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IBM Limited Edition

Business Process Management

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Learn:

- How BPM can help your organization
- How to become more agile
- To be more responsive to the needs of your clients
- How to turn market opportunities into revenue streams

Brian Underdahl

Business Process Management

FOR

DUMMIES®

IBM LIMITED EDITION

by Brian Underdahl

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Introduction

Are you ready to tackle Business Process Management (BPM) for your enterprise? Do you want to improve efficiency, enhance agility, and also be more profitable? If so, you've come to the right place.

BPM is an approach toward managing how an organization operates so it better meets the needs of clients. BPM enables organizations to be more efficient and more capable of change. BPM is exactly what your organization needs to meet the challenges of the modern business climate.

About This Book

Business Process Management For Dummies, IBM Limited Edition, shows you what BPM is and how it can help your organization. You see how the BPM solutions from IBM help you gain many benefits from higher customer satisfaction to greater agility in adapting to changing market conditions.

How This Book Is Organized

This book is divided into six chapters, which can be read in any order. This section contains a brief breakdown of what you find in each chapter, so you can skip to whatever chapter that interests you the most.

Chapter 1: Understanding BPM

Chapter 1 discusses the new agile business model that's BPM and shows you why changing to BPM now makes sense for your organization.

Chapter 2: Getting Started with BPM

Chapter 2 shows you how to evaluate your company's needs and how to select the correct first project. In addition, you see the BPM options that are available to you. Each of them offers benefits, such as reducing costs, improving agility, and increasing efficiency.

Chapter 3: Putting BPM to Work for Your Organization

In Chapter 3, I discuss the planning process for putting BPM to work in your company. You see how to build a BPM solution and how to make sure that you're correctly documenting everything.

Chapter 4: Improving BPM Automation with Decision Management

Chapter 4 discusses decision management and shows you how to drive process improvement. Finally, you see how to automate and improve the decision-making process.

Chapter 5: Checking out BPM Success Stories

In Chapter 5, you see several success stories that show you how IBM's BPM solutions help companies all around the world to become more agile and successful.

Chapter 6: Top Reasons to Choose BPM from IBM

Chapter 6 gives you the top reasons why you should choose a BPM solution from IBM. Check it out; one of them may just convince you to switch.

Icons Used in This Book

This book uses the following icons to call your attention to information you may find helpful in particular ways.

The information in paragraphs marked by the Remember icon is important and therefore repeated for emphasis. This way, you can easily spot the information when you refer to the book later.

The Tip icon indicates extra-helpful information. You may discover how to get the most experts in the field or a fascinating way to implement your BPM or save time or money.

This icon marks places where technical matters are discussed. Sorry, it can't be helped; plus, the information is intended to be helpful.

Paragraphs marked with the Warning icon call attention to common pitfalls that you may encounter.

Chapter 1

Understanding BPM

In This Chapter

- Seeing BPM as the new, agile business model
- Recognizing how BPM benefits your business
- Switching to BPM
- Going beyond existing tools

Better processes produce lower cost, higher revenues, motivated employees, and happier customers. Business Process Management (BPM) is an approach that's designed to produce better processes. BPM is a collaborative effort between business units and the IT world, and this effort fosters a new paradigm of efficient and logical business processes.

In this chapter, you get an introduction to BPM and see how it can benefit your business. You also see why now is a good time to implement BPM and why your existing tools just won't do the job.

BPM: The New, Agile Business Model

In today's dynamic business environment, organizations need to be agile so they're ready to respond to whatever challenges come their way. BPM provides that agility by giving you more direct control over your operational processes. You can make better use of technology and your entire enterprise becomes far more responsive, helping you meet your goals.

BPM helps create value for the enterprise through growth, improved performance, better productivity, higher staff

effectiveness, and better customer service. All of these improvements result directly from improved processes.

BPM can help your organization become more agile in a number of different ways:

- **Increased productivity:** In today's economy you need to do more with fewer resources. Applying BPM principles helps your enterprise increase its productivity.
- **Speed to market:** When a new idea or product comes along, effective BPM helps you be one of the leaders, not one of the followers who were too late to take advantage of the new market.
- **Reaching the global market:** BPM can help you streamline your supply chain operations, so you can take advantage of opportunities no matter where they may exist.
- **Achieving compliance:** Keeping up with complex compliance, regulatory, and corporate governance requirements can be very costly and time-consuming. Using BPM, you can keep these costs under control.
- **Accelerating innovation:** You need a business environment where innovation isn't only encouraged but also where innovation is a normal part of daily operation. Here, too, BPM can help make that possible.

The agile and flexible organization has the ability to meet the needs of the customer and be the winner at the end of the day.

Practices such as Six Sigma and Lean Six Sigma as well as the work of quality control experts such as Deming are fully incorporated in BPM methodology. BPM actually enables you to leverage these practices to provide even greater benefits to your enterprise. For more information on Six Sigma, check out its full retail title, *Six Sigma For Dummies*.

Understanding How BPM Benefits Your Business

The basic operational value proposition of BPM is the ability to process more with less effort and higher quality. As a

result, BPM has become a cornerstone discipline for companies that want to grow revenues quickly while controlling resource costs.

Business processes are pervasive in any organization. These processes represent all the activities that organizations in all industries undertake. Some processes are highly structured, such as high-volume manufacturing processes, while others, such as medical care that must be tailored to specific patients' needs, are more unstructured.

You may not think of the activities performed within your organization as business processes, but that's exactly what they are. As you try to improve your operations, you're engaging in a process improvement project. Clearly, you want to leverage advanced methodologies and technologies to deliver consistent, repeatable, and more efficient outcomes as you work on this improvement project. BPM helps you define and manage your business processes so you can reach your desired goals.

Making faster decisions

Speed and agility are very important factors in the success of any business. Take the fast-food restaurant business as an example. Look at any fast-food restaurant on the corner during lunchtime. They serve many times the number of lunches of the typical sit down restaurant simply because the industry is fast. People typically have a limited amount of time for lunch, and they know that the fast-food restaurant will serve them quickly. Customers don't like to wait for products or answers.

This example is excellent for seeing how managing a business process effectively can greatly improve the speed of an operation. By using BPM, your managers have unimpeded access to data as well as well-defined systems to help them make decisions quickly.

Typically, when organizations thought about process improvement, they focused on the orchestration of the various tasks that comprise the end-to-end process. But the decisions that take place in the process are equally important. BPM can help you automate high-volume operational decisions so they can be made more quickly and in a highly

repeatable manner. In this way, managers gain the tools they need to more easily make important decisions quickly.

Making better decisions

Because BPM can help make sure that your managers have complete information, they're able to make better decisions. In addition, by helping you automate many decision-making processes, by using BPM, you can be sure that most decisions are made in a much more consistent manner. Because these decisions are based on solidly defined rules, they're likely to be more in line with the goals of your organization.

BPM also enables you to see your processes in action and to see how decisions affect your bottom line. As a result, you're able to do more than simply react; you can alter the process to better manage new opportunities or looming threats. BPM gives you the tools to improve the processes and decisions proactively. This process improvement ultimately means that decisions aren't only made faster, but also better decisions are made.

Making financially sound decisions

In addition to fast and better decisions, your company may absolutely require that any decisions be financially sound. No company can stay afloat for very long if it's throwing away money. Virtually every decision made within an organization affects the bottom line.

BPM helps you create processes that can be quantified in terms of financial results. By using BPM, the decisions that are made can help maximize the financial returns by minimizing time spent, maximizing the use of resources, and reducing waste to an absolute minimum. Through the use of BPM, management is no longer in the dark when it comes to making important financial decisions. Rather, it's able to see the big picture so it can make fiscally responsible decisions for the enterprise.

BPM helps you automate the decision-making process by using a business rules approach. Because your business rules

are defined based on financially sound foundations, those automated decisions automatically are based on financially sound foundations also.

The bottom line is that BPM can help improve your decision-making process by making it faster, more intelligent, and by making it return decisions that are financially responsible.

Why Changing to BPM Now Makes Sense

Every organization has a number of processes in place, but there is also likely to be a certain amount of inertia because people are used to doing things certain ways. Sure, people may agree that some improvement may be possible, but without seeing the big picture they don't see the need for change.

Unfortunately, burying your head in the sand simply fills your nostrils with a bunch of gritty sand while leaving the most vulnerable parts of your body exposed. Organizations that ignore the need for change are doing the equivalent of burying their head in the sand. Not only will the problems not go away, but the competition will rush ahead and win the business race.

At its core, BPM takes rigid, independent processes and transforms them into flexible, choreographed business services that work together to create substantial business value. This transformation can help the organization to adapt to an ever faster changing business climate and global economic challenge.

It's a tough market out there

Rarely, companies have an entire market all to themselves. Indeed, most enterprises are facing ever-increasing challenges just trying to hold onto their market share. In fact, in most cases companies are dealing with more and more competition every day.

You simply can't afford to sit still and hope for the best. If you take this approach, you'll soon find that your competitors are taking away all your business.

