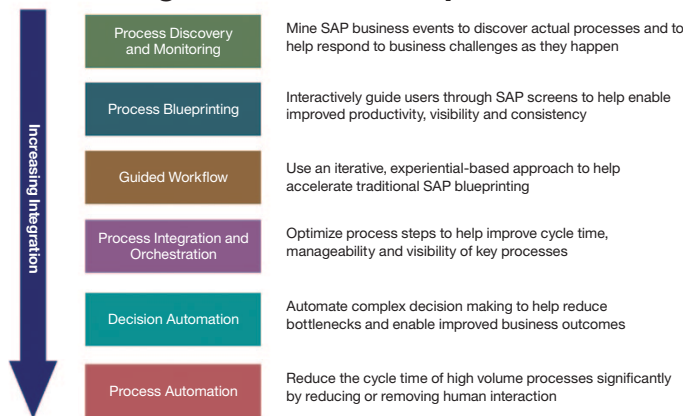
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## IBM business process management: Summary of business value

Using IBM business process management tools, you can mine SAP business events to discover actual processes. With an iterative, experience-based approach you can help accelerate traditional blueprinting. You can guide users interactively through SAP screens for a guided workflow that can help enable process visibility and productivity. IBM Business Process Management can help enable enhanced process orchestration and integration by reducing application customizations and optimizing process steps. By automating decision management, you can help enable enhanced process responsiveness and consistency. With process automation capabilities, you can help reduce process cycle times.

IBM business process management software can help you to quickly know the flow and status of key SAP processes. The IBM solution can also help you change your process faster and quickly integrate new process workers into your business. The software can also help ensure that the processes that you designed are the processes that are being run. IBM business process management software can help enable faster response to business changes by automatically escalating problem process instances and modifying queued and running processes as the processes happen. The software can help you apply the correct level of process integration and automation and know which process changes are most likely to help improve business performance. Using IBM business process management platform you can help enable enhanced customer experiences, reduced costs and optimized business performance by improving the visibility and agility of your SAP processes.

### Capabilities of IBM business process management for SAP implementations



### Why IBM business process management?

IBM is a market leader in both business process management software and SAP implementations. IBM has provided business process management solutions for 15 years and has won numerous awards from SAP for its SAP implementation innovation and expertise. IBM can combine market-leading products, SAP implementation-specific process improvement methods and the expertise of IBM service professionals to help enable positive results for implementing the SAP platform, upgrading to newer versions of SAP applications or for a process innovation project. IBM can help enable optimization of the business value of your SAP implementation by using the combination of the SAP implementation expertise of IBM® Global Business Services® and the business process management capabilities of IBM.

IBM business process management is designed to create process models that can run the processes while capturing process metrics and key business data to help enable improved visibility and control. IBM business process management provides a common software platform that can help enable process improvement and business process management lifecycle governance. This software platform is designed to offer the robustness required for mission-critical enterprise solutions while combining the simplicity and ease of use required for deeper business engagement. Moreover, most business process management projects using IBM business process management solutions do not typically require disruptive, multiyear technology investments.

### Planning your path to value

To help you decide your business process management priorities, IBM specialists can conduct an SAP process improvement discovery workshop at no charge at your location. IBM can bring together IBM product, SAP and business domain experts with your business and IT stakeholders to define business needs, architecture and the implementation process for a potential business process management solution. At the conclusion, a summary of key findings and recommendations can be presented, followed by a detailed report for stakeholder analysis and decision making. To know more about the process improvement discovery workshop, contact an IBM representative.

If you have decided on pursuing a business process management approach, you can consider the IBM Quick Win Pilot, which is a prescriptive approach to help enable a quick win to your

business and to put you on a suitable path for your business process management journey. IBM specialists can work with your team to define a process improvement solution using business process management software in 90 days. The IBM specialists then collaboratively scope a subset or pilot of the overall solution that can be produced as the first step in an approach that targets value incrementally. The aim is to provide your team with a deployable business solution that has a high level of business acceptance. To learn more about our capabilities and offerings, or to speak to a client partner, visit: [ibm.com/websphere/serviceszone](https://ibm.com/websphere/serviceszone)

### For more information

To learn more about the IBM business process management, please contact your IBM representative or IBM Business Partner, or visit the following website: [ibm.com/software/products/us/en/category/BPM-SOFTWARE](https://ibm.com/software/products/us/en/category/BPM-SOFTWARE)

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<sup>1</sup> 2012 ERP Report, Panorama Consulting Solutions, 2012

<sup>2</sup> Gartner, Inc, Leading in Times of Transition: The 2010 CIO Agenda, 2010



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