



## **Removing Risks and Getting Results with Workflow Solutions**

*How IT Can Deliver Real Value across the Enterprise*

**June 2006**

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## Table of Contents

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<b>Table of Contents</b> .....	1
<b>Objective:</b> .....	1
<b>Audience:</b> .....	1
<b>Executive Summary</b> .....	2
<b>The Primary Business Drivers for Workflow and Process Automation</b> ..	3
<b>Business Objectives</b> .....	3
<b>Know What Your Business Leaders Really Want to Achieve</b> .....	4
<b>Critical Functions for Maximum Value across the Enterprise</b> .....	6
<b>Know the Full Range of Benefits to Maximize Value</b> .....	7
<b>Comparing the Value Proposition of Process and Workflow Technologies</b> .....	9
<b>Ease of Integration</b> .....	11
<b>Budget and Bottom Line Value</b> .....	11
<b>Overcoming Risks and Obstacles</b> .....	13
<b>Conclusion</b> .....	15
<b>Tools and Resources</b> .....	15

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**Objective:** This whitepaper explores the full range of benefits and the common areas of risk associated with automation and workflow technologies. Its purpose is to help you maximize bottom line value from both a technical and business operations perspective. This enables a greater return on your workflow investment and expands the Information Technology Professional’s value proposition throughout the organization.

**Audience:** Project Managers, Programmer/Analysts, Chief Information Officers, Information System Directors, Business Analysts

## Executive Summary

Inevitably forward thinking businesses start looking to process automation technologies and workflow solutions to improve productivity, reduce operating expenses, address labor shortages, improve quality and establish systems that enable long term growth.

As an IT professional, you are the expert that business leaders look to for technology solutions that enable business benefits, and those benefits always come down to the bottom line. In most organizations, Information Technology resources are expected to deliver quality solutions that support current and evolving business needs, while working within a tight budget and timeframe.

This leads to the typical challenges that are all too familiar to most IT executives and their team members. *How do you deliver as much value as possible across the enterprise while meeting budget and delivery requirements? How do you choose a workflow or process automation solution that fits your current infrastructure and future technology model?*

The term workflow is used to classify a wide range of applications, all with varying degrees of capability. For example, some workflow applications have a full range of functions, but are not designed for business users. Others provide business rules repositories, but have limited “decisioning” functionality. Some options are designed for specific industries or functions and have limited application.

Understanding the business drivers and full range of potential process automation benefits enables a solution that delivers on the bottom line, and extends the IT value proposition within your organization.

Process automation technologies and workflow solutions will continue to grow in importance out of sheer necessity. Process automation technologies are becoming an essential component of doing business because they provide a means to improve productivity and automate repetitive tasks. Choosing the right solution allows you to utilize the unique talents of your resources in areas that provide the most value; maximizing your organization’s performance results.

This whitepaper explores the full range of benefits and the common areas of risk associated with automation and workflow technologies. It provides tools and resources to help you choose a solution that is the best fit for your organization.

## **The Primary Business Drivers for Workflow and Process Automation**

As an IT professional your reality revolves around making technology decisions that deliver real bottom line value. You are called upon to deliver technology solutions that enable business benefits and those benefits always come down to the bottom line. The questions that drive technology investments almost always focus on the “big five” business drivers.

**The following five questions drive business performance improvements and therefore directly impact the bottom line.**

1. How can we minimize operating expenses?
2. What systems do we need to enable growth and expansion?
3. How can we shorten cycle time and improve productivity?
4. What do we need to do to meet or exceed customer expectations?
5. How can we improve the quality of our products and services?

These questions naturally lead decision makers to automation technologies and workflow solutions. The expected benefits can be relatively easy to deliver if you have an unlimited budget, ample resources, iron-clad business requirements, and tightly integrated leading-edge technology. However, most IT organizations aren't blessed with these luxuries. In most cases, IT professionals are asked to deliver quality solutions that support evolving business needs, while working within a tight budget. In addition, most organizations are working with multiple technology platforms that are far from uniform or leading edge. So you are also challenged with making investment decisions that fit your current architectural reality and support your future vision.

This is no small order, but the obstacles can be effectively addressed when you use a systematic approach.

To start, let's explore the common areas that must be addressed to successfully implement process automation technology. This list can be used to help you assess your current software evaluation process. Some topics may not pertain to your organization. However, we have found that the areas presented