What do you need to do to be competitive in tough markets? Here are a few very important items:

- **Improve productivity:** To compete and win, you need to be profitable. One of the best ways to improve profitability is by improving your productivity. If you can improve your productivity so your product or service costs you less to deliver, it's much easier to compete against low-cost competitors.
- **Improve decision-making:** Automating the decision-making process leads to faster, better, and more fiscally responsible decisions based on business rules. Of course, automating the decision-making process also has positive effects on productivity.
- **Improve flexibility:** Market demands seem to change almost overnight making flexibility and agility one of the primary keys to success today. If you can't deliver what the customers want tomorrow, you may as well be in the buggy whip business — there isn't a lot of demand, but you have the market cornered on obsolete products no one wants.

Waiting won't improve things

There's no question that people have been living through some tough economic times. Many people and organizations see a poor economy as a reason to sit on the sidelines and wait for things to improve before making any decisions. Their rationale seems to be that doing nothing costs nothing. On the surface, this rationale may seem correct but only if you ignore the fact that doing nothing creates a large opportunity for your competition. While you're busy doing nothing, you can bet that your competition is trying to become more productive, more flexible, and more profitable.

Waiting for improvement to happen on its own is almost a sure path to failure. There's no better time than when conditions are challenging to make positive improvements in your business processes. After all, the people within your organization are almost certainly aware of the current business conditions, and they know that you need to remain competitive.

Take advantage of the opportunities

Difficult times create excellent opportunities for those people and organizations that are willing to invest in the future. While everyone else is sitting around complaining, you can begin the planning and implement changes that ensure a long and profitable future for your organization.

By using BPM, you not only improve your current processes, but also you build and deploy new capabilities and improve your Return on Investment (ROI). In fact, by implementing BPM now, you'll be able to make the necessary improvements faster, at a much lower cost, and you'll be able to better leverage your existing resources, thus having an even more positive effect on ROI.

With BPM, the benefits go beyond what you may expect. For example, your customers are likely to see improved customer service and satisfaction while your partners and suppliers will experience improved communications, faster response, and an organization that's generally easier to do business with.

These changes position your company to take advantage of new opportunities in ways that simply aren't possible now. Whether you choose to optimize current operations or develop new processes and applications, BPM can help.

Why Existing Tools Just Won't Do

If you have been reading the chapter through to this point, by now it may be pretty clear that BPM can offer some very important benefits to your organization. But even so, you may encounter some opposition from people who believe that your existing tools should be more than adequate. In this section, you take a look at the alternatives to see why they're not up to the job.

Buying a packaged application

In many cases, you can buy a packaged application that's supposed to be designed to address the needs of a particular process or function. Unfortunately, packaged applications are rarely a good solution because four issues with buying applications exist:

- **Time to value:** Additionally, most applications require organizations to start with the application's core data model and base functionality. A great amount of time could be spent implementing capabilities that aren't directly relevant to your process problem but are required for the proper execution of the application. No such start-up costs for working with BPM exist because you're starting with your current processes.

  

  According to Forrester Research, at one point the industry average for installing new applications was 14.5 months — and 36 percent of the projects were delivered late. When compared with typical BPM installations, many BPM deployments would have three or four versions of a process deployed in that time — each generating significant business value.

- **Risk of adoption:** Users often resist having to learn an entirely new application. Worse still, if the application's capabilities don't match users' needs, then the application won't be used and process efficiency can get worse.

  In contrast, leading BPM solutions can bring the process into the tools that users are familiar with today — like Microsoft Outlook. Using familiar tools virtually eliminates training and adoption hurdles. Furthermore, BPM allows project teams to focus on the specific capabilities needed by participants in the process — and no more. No time is lost identifying which application capabilities won't be used or need to be customized.

- **Responding to change:** After the packaged application has been installed, organizations are often faced with difficulties keeping the application synchronized with the changing priorities of the business processes. Applications typically aren't designed to accommodate frequent change — they're focused on standardizing actions and processes. In fact, customizing a standard

application often introduces additional problems and costs.

- **Expanding scope:** Process improvement requirements can come from all parts of the organization. While the first problem may be in bringing new employees into the process, the next could be in managing shipment logistics. Buying specific applications for each of these process problems wouldn't be practical. In contrast, a BPM suite (BPMS) can be used to improve any process.

Extending an existing application

Most organizations already have existing applications which they use in their business processes. Obviously, making use of that existing application gets major consideration. If an existing application is in place, some companies evaluate extending that application to help drive improvement in key process areas.

When taking this path, you run into problems:

- **Cost:** The cost of purchasing additional modules and the development tools required to customize the existing application can often be extensive — more costly than adopting BPM. In addition, extending the applications often requires unique, expensive skills. Often, applications must be extended by using proprietary application-specific languages. Contracting with consultants who possess this knowledge can be expensive. In contrast, leading BPM solutions are standards based, and many consultants have been trained in the core skills and technologies required for deployment.
- **Complexity:** Extending packaged applications generally makes future upgrades more complex — sometimes significantly more complex or virtually impossible. Most application vendors advise clients not to extend or customize their applications. They suggest a "vanilla" implementation (one that isn't customized) in order to make future upgrades possible.

  In addition, extending a transactional application to support process management capabilities often means that companies have to custom develop capabilities, such as workflow and reporting, which exposes development

teams to the greatest possible risk — they're constrained by the existing application on things like data model, user interaction, yet they must also custom develop complex new capabilities specific to process management. In addition, if you extend a packaged application, the application vendor may no longer be willing or able to support the application.

- **Immaturity:** While many application providers are adding process to their applications and platforms, their offerings are still immature. The process management capabilities offered by the large application vendors can't presently drive process improvement to the same degree and speed as mature BPMSs.

Traditional application development

One option is to develop a completely new application in house. After all, you probably have some sort of IT staff, right? In fact, most companies have the capability to develop applications in house. So, it isn't uncommon for these companies to evaluate whether they can use their traditional application development instead of using a BPMS.

Traditional application development is a poor fit for driving process improvement in two different areas:

- **Requirements:** In one study, Forrester Research reported that 57 percent of traditional application development projects were poorly scoped and 30 percent had unattainable requirements. These same percentages — or worse — can be expected using traditional application development for process improvement. In contrast, BPM project success rates — over 90 percent — suggest that BPM is a superior technology for getting process improvement requirement right.
- **Time to market:** BPM projects tend to be delivered faster, cheaper, and more reliably than most application development projects. How much faster? Based on IBM's research with customers that have existing application development capabilities (for example, Java-based development), BPM delivers productivity gains in virtually every phase of the project delivery.

The BPM advantage

BPM provides you with productivity improvements compared to other solutions for number of reasons:

- **Built-in functionality:** The tools you need to define process improvements and implementation, such as modeling, workflow, simulation, and so on, are typically built into a BPM suite.
- **Cohesive development environment:** Because the tools you need are integrated into the BPM suite, those tools are designed to work together, which simplifies implementation and change management.
- **Graphical development tools:** Leading BPM suites support graphical development of process solutions instead of requiring complex and highly technical coding. This speeds development and reduces the technical skills necessary to deploy BPM.

BPM simply lets companies create a platform for process improvement easier and faster. Often, however, you can encounter a challenge in justifying the BPM investment as opposed to following the traditional paths, such as buying or building a custom application. BPM offers a high ROI, rapid development, and the tools to drive process improvement. In addition, BPM can help your organization become more agile and able to face the challenges of the future.

Chapter 2

Getting Started with BPM

In This Chapter

- Understanding your business goals and strategy
- Picking a meaningful project
- Knowing the BPM umbrella options
- Looking at IBM software for BPM

With all the complexity of a dynamic business environment, getting started with BPM can seem a little challenging. The key to success is to use the right approach — one that starts with a careful analysis that's focused on business value and then expands to leverage successes along the way.

In this chapter, you see how to get started with BPM by evaluating your company's needs, picking the right project, and having a look at the BPM marketplace.

Evaluating Your Company's Needs

To get started with BPM, you need to begin by evaluating your company's needs. Any successful process improvement initiative must start with and be driven by business value. You must understand the business goals and strategy that drive the process improvement initiative.

Begin by analyzing your current processes to identify those processes whose improvement will deliver the greatest return on investment — the so-called "low-hanging fruit." After you've identified the candidate process projects and prioritized them based on your business needs, you're ready to begin working on an initial project.

But how do you evaluate your company's needs? Clearly, your evaluation must begin with an understanding of your business. Ask yourself the following questions:

- Where are your bottlenecks?
- Which business processes are resulting in customer dissatisfaction?
- Which processes have obvious problems?
- Where can improved efficiency quite obviously save you money?
- Who are the leaders who are most likely to champion a BPM project and help ensure its success?

An analysis of your business is an important first step on the road to process improvement, but you also need to exercise some caution against over analysis. Remember that any process improvement initiative must be able to deliver some quantifiable successes within a reasonable timeframe so stakeholder commitment remains strong and your funding for the initiative remains in place.

One of the best approaches for an initial project is to select one that not only meets your business needs but also one that can be implemented fairly quickly. By starting with a manageable project you can develop your process improvement skills and deliver value to the business quickly. Your choice of a proper project can help ensure continued commitment, funding, and success of subsequent projects that you may want to take on in the future.

BPM is a collaborative venture that involves both your business units and your IT staff — make sure that both are on board before you begin to help ensure the ultimate success of your project.

Selecting the Right Project

You're likely to have an awful lot of scrutiny from every level of your enterprise. Therefore, you want to pick a project that's meaningful but can be implemented in a reasonable period of time.

Success with BPM begins with being able to document the current processes. After all, you can't manage what you can't measure.

Process analysis

Discovery and design are the first steps in understanding your business processes. In this stage of the project, you visualize, document, and model current or new processes. In some instances you may want to rework existing processes while in others you may need to create new processes from scratch.

BPM is a system of managing business activities through a framework of operational processes. A business process is the set of tasks and activities that accomplish the specific organizational objective. BPM maximizes the effectiveness of business processes by following certain steps:

1. **Determine the best process given the current conditions.**
2. **Figure out how to make the process operate most effectively.**
3. **Implement controls to achieve ongoing effectiveness.**

After you understand the current processes, you have a baseline against which you can measure progress and improvement. With BPM you can make continuous improvement instead of attempting to reach the ideal state with one huge jump. Essentially, a BPM project follows an iterative approach that allows this continuous improvement.

As a part of your process analysis, look for suboptimal and broken processes that cause bottlenecks in your current system. Although pretty much every process in the company could be optimized, during the process analysis, it's extremely important to first locate any current processes that cause big problems. Remember, because BPM allows continuous improvement, optimization is possible at any time.

Although your IT staff plays a key role in implementing your BPM project, you need to tap the expertise of your business units who already have the knowledge of the current processes. Both teams must be full contributors to ensure the success of your BPM project.

Agile Business Rules Development (ABRD)

The Agile Business Rules Development (ABRD) methodology is used to build the rules-based application. ABRD provides a framework that project teams may adapt to meet the needs of their specific business rules application project. Methodology supports the full rule lifecycle, from discovery to governance by using an agile, iterative approach. ABRD activities fall into several categories. Each of these activities is executed multiple times as the process is followed, although the entire set of activities may not be required for each iteration:

- Rule discovery
- Rule analysis
- Rule design
- Rule authoring
- Rule validation
- Rule deployment

Like all agile methodologies, in ABRD the application elements are developed incrementally, in multiple iterations of short time frames. As the iterations progress, the overall rule set gradually evolves into the final set of rules.

Initiation: Starting small and scaling up

Many BPM experts may suggest getting your feet wet, to start, with a small, yet important, project. As with any technology that's new to you, you'll encounter a learning curve. To get a better idea of how you may start small and then scale up, picture for a moment a baseball game and think of that game as being a business.

Clearly, your goal is to win the game. But the series of processes contribute to that goal. For example, when the opposing team is up to bat, your team needs to field a pitcher, a catcher, infielders, and outfielders. But when your team is up to bat, you need to concentrate your efforts on hitting the ball and going around the bases. Already we've broken down the game into two large processes. However, even these two large processes can and should be broken down even further to concentrate on the specific processes each player needs to perform.

Suppose, for example, you've identified a problem area with your base runners not being able to get further than first base. You may define a process called "running around the bases to home plate." Although this single process is only a part of the game, making improvements to this specific process could have a major impact in your team's ability to win the games.

Your business probably isn't a baseball team, but the lesson is the same. You can start into BPM with a small but important process, which can have a large influence on your business's success. Later, you can scale up and start using BPM to tackle additional processes.

In many cases, you'll find that the processes you develop while implementing BPM are reusable in other places. This reusability can help you leverage the efforts you put into your BPM project.

Transformation: Making changes

A business process typically stretches across organizations, departments, systems, and applications; therefore, all these components need to be orchestrated and integrated.

With BPM, a business-rules engine helps to automate decisions that were previously made manually, and it also segregates decision logic from applications so that sound decision rules can be easily and quickly changed. You need end-to-end process monitoring and analysis to capture real-time key performance indicators (KPI's) and other performance metrics to continuously evaluate and monitor process performance. Based on the process performance data, corrective actions can be taken to augment or change processes so that they are even more efficient.

Proving value

There's no doubt that all eyes within the enterprise will be on you when you take on your first BPM project. That's one reason why it's so important for you to develop metrics to measure process performance both before and after your BPM implementation. You need to be able to show the improvements based on real numbers. For example, you may be able to show that

- Invoice processing time was reduced by 50 percent
- Each claims processor was able to successfully complete 25 percent more items
- Departmental costs were reduced by 15 percent
- Online orders doubled

Obviously, you have your own measurements to prove the value in BPM. Regardless, you need to be thinking about those metrics as you plan your project.

Understanding Your Options

Just as there are different types of businesses, different types of BPM products exist that fall under the BPM umbrella. Each of them offers a set of fundamentals, such as reducing costs, improving agility, and increasing efficiency, but clear differences exist between them.

Functionality options

A BPM solution must offer the functionality to help you reduce costs by streamlining and automating processes effectively. Further, this functionality must include the ability to correctly model the business processes, translate those processes into implementation, and iteratively improve the process.

In addition, the BPM solution must offer the advanced user interface generation functionality so the user productivity can be increased. Along with this functionality is the need to use business rules that govern process operations.

A key element of functionality is effective event handling so the relevant information is delivered seamlessly to the end-users. By ensuring that users have the information they need when they need it, operational efficiency improves tremendously and costs are concurrently reduced.

Time to value

When working on your first BPM project, especially, consider the payback time. With all eyes in the company on your project, you want to choose a BPM solution that offers ease-of-use and rapid turnaround.

Factors that influence time to value include

- The skill level demanded of users
- How quickly the BPM system can connect with your existing systems and applications
- Help and training from your vendor

A BPM vendor with wide experience across many different industries is able to offer you solutions based on that experience.

Additional value-added capabilities

The best BPM vendors offer additional value-added capabilities, such as

- Process discovery
- KPI handling
- Continuous process improvement support

A BPM solution based on industry standards instead of proprietary ones is far easier to maintain and offers better value.

Considering the top BPM vendors

Many companies are looking for ways to improve their efficiency and profitability. As a result, BPM has become a key focus for many of them as they realize that more efficient and effective processes reduce costs and allow them to improve customer service.

Many vendors offer BPM solutions, but three leaders have emerged in this market segment:

- **Pegasystems:** This vendor primarily focuses on delivering package, process-based solutions that address specific business needs. Its solutions follow any rules-based approach to BPM that address specific process needs. Users then need to customize these solutions and the underlying business rules. The Pegasystems solution generally seems best suited to decision-heavy processes that are often found in the financial services industry.
- **Software AG:** This vendor concentrates on orchestration and workflow needs at the program-to-program level instead of serving human interaction or document-based process needs.
- **IBM:** IBM offers the broadest range of BPM solutions, to meet different needs. Through these offerings, IBM can address all forms of process needs across a wide range of business needs. With over 5,000 customer engagements, IBM has extensive skills and service expertise, providing accelerated time to value with prescriptive and defined services for every stage of your journey.

Understanding the IBM Advantage

Rather than forcing you to adapt your business processes to a pre-existing rigid framework, IBM offers a broad range of BPM solutions that can be precisely tailored to your needs. IBM Software for Business Process Management can address the full spectrum of process requirements.

BPM with SOA

In BPM with SOA, business processes, human tasks, and business rules are all examples of service components architected for reuse and flexible integration. This integration not only works inside BPM with SOA but also with business systems across the enterprise and with external business systems.

SOA improves agility in business integration and reuse of software investment. Business analysts can use BPM with SOA

to model end-to-end business processes that are then implemented as reusable SOA components.

The BPM with SOA style of BPM development is probably closer to the traditional IT style than some of the other BPM solutions, because although business analysts create the basic process models, developers in IT have a stronger role in the final product.

Rapid process implementation

A rapid process implementation with focus on a project team collaboration solution provides a point-and-click development model. Business process analysts work jointly with developers throughout the implementation cycle in a rapid iterative design style.

One key architectural feature is the shared model wherein the models created at design time are the same models used at runtime. The model seen in the process diagram during design phase is exactly what's executed on the process engine.

Another important feature is that any design component can be played back instantly from the authoring environment. This playback is possible because each step in the process model has a defined implementation that may be a human task, an automated step, or a business rule. Even complex tasks can be designed and played back in the design tool. This interaction breaks down the barriers between design and runtime, thus fostering close collaboration between business units and IT.

Content management, workflow, and collaboration capabilities

Content management, workflow, and collaboration capabilities between departments and across the enterprise are a strong focus of enterprise content management (ECM) and are good choices for BPM projects relating to the authoring, assembly, distribution, and maintenance of documents. These capabilities support active content natively so many document-related processes are immediately available to the process designer.

Content management, workflow, and collaboration capabilities are also very appropriate when retention and records

management are important parts of the business. These are vital in litigation and compliance, as well as audit support.

Using BPM with SOA in your BPM solution makes good sense with content lifecycle processes, document capture workflow, case management, and retention-sensitive processes.

Blueworks Live

IBM's latest BPM solution is Blueworks Live, a new cloud-based offering. Blueworks Live allows knowledge workers to leverage the benefits of BPM in a cloud environment to capture, understand, collaborate on, and improve everyday processes that drive their businesses.

Blueworks Live makes it easy for any organization to get started with BPM, is competitively priced, is easy to use, and has an elegant and simple interface. Some of the features of Blueworks Live include

- Automation of simple processes
- Integrated BPM community
- Built-in dashboards and reporting
- Governance
- Discovery and documentation of complex processes

Blueworks Live is an SaaS (Software as a Service) offering that you can leverage to drive the transformation of your business as you implement new business models, increase speed and innovation, and reengineer business processes. Blueworks Live has industry-specific templates to help you address challenges and issues quickly.

Chapter 3

Putting BPM to Work for Your Organization

In This Chapter

- Getting your BPM project off the ground
- Understanding the basics of building a BPM solution
- Dotting your I's and crossing your T's: Documenting your process

To put BPM to work in your organization, you need to do a certain amount of planning. As with any large change, being prepared makes all the difference in how successful a project will ultimately be. In addition, you don't make the decision to add BPM in a vacuum; rather, you need to have your management team and colleagues on board.

In this chapter, you see how to do the planning necessary to get your BPM project off the ground, you get an introduction to the basic steps of building your BPM solution, and you see the importance of making sure that you have fully documented your process.

Planning, Planning, Planning

Of course you want your BPM project to be a success. You wouldn't waste your time trying to develop the project otherwise. But the key to BPM success is "planning, planning, planning."

Not every project is successful, and BPM projects are no exception to this. Any organization that begins a BPM project has high hopes for its success, but there are a number of things that can derail a project:

- Choosing the wrong project
- Choosing the wrong process
- Lack of proper communication
- Lack of collaboration between the partners
- Ineffective coordination
- Missing buy-in from a key player

Any one of these elements can spell disaster for your BPM project. Upfront planning needs to take each of these elements into account to ensure success.

Choosing the correct project/process

Chapter 2 discussed the concept of choosing the correct project. Choosing the correct process within the project is very closely related, of course. To reiterate, you need to begin by doing process analysis so you can tell which processes benefit the most from the implementation of BPM. As you do your analysis you may discover that you're developing a list of processes that need to be prioritized to determine where to begin.

Don't confuse requirements documents with process analysis. Requirements documents spell out the required outcome, but process analysis looks at how things are done.

As you're working on your process analysis, explore different variants to visualize potential ways that you can change the processes. Remember, one of the key drivers for implementing BPM is to improve the processes. Just because something was always done a certain way doesn't mean that it's the best way, the most efficient way, or the logical way to do things.

Selling BPM to management

Selling BPM to management may be largely a matter of showing the economic value of BPM to the organization. BPM delivers this value because better processes produce lower costs, higher revenues, motivated employees, and happier

customers. The most dramatic examples of economic value driven by process improvement come from the companies that led the adoption of the Six Sigma or Lean Six Sigma methodologies.

A study showed that with just a one-Sigma shift, companies experience approximately a 20 percent margin improvement as well as corresponding increases in capacity, reductions in number of employees, and reductions in capital investment. Companies like General Electric have adopted these methodologies and embraced BPM specifically because of these types of economic benefits.

GE also made Business Process Management a core part of their corporate culture all the way up to the CEO. In the beginning, you may not be able to assume this type of commitment from the entire executive team. Even so, this shouldn't be a problem because even a basic investment in BPM can yield significant returns that may result in more solid support as the executives see the results.

Without any process redesign, Connecticut-based research firm Gartner indicates that companies can still expect to receive significant operational improvements for any given process. Gartner claims that by simply "making the current-state handoffs, timing and responsibilities explicit, productivity improvements of more than 12 percent are normally realized." For many processes that is just the start of the efficiency gains.

Even a few years ago, Gartner reported that 78 percent of BPM projects saw an internal rate of return (IRR) of greater than 15 percent. Moreover, these projects typically deploy quickly (67 percent in less than six months, 50 percent in less than four months), so companies have been able to realize significant value with rapid returns by driving process improvement with BPM.

Selling BPM to your colleagues

Getting management on board is only the first step (see the preceding section). You also need to sell your BPM project to your colleagues. To do this, show them how they can benefit from BPM, too.

Your colleagues are interested in the basic operational value proposition of BPM, which is the ability to process more with less effort and higher quality. Most processes have significant waste because of manual effort, for handoffs between departments, and a general inability to monitor overall progress. The initial deployment of a BPM solution eliminates these problems and results in real, quantifiable benefits.

After efficiency improvements, some of the largest gains to be realized from BPM are typically in making processes more effective. These effectiveness gains are typically expressed in the context of handling exceptions better or making better decisions. For example, one telecommunication service provider found that by better controlling their billing disputes process they were able to reduce the amount they were paying out by approximately 10 percent. Their BPM deployment helps them identify duplicate issues, research disputes more completely, and enforce more consistent payout policies. For processes that are regulated, this level of control and consistency adds another benefit that's the avoidance of fines due to incorrect, inconsistent, or slow execution of the process. These types of efficiency improvements are important to your colleagues because they're interested in making their departments look good.

Your colleagues are also interested in the agility that BPM provides. In any modern organization, the ability to change quickly is essential. Often this is driven by new opportunities, but in some cases new regulations require changes in processes. Regardless of the reasons for the changes, your colleagues appreciate the fact that BPM provides them access to quickly adapt processes as needs arise.

Building a BPM Solution

Building your BPM solution typically follows a relatively predictable path. In most cases, you find several fairly quick iterations as the solution is developed and refined.

A typical BPM project scenario

Although each BPM project is somewhat different, it's pretty easy to create a road map that shows a common project development path. Here's a fairly typical scenario:

1. **Assessment phase**
    - High level design
    - Project scope and plan
2. **1st Iteration**
    - Application framework development
    - Initial object model defined
    - Initial rule set defined
    - Rule flow created
    - Basic deployment to development environment
    - Initial governance plan created
3. **2nd Iteration**
    - Live database connection established
    - Framework refined
    - New rules added
    - Rule flow updated
4. **3rd Iteration**
    - Integration points refined
    - Object model refined
    - Additional rules added
    - Rule flow updated
    - User training

Depending on the project's needs, there could be additional iterations before the project is considered to be essentially complete. But because each iteration occurs on a very short cycle, the entire development process happens very quickly.

BPM project resources

You need to allocate a certain level of resources to your BPM project. Typically these resources include software, people, and hardware.

Software resources

Some vendors license components individually or require additional software to support the BPM deployment. BPM suites that are based on industry standards (like those from IBM) are more likely to be successfully deployed by using the existing infrastructure components of an organization. Most BPM vendors support the ability to buy BPM at the departmental level and grow that license to the enterprise as requirements grow. This process allows you to grow your BPM footprint more slowly.

People resources

Make sure to plan for staff to handle your BPM project implementation. Typically, these people should include

- A project manager
- A subject matter expert
- One or two business analysts
- One or two developers

This core project team aligns the Business and IT organizations to ensure project success.

The small size of the project team demonstrates the productivity that BPM brings for delivering process improvement. Typically, you need no more than five or six people on the team.

The BPM project team should be dedicated to ongoing BPM projects if you want to drive continuous process improvement. Your team doesn't just work on a single project and then disperse, but instead, the members use their expertise gained from completed projects to help make future BPM projects even more successful. Staffing your BPM team becomes an ongoing investment that grows and pays off as you add new processes.

Hardware resources

In reality, your ongoing hardware needs for BPM project development are essentially comparable to other application deployment needs. A BPM vendor provides you with minimum hardware requirements, but it's unlikely that there will be any surprises in them.

Documenting Your Process

In any BPM project, documentation plays a very large role. The documentation process actually begins at the very beginning of the project.

Documenting the changes

Before you can begin your BPM project, some baseline measurements can help you see the changes that occur after BPM is in place. Implement the monitoring and management of selected core and enabling processes. In this way, you can gauge your progress as well as measure the improvements.

Having a program, such as Six Sigma, functioning in your organization helps because this ability enables you to measure improvement directly. BPM leverages programs like Six Sigma to add even more value.

Keep in mind as you establish your baseline measurement system that there may not be a direct correlation between each of the processes that exist before BPM and those that exist after BPM is implemented. This lack of correlation between the processes comes about because BPM helps eliminate certain non-value-added tasks.

Understanding BPM architecture

BPM has a particular structure or architecture that greatly assists in process documentation. Although different implementations of BPM vary somewhat, there are certain major components that are fairly common. These include

- A workspace that includes user interfaces, process monitoring, management dashboards, and task inboxes
- An execution environment where you find the business rules engine, the process engine, and analytics engine
- The metadata repository that contains process asset descriptions, process relationships, and process policies
- A process design toolbox that enables process modeling, business rule definition, definition of KPI's, process development, and design of user interfaces

- A new services development environment that includes Web service adapters, connections to existing functionality, and new services creation tools

Documenting processes

In the BPM environment, process design and definition occurs within a graphical environment. In most cases, process design tools allow business analysts to use drag-and-drop techniques to build the process definitions.

Most BPM development tools are a standard modeling notation — essentially, a simplified programming language — to define the process model. Typically, either Business Process Modeling Notation (BPMN) or XML Process Definition Language (XPDL) is used. Using one of these modeling notations enables business process definitions to be standardized and therefore shared between different tools.

Essentially, a process design looks very much like a flowchart wherein the processes are the boxes in the flowchart, and the business rules define the logic flow through the flowchart. So, for example, you may have a process that handles customer complaints. The first part of the process would trigger when a customer complaint was received. At that point, you may have a decision point driven by a business rule that routed complaints from very important customers to an elite team of customer service representatives. Other customers would have their complaints sent to the ordinary customer service team.

The process design is made up of various services and business rules. The design begins with the collaboration between the business analysts and the development staff. The business people provide the definitions and then the developers create the model using those definitions. In some BPM implementations, business analysts may play a larger role in the whole design process.

Business rules are at the heart of a BPM project. These rules are the policies and procedures that automate the business process. In a BPM project, the business rules are managed in a rules engine, which is accessible to business managers. As a result, it is much easier for managers to see and to change the business rules as needed.

The ability for business managers and other authorized users to change rules in the rules engine is one of the keys to the agility provided by a BPM solution. Rather than having to redesign the whole process, by adding or changing an existing rule the system can quickly be adapted to changing conditions.

Business rules govern workflow routing within a BPM process. In some cases, these business rules create exceptions such as the one that routes customer complaints from VIP customers to the elite customer service team. In other cases, these rules make decisions automatically. For example, a rule may automatically approve an order for customers in good standing if the order is below a defined threshold.

Process simulation

BPM implementations allow you to test your processes before going live with them. This testing process is called simulation, and you run the processes through what-if scenarios so you can make adjustments and fine-tune your model.

With process simulation you can see how your model reacts to different conditions, and you can view reports, which analytically break down the data. In some cases, you can use historical data gathered from real-world processes and run that historical data through the simulation so you can compare how your model functions with the way the existing processes work.

When you run a process simulation, you obtain valuable documentation, which shows where you may need to make changes to improve the efficiency or operating function of the model. The documentation produced can show you all of the resource requirements as well as how smoothly work flows through the entire model.

Process simulation is one of the iterative steps in the development of an effective BPM system. Typically you discover the importance of analyzing the results of the simulation, make any necessary changes, and rerun the simulation — possibly several times.

BPM models provide the agility for you to continue to make improvements even after you've gone live with your implementation. You don't need to test endlessly. It's often better to plan for some continuous tweaking once your BPM system is in place.

Chapter 4

Improving BPM Automation with Decision Management

In This Chapter

- Understanding decision management
- Driving process improvement
- Automating and improving decision-making

After you have an initial BPM project in place, you can gain even greater benefits by incorporating decision management technologies to increase process automation and facilitate maintenance of decision logic that guides business systems. In this chapter, you see what decision management is and how you can use it to make your BPM system even more efficient and responsive.

Understanding Decision Management

If you read Chapter 1, you know that the basic operational value proposition of BPM is the ability to process more with less effort and higher quality. In order to achieve the competing goals of growth and productivity, organizations must find ways to intelligently automate high-volume operational decisions. Why? Because without this, the only way to meet the demands of growth are to hire proportionally in order to handle increased workloads for both the front and back office.

Decision management is an approach combining software and human expertise to automate and improve decision-making. It

involves both being able to provide operational business systems with the best possible decision at the current moment based on data and situational context, as well as being able to use data to discover insights that can be used to continually improve decisions over time. Decision management is also a primary key to achieving greater business agility in your BPM system.

Driving Process Improvement

Two software technologies are an important part of the decision management approach, helping support better automated decision-making within and across processes. These two software technologies are business rule management systems (BRMS) and business event processing (BEP). These technologies work in tandem to help make automated decision-making in processes smarter.

Understanding business rules

You may have seen the term "business rules" before, but you may not be completely clear about what that term means. Business rules are conditional statements that are used to define decisions based on business policies. For example, a bank may use a business rule that states "if the customer's credit score is above 720, give the customer a 1/4 percent discount on loan rates."

In the context of BPM, business rules are used for a variety purposes

- Decisions on process initialization
- Routing decisions
- Exception alerts and triggers
- Process and case prioritizations
- Determining business outcomes at specific points in a process

Business rules can be used both for providing guidance to people involved in process activities and for fully automated decision responses.

Within application code, business rules are generally expressed using "if-then-else" statements, which are coded in a technical programming or scripting language. This type of programming logic determines which piece of the program is executed next based on the value of a variable. In many cases, business rules are based a number of inter-related conditions and multiple data inputs. This can make the coding of the rules difficult to develop and maintain, as well as keeping them from being understood outside of the IT functions in the organization.

Scattered business rules

Unfortunately, in most organizations the business rules are scattered in many different places. Some of the business rules are embedded within applications, some are written in procedural manuals or other documents, some are defined in process models, and many business rules may only be a part of the knowledge possessed by experienced, specialized subject matter experts, such as policy managers.

By having business rules scattered and embedded in so many different places, organizations often find themselves under constant pressure to deal with change and the constant evolution of decisions. This can result in numerous problems:

- Reduced organizational agility due to the time it takes to make and test changes in critical business systems.
- Reduced employee productivity because of excessive manual activities.
- Increased load on the IT functions in the organization in trying to maintain business rules across various systems.

Clearly, to make the most of the organization's accumulated expertise and knowledge, you need to be able to effectively manage all the relevant business rules required within processes and applications. You can achieve this by externalizing rule-based decision logic from the systems it utilizes and managing it in a centralized manner that can be accessed by each system that has need of business rules.

This approach makes business rules easier to define, maintain, share, and govern, improving process efficiency by making it possible to automate many more of the decisions that are required throughout each process.

Business rule management systems

Because business rules are so important to the organization, it makes sense to have a system in place for managing those business rules. A business rule management system (BRMS) is an integrated application development and execution platform that allows you to precisely define, deploy, monitor, and maintain decision logic that is used by operational systems. One of the clear advantages of a BRMS is that decision logic is separate from the core application code. This separation means that the decision logic can be clearly and easily understood, maintained, and reused throughout the enterprise.

Because a BRMS separates the business rules from application code, business experts (as opposed to IT staff) can define and manage the decision logic, reducing the amount of time and effort required to update that logic in production systems, while enhancing the organization's ability to respond to changes in the business environment.

A BRMS includes both rule management and rule execution capabilities. As a result, the externalized business rules can more easily be managed as they change, and these rules can be utilized by various operational systems to automate decisions for transactions, processes, and customer interactions.

By adopting the BRMS approach, organizations can more effectively deal with the problems associated with traditional embedded decision logic. You gain visibility and access to business rules along with the ability to more easily define and automate them for use in your operational systems. This visibility and access leads to reduced time and resources being required to implement changes to decision logic and also improves the precision, quality, and consistency of automated decisions across your critical business systems.

Understanding business events

Although the term "business event" may bring to mind something on the order of a special occasion related to a company announcement or publicity campaign, in the context of BPM, a business event is defined as a change of state in the enterprise which has relevance to the business. These events may be anything from an RFID tag transmission to an online order

entry, or even data from manufacturing floor sensor outputs. Obviously, the number of business events which occur in most organizations is immense.

The huge number of business events which are continuously occurring, and may need to be tracked over time, make it virtually impossible to identify, monitor, correlate, and make sense of all of these events without the assistance of technology. Organizations can easily be overwhelmed by all of these events and as a result, can miss opportunities and threats — many organizations have no real way to make their managers and leaders aware of context provided by this constant flow of event-based information.

Business event processing

Your business needs to detect and respond to many events which occur hundreds or thousands of times every day. Business event processing (BEP) is a technology which addresses event processing needs throughout your enterprise.

BEP enables an organization to detect and respond to patterns of events (including the absence of an expected change), taking place at a specific moment or across a defined period of time. A BEP solution automatically interacts with disparate systems across the enterprise to maximize the value of business interactions.

By using BEP, organizations can leverage market opportunities as well as recognize and prevent problems in an automated fashion. In many cases, it would be resource prohibitive for organizations to respond to all of these events effectively without the help of BEP, but by incorporating this as part of a decision management approach to process improvement:

- BEP can help you predict the future values of key performance indicators (KPIs) based on historical and cyclical trends.
- BEP can help you manage processes across multiple channels and then trigger alerts when predicted values indicate that there's a problem.

Just as with BRMS and BPM technologies, BEP is designed with the business user in mind. Users work within a graphical user interface which allows the business users throughout the enterprise to manage event processing logic themselves without requiring the skills and expertise of programmers or other IT staff. This user focused design results in a significant reduction in time and effort to define and maintain event-based conditions that can be utilized by business systems.

The typical BEP solution can support a broad set of application requirements:

- A high volume of heterogeneous business event types from multiple sources
- Business events in complex patterns which occur at random times and orders rather than being predictable in nature
- Frequent changes to event processing logic that require rapid implementation

Combining BRMS and BEP

Individually, both BRMS and BEP can provide great value to your organization. Additionally, a growing number of analysts are making the case that rules and events naturally complement each other, and which, when they're combined, provide an "always-on" mechanism for data pattern analysis and decision automation. As a result, employing the two solutions in tandem offers you the greatest potential for optimal agility and positive business outcomes in processes. For example:

- **Business rules:** Helps you automate, manage, and govern decisions; harvest organizational knowledge and best practices; and enforce internal policies and external regulations.
- **Business events:** Detects events and event patterns in real time to facilitate situational awareness and response.
- **BRMS and BEP together:** Enables the finely-tuned orchestration of business information, actions and responses, enabling intelligent and responsive decision automation. BEP quickly identifies when patterns occur and BRMS applies complex reasoning algorithms to the data to make the appropriate decision based on the context of the situation.

Automating and Improving Decision-Making

You want your organization to be efficient and profitable. Automating and improving operational decision-making within processes is one very high payback method of achieving these goals. As a part of the BPM-orchestrated process, many of the decisions made daily while running your business can be automated rather than always requiring human intervention. And when people are involved, the use of BEP and BRMS provide intelligent, responsive decision guidance to each process participant.

Real-world scenarios

Sometimes the best way to understand the true power of technology is to see some examples of how they function in the real world. This section includes some real-world examples of the power of combining BRMS and BEP to create tangible business benefits.

Using BRMS and BEP in the financial services industry

As in other industries, leaders in the financial services industry must also contend with increased competition and growing pressures to offer more value to customers.

By using a combination of BEP and BRMS, financial leaders can create solutions that improve operational decision-making capabilities throughout the enterprise and enable real-time, personalized cross-sell and up-sell opportunities for clients across a multitude of delivery channels.

For example, using BEP, bank officials can track the behavior of customers as they browse through offerings on the company's Web site, submit inquiries via e-mail or Web forms, ask questions of a call center representative, speak to a loan officer at a local branch, or complete a transaction at an ATM machine.

As BEP detects actionable situations, BRMS applies rule-based decision algorithms to the data. For example, BRMS can process event data passed from BEP against specific customer

information (such as a credit score, purchasing history, and other individualized data) to determine the best cross-sell and up-sell opportunities to offer a client at any given moment, including determination of the customer's eligibility for any given offer.

BRMS and BEP can coordinate response actions with other systems, to deliver that offer to the customer using the appropriate channel. This decision response could be fully automated, for example, offering qualified and interested customers the chance to sign up for overdraft protection when they are making a withdrawal at an ATM. Or, it could provide decision guidance, feeding information about the customer's recent Web research or call center questions to loan officers or bank tellers to inform their cross-sell or up-sell suggestions when interacting with that customer. In many cases, a BPM application needs to be initiated in order to follow a set of actions related to an offer.

Such a system offers financial institutions of all types the ability to realize better business outcomes:

- Make better decisions on credit offers and other products at the point of sale and during the account opening process, between all channels and for all financial products.
- Gain the ability to offer personalized financial advice, boosting customer value and company loyalty.
- Optimize cross-sell and up-sell opportunities to enable "share of wallet" growth while reducing risk through consistent, automated processes.
- Maximize opportunities for the best customers and increase growth rates with targeted offers to attract new customers.

Using BRMS and BEP in other industries

Other examples requiring the ability to detect event-based patterns and then determine precise decision responses include:

- An energy utility monitoring data from smart meters across the grid and then determining which event pattern alerts require follow-up inspection by its field operations personnel.

- A healthcare provider tracking patient monitoring devices and test results, then using this information to detect situations that require proactive assessment and/or intervention.
- A retailer coordinating its interactions with consumers across Web, store, and call center channels, so that it can provide more relevant promotions based on actual consumer behavior.
- An insurer assessing incoming claims at the time of submission for potential fraud, and automatically re-routing high risk instances for special review.

The need to make good operational decisions is not unique to any industry, so decision management solutions using BEP with BRMS are applicable for virtually all industries for a wide variety of purposes. Some frequent uses include

- **Fraud prevention and detection:** Tracking events, correlating event patterns and executing automated risk assessments enable companies to take a proactive approach to identifying and stopping claims fraud, money laundering schemes, mobile device hacking, phishing scams, meter or other equipment tampering, and identity theft.
- **Promotions personalization:** From travel and transportation companies, to retail organizations and telecommunication firms, decision management solutions utilizing BEP and BRMS enable virtually any company that uses promotions to customize their offers for each customer based on a wide variety of data including: historical purchases and inquiries, recent research or inquiries, and the customer's loyalty program status (or recent change in status).
- **Manufacturing and supply chain optimization:** Any company that relies on a manufacturing or supply chain to do business can benefit from the transparency and agility that a robust decision management solution can bring to their organization. Using a combination of BEP and BRMS can help companies track supplies and inventory through multiple checkpoints and provide real-time substitution options for delayed or out-of-stock items, as well as to initiate remediation activities or processes due to inventory outages or other critical disruptions.

BRMS and BEP work together to enable intelligent and responsive decision automation thus offering businesses in virtually every industry the ability to work smarter and achieve better business outcomes.

The role of analytics in decision management

This chapter has focused primarily on the role of technologies for automating operational decisions. But how can organizations determine the best definitions for their event and rule-based solutions? In some cases, the definitions are explicitly defined in the organization's objectives, business policies or in regulatory requirements. In other cases, determining those definitions requires analysis of data from business systems as well as from external sources — this is when the use of analytic technologies is required as part of a decision management solution.

Several different types of analytic technologies can be used, but these fall into three main categories:

- **Descriptive analytics:** Using historical and current views of business operations data to provide decision support to people and systems
- **Predictive analytics:** Discovering insights in data that can be used to create models which represent the relationships between data inputs and outputs/outcomes
- **Prescriptive analytics:** Determining various options for achieving business objectives using mathematical techniques that derive alternatives given a set of objectives, requirements, and constraints

The use of the various analytic technologies depends on the business requirements and the available data. To find out more on this topic, read "The Analytics Journey" in *Analytics Magazine* by Irv Lustig, Brenda Dietrich, Christer Johnson, and Christopher Dziekan. Check out the link on the Web too: `www.analyticsmagazine.com`.

While each type of analytics is suited for solving different problems, all are focused on improvement of decision outputs. By integrating BEP and BRMS technologies with analytics, organizations can facilitate continuous improvement in the definition of decision logic in their processes and critical business systems.

Chapter 5

Checking out BPM Success Stories

In This Chapter

- Looking at companies with success
- Understanding IBM BPM solutions in the real world

If you've been reading the other chapters to this point, you've been introduced to BPM and gotten the flavor of the various components that work together to create a comprehensive BPM solution. In this chapter, you take a look at some real-world BPM success stories and see how IBM's BPM solutions have helped organizations across the world.

Growing with Mobitel

Mobitel is Slovenia's largest mobile communications company. Mobitel is a medium-size company that develops its own innovative mobile solutions in accordance with the needs of both the Slovenian market and the user's demands. As a progressive company, it keeps the developments in the Slovenian mobile telecommunications market very much in line with those in the most advanced countries worldwide.

Mobitel was looking at aggressive growth through partners and innovative services but was hampered by lack of scale, flexibility, and the difficulty of bringing new business requirements to life quickly. It needed to modernize the billing application that included CRM, provisioning, and mobile payments. The existing system was rigid and cumbersome with over 15,000 lines of code.

Mobile operators like Mobitel are no longer looking for the killer apps that transform the market; instead they're focused on delivering unique, customized, and complex services to customers on shorter lifecycles. To deliver this level of service and keep up in a highly competitive industry, they need to simplify their IT architectures and management so they can respond quickly and scale as needed.

The infrastructure required to support the fast pace of innovation can be quite complex. Mobitel implemented services that included voice, data, Internet, video, television, advertising, local services, and social networks. To deliver all these services, the company must integrate them with many established technologies, products, and service suppliers throughout the industry.

Communication service providers need to be able to deliver very fast time-to-market innovative services in order to stay competitive. They must constantly deliver differentiated products and services faster than their competitors to reduce customer churn and attract new customers. Traditionally, increased speed-to-market has meant increased costs. However, minimizing development and implementation costs have become increasingly important in the telecom industry due to the shorter lifespans of the products.

Mobitel embraced the challenges of managing complex processes, systems, applications, and interfaces by adopting BPM and service oriented architecture (SOA) technology to accelerate its speed-to-market and optimize the business cost involved in creating new products.

Mobitel did an extensive return on investment (ROI) analysis and projected the benefits:

- Accelerates Time to Build by 64 percent
- Reduces total cost of ownership (TCO) over a 5-year period by 19 percent or €0.8m
- IT Cost Breakeven occurs during initial build by 5th Composite Business Application (CBA)
- Accelerated Time to Value and avoided IT costs drives a 5-year ROI of 161 percent

Mobitel saw these actual additional benefits:

- Achieved differentiation through customer satisfaction and innovative offerings
- Speed time to market of value added services
- Lower network operating costs
- Able to collaborate well with IT towards common goals
- Rapid time to market of new and enhanced services
- Real-time business visibility and detail "drill-down" abilities
- Rapid escalation and intervention of critical business transactions
- Ensuring business and regulatory process compliance
- Automating human based tasks and processes
- Reducing complexity in managing change

Mobitel chose IBM Software for BPM because speed to market capabilities were critical in the industry.

IBM's approach of BPM together with SOA was a major differentiator that led Mobitel to choose IBM. Based on an NGOSS approach, the IBM Software for BPM helps CSPs quickly deploy more solutions while increasing business agility along the way. This means that solutions deployed can be extended with new capabilities, meeting new and perhaps unanticipated business requirements, and as a result extend the business value of their systems.

IBM Software for BPM includes industry accelerators that use a business-defined Telco vocabulary and tasks to enable the assembly of existing and new IT assets into BPM and SOA-based, discrete, reusable and sharable business functions called "business services." The IBM Telecom Operations Content Pack provides prebuilt industry BPM and SOA content based on TeleManagement Forum (TMF) standards. A project such as this highlights the practical benefits of SOA and a framework approach to reduce complexity and deliver a return on investment (ROI) quickly.

Out with the JBOSS in with the WebSphere

Mobitel's billing, provisioning, CRM, and self-care (self-service) functionality previously ran on JBOSS, which Mobitel replaced with the innovative, agile, performance-based WebSphere Application Server ND to deliver on business objectives and contain or even reduce cost. Its immediate drivers were actually not cost savings but the need for an app foundation that supported the fast introduction of new products and services which WebSphere Application Server ND provides. Mobitel realized cost savings as an additional benefit later in the reduction of physical servers needed and lower operating costs. Mobitel is using the flexibility, scalability, and open standards to quickly add new operators and expand across geographies.

The SOA transformation was key in identifying and creating reusable assets and services. It provided the critical ability for the technology to optimize the assets behind the services — which in turn accelerated introduction of new services. Mobitel set up a BPM and SOA competency center that it uses to write new business services once and then reuse them many times as developers access the services they need. The solution was critical in integrating and managing business services across Mobitel's environment and with its mobile operators. The center has a significant impact on the deployment of new processes and their upgrades, on the initial phases of modeling, and on service naming and the use of appropriate standards.

Reducing Medical Costs for Medizinische Hochschule Hannover

Medizinische Hochschule Hannover (MHH) wanted to enhance patient safety, improve the quality of the treatment services, and reduce patient waiting time, optimize its processes, and better support its special operating conditions. However, the school lacked an IT solution to facilitate tracking the patient

from enrollment through discharge which would ultimately optimize the treatment process. Typically, patients arrived, were entered into the hospital information system (HIS) once they arrived, but after that the IT support ended. Patients were ordered into the treatment area according to the sequence of arrival, and there was no system in place that would track admissions by medical priority.

To achieve its goals, MHH wanted to deploy a solution based on state-of-the-art technologies that would optimize the treatment process and integrate with the existing HIS. By deploying new technologies, MHH hoped to create a solution that automatically gathered and recorded data about patient treatment, including details regarding waiting times and patient location. MHH wanted the solution to utilize its existing wireless local area network (WLAN). In addition, the school wanted a scalable solution that could include other enterprise-wide capabilities, such as helping MHH locate and track medical devices, reducing the need for investment in new assets and optimizing the maintenance process by locating devices faster.

By implementing the new solution from IBM, MHH optimized its treatment process, reduced waiting times for patients, increased patient security and improved its return on investment (ROI) by improving its asset tracking capabilities. The solution, built using state-of-the-art technologies, provides the school with a highly scalable and adaptable SOA solution that can become the basis for a fully integrated enterprise-wide solution.

The school decided to engage IBM because it felt that the Global Business Services and Integrated Technology Services teams could provide independent consulting while involving the specific partners, including Cisco and Ekahau, to best meet the particular technology requirements. By leveraging its relationship with the IBM teams, MHH utilized its existing WLAN infrastructure to track patients during the treatment process, as well as medical devices — leading to higher patient satisfaction, improved patient security, and valuable cost savings.

MHH engaged IBM Global Services - Global Business Services and IBM Global Technology Services - Integrated Technology Services to create a comprehensive solution. The Global

Business Services team designed and implemented the solution architecture using a service-oriented approach. The new WLAN-based automated tracking solution utilizes a complex event processing (CEP) engine to automatically aggregate location changes and other events into process relevant information, resulting in data such as "patient waiting for doctor at room x."

The Global Business Services team initially built a CEP prototype using JBoss open source software, but replaced this prototype with IBM Software for BPM. Data is gathered by using the IBM Software for BPM, allowing the school to automatically track and record the position of each patient. IBM Software for BPM provides a flexible and scalable user interface, delivering the dashboard functionality necessary to present relevant events and data to medical staff in a business-to-employee (B2E) portal, as well as fulfill future requirements for an enterprise portal. The Integrated Technology Services team provided guidance and implementation services for the new WLAN-based infrastructure.

To create a highly flexible, scalable and open software infrastructure that could scale as needed, the IBM team implemented a SOA based on core WebSphere offerings. The software acts as the integration platform connecting the new solution to MHH's legacy HIS. The newest software versions available were used. The solution also included positioning engine technology from Ekahau, Inc. and WLAN access points from Cisco.

Getting Airborne with Atlas Air Worldwide Holdings

Based in Purchase, NY, Atlas Air Worldwide Holdings is the leading provider of outsourced freighter aircraft and operating solutions to the global air freight industry. After a decade of rapid growth, Atlas faced the challenge of adapting its operations to the dynamism and variability that are common to the air freight business. Atlas needed to become more agile by making its business processes more flexible.

Completing the mission

The most basic mission of air freight carriers is to ensure that their aircraft and their cargo get to their destination safely and on time. That's the standard by which carriers are ultimately judged. Although this dimension of the business may be the most visible, below the surface it's guided by a complex operational plan whose components need to be intricately coordinated for the business to succeed. If air freight were a game of strategy, the board on which it is played is each operator's worldwide delivery and support network, which chiefly include the facilities and business services — ranging from maintenance and fueling for aircraft to catering and hotel layovers for crews — that operators rely on to keep cargo moving. The greater the number of destinations each operator covers, the larger and more complex the required network of providers and potentially disparate systems to interface.

However, the real challenge for air freight operators is in choreographing the movement and availability of their most strategic assets — their aircraft and flight crews — as they move within their worldwide networks. What makes this challenge the most complex of all is that these networks are always in motion, usually according to plan, but sometimes not. The other defining characteristic of air freight operations is a high level of interdependency in terms of flight scheduling, the sequences of supporting processes and a physical location of planes, people, and cargo. If one of these elements goes out of sync with the others — a plane is delayed or a flight crew isn't in the right place — the ramifications tend to cascade into other parts of the operation. That's why, in such cases, operators need the capacity to refigure their plans, on-the-spot and on-the-fly, to mitigate the impact of unpredictability and to do their best to optimize the overall efficiency of their operational plans.

Atlas saw one of its biggest challenges as achieving "dynamic optimization" by maximizing the efficiency and profitability of its operations in the face of changing inputs, such as new customer delivery requests and operational constraints, such as flight crew rest requirements. Determined to prevent the growing complexity of its business processes from dragging down its efficiency, profitability and growth, Atlas realized it needed a BPM capability to fundamentally change the way it translated information from across its operations into the best possible business decisions.

Atlas turned to IBM to help in its transformation. The key role for IBM was to design and deploy a SOA that would provide the foundational capabilities necessary for BPM. IBM created an architecture that abstracted Atlas's core backend applications into services that can be reused to create entirely new applications via SOA. This SOA was built on Atlas's existing IBM System X servers by using IBM Software for BPM and a diverse range of other technologies.

On top of this SOA foundation, Atlas created a full BPM solution. The team used IBM Software for Business Process Management to create dashboards to track key performance indicators within each process and to create detailed maps of its process flows to identify targets for deeper process improvements, a task beyond the capability of any employee. Once such targets have been found, Atlas can rapidly assemble abstracted services into new business services.

With its BPM architecture in place, Atlas is poised to achieve a much deeper level of process optimization, helping it to strengthen its margins by achieving significant cost savings. Atlas's increased business agility will also enable it to seize market opportunities rapidly and by significantly reducing its application development costs, do so more cost effectively.

From its implementation, Atlas saw the following benefits:

- 80 percent reduction from the expected cost of integrating operations with strategic delivery partners
- 50 percent reduction from the expected time required to integrate operations with strategic delivery partners
- Significant expected reduction in operational costs
- Improved time to market with new business services
- Stronger decision support through increased transparency into key performance indicators (KPIs)
- Decreased application support costs associated with integration
- Potential for market differentiation via agility
- Expected 30 percent reduction in application development costs

Suiting Up with Mark's Work Wearhouse

Mark's Work Wearhouse is a Canadian retailer specializing in men's and women's casual and business wear, outdoor apparel, and industrial work wear. The company operates 400 stores across Canada. The company's corporate vision centers on the "Clothes that Work" philosophy, delivering quality, innovative, and affordable garments that can meet the needs of both customers' business and personal lives.

Mark's Work Wearhouse had a cumbersome "Shop and Send" process of locating products across stores and shipping them to clients — one that involved phones, faxes, and forms.

The company struggled with product sourcing processes and a lack of visibility into inventory — both causing lost sales. When a customer requested an out-of-stock item, store clerks had to manually check inventory at different stores and use a phone and paper process to place the order.

The company's manual process involved these steps:

1. **Verify the merchandise on 450 inventory screens.**
2. **Place a call to the store to confirm the product availability.**
3. **Manually create sales orders by completing a form with customer, shipping, and product information.**
4. **Fax the customer order to the sending store.**
5. **Transfer payment information over the telephone.**
6. **Bill the customer.**
7. **Arrange delivery.**

Overall, completing the order took up to several hours, which created a challenge for the store associate promoting this option to customers. The process also had a few more flaws:

- Delay contributes to excessive costs
- Process only allows two payment options, credit card and gift card, further limiting the service offerings
- Time lost on product verification and order preparation
- Lack of information on order status
- Lack of tracking information
- Large number of paper forms required to complete the order

To improve the process, Mark's first analyzed the existing sourcing process to find bottlenecks and key areas to improve the processes. It modeled and simulated the new processes and ultimately deployed a new automated process that integrated the sourcing processes with real-time inventory visibility across all stores. Mark's engaged IBM Software for BPM to develop a SOA solution called Fast Find. Mark's managed and governed the various services which comprised the Fast Find solution. The IBM team provided the necessary technical leadership and mentoring services for the entire deployment of the company's new Fast Find solution.

Since the new solution was rolled out, the company has realized $225,000 in savings every month and generated $3.6 million in additional sales revenue in the first ten weeks. It has improved efficiency and communication, as well as order management.

Mark's new service-oriented Fast Find solution delivers a number of important benefits:

- More efficient search for products enterprise-wide
- Effective communication of order information to the fulfillment location
- Improved management of the order lifecycle
- Improved management of exception alerts
- Acceptance of all valid types of tender (credit/debit cards, gift cards, and cash)

Fast Find Business Process Execution Language

The Fast Find Business Process Execution Language (BPEL) solution was defined, assembled, and deployed on a logically partitioned IBM System i5 570 server running the IBM i5/OS V6.1 operating system. The Fast Find solution also uses IBM WebSphere Enterprise Service Bus V6.1 software to connect and mediate the data exchange between the Fast Find process and the supporting services.

At the core of the Fast Find solution is a BPEL process that controls and coordinates the execution of a variety of back-end services that have enabled Mark's to automate a large part of the process from the initial request for merchandise to merchandise shipment and tracking. Retail store associates use a Web-based interface on the company's Web storefront to locate, allocate, and ship product from another store directly to an address specified by the customer. The Fast Find solution seamlessly integrates with key back-end systems to provide customer order tracking capabilities throughout the order management lifecycle.

A sales associate logs in to the storefront console to search for the product. When the item is selected, the Fast Find solution automatically checks the company's inventory, including in-stock inventory across all retail outlets, for availability. The sales associate is able to create a list of several products requested by the customer for shipment to the customers shipping address. Prior to the order being submitted, tax charges are calculated and displayed based on a postal code. After a customer provides her or his name, address, and payment information during the order submission, the data is shared with applicable areas throughout the company almost instantly. The customer's name, street address, and e-mail address are sent to the store shipping the merchandise along with the new order notifications. Next, the shipping store is notified of the new order and the order is sent to the store closest to the consumers shipping address that has the items in stock. The receiving store performs a few basic manual tasks to confirm the product's availability, update the status of the order, prepare the items for shipment, and finally ship the items. The solution seamlessly integrates with back-end systems to provide accurate customer order tracking.

Going Paperless at Wüstenrot & Württembergische AG

Wüstenrot & Württembergische AG (W&W), a German financial services company still receives much of its customer correspondence via mail. Many important documents and forms must be routed to the appropriate person within the organization of 11,000. W&W was struggling with a manual, labor-intensive process that was expensive to operate and inefficient at routing mail. It often took as long as seven days to route mail through the company to the appropriate person.

To improve the process, IBM worked with W&W to implement a paperless mail distribution system that leveraged BPM and Business Rules Management software. Instead of physical delivery, incoming mail is scanned and routed electronically to the recipient. This system reduced the delivery time to less than two days, a 70 percent reduction in processing time. The new automated system helped to improve employee productivity by giving back-office employees a new interface to easily view, prioritize, and manage tasks.

Chapter 6

Top Reasons to Choose BPM from IBM

In This Chapter

- Ten top IBM BPM differentiators
- Making IBM your choice provider

In this chapter, you get the best reasons to make IBM your smart choice in providing a BPM solution for your organization.

Ease of Use

IBM provides superior total cost of ownership compared to other BPM solutions. Your operational costs are reduced because IBM provides consistent and scalable runtime architecture across capabilities. Your cost of change is reduced based on architected points of agility, so for some changes IT development cost can be zero and for others it can be very minimal.

Dynamic SOA Capabilities

IBM's Service Oriented Architecture (SOA) enables you to build agile solutions based on dynamic SOA capabilities. With IBM you can capture business logic with XML/metadata rather than requiring the use of traditional programming languages. This ability allows you to support multiple and greater degrees of abstractions and capabilities so you can be more agile and flexible. This agility extends to service selection,

rules, business events, business service policies, and business services. You can manage change with confidence.

Role-based User Environment

IBM empowers the business user to manage processes through Web 2.0 Mashup technology. This technology enables customizable and flexible user interfaces through role-based business spaces. Role-based business spaces provide information access that gets the right process information in capabilities to the right people.

Integrated BAM Capabilities

IBM's solutions make measurement and insight into action easier. They provide the ability to put control and change management into the hands of business users. IBM provides advanced, real-time predictive analytics and drill-down business activity monitoring with predictive KPIs. In addition, they provide pre-defined industry KPIs.

Advanced Programming Model

With the IBM BPM solutions you have fine-grained control over individual process instance execution through an infrastructure and programming model which leaves your business in a consistent state at all times. IBM provides process transactional integrity combined with advanced programming models and runtime features.

The IBM BPM operational environment runs in a highly available, secure, and disaster recovery enabled mode so you can run very complex and mission-critical applications with confidence.

Scalability and Performance

IBM BPM solutions provide you a robust, secure, and scalable environment that supports a wide range of platforms. The IBM BPM solutions are built for expansion and growth to handle your future needs. These solutions include high availability with both vertical and horizontal support.

Documenting and Running Processes in the Cloud

Blueworks Live ease-of-use, browser-based delivery and wiki-like structure allow stakeholders inside and outside your organization as well as across functions, campuses, and even oceans to collaboratively participate in process improvement. Blueworks Live takes the practice of process from the hands of the few and spreads it throughout your organization. In effect, the Blueworks Live platform becomes the central communication platform for collecting, sharing, and improving how work gets done in your organization.

But don't take our word for it. Register today for a free 30-day trial at `www.blueworkslive.com/signup/trial`.

Business Rule Management

IBM offers Business Rule Management (BRM) that adds flexibility and performance to your business systems by enabling powerful decision automation across processes and applications. Its tools include the functionality to support rule definition, deployment, maintenance, and governance with specific environments for technical and non-technical users who participate in rule management. In addition, IBM provides best-in-class rule execution capabilities that can run on a wide range of operating systems and platforms, ensuring enterprise-wide decision automation.

Business Event Processing

IBM supports advanced event processing capabilities for detecting, evaluating, correlating, and responding to patterns of events that can occur over a period of time. These capabilities are exposed through graphical, non-programming user interfaces, allowing IT to manage the business event environment, while equipping business users to manage the event definitions.

Beyond Technology, Assuring Success with BPM Services

Being successful at BPM requires more than cool technology. BPM calls for upfront strategic thinking about where the organization is heading and where BPM fits into this journey. The IBM WebSphere Services for BPM consists of skilled consultants with deep process modeling and technical skills gained from countless of engagements who ensure that you start off your BPM journey on the right track. The name of the game is quick, small successes that can be easily scaled across the organization, and IBM consultants bring with them proven methodologies and best practices that guarantee you achieve your objectives.

Notes

Notes

The time is now to use BPM to give your organization the edge it's been looking for

In today's dynamic business environment, your organization needs to be ready to turn signals from the marketplace into strategic plays. BPM helps you quickly find and execute on missed opportunities trapped inside day-to-day operational processes. By unleashing the power of technology as a competitive advantage, your entire enterprise becomes far more agile, helping you meet your goals. BPM creates value through growth, improved performance, better productivity, higher staff effectiveness, and better customer service.

- **Increase your productivity — in today's economy you need to do more with less**
- **Apply BPM principles — to help your enterprise increase its productivity**
- **Take advantage of the new market opportunities — with BPM, you can be a market maker and leave your competition behind**
- **Reach the global market — BPM streamlines your supply chain operations to take advantage of opportunities wherever they may exist**
- **Accelerate innovation — let BPM transform your organization into an innovative machine**

Open the book and find:

- **Ways to achieve compliance**
- **Tips for controlling your costs**
- **How IBM can help you transform your organization with BPM**

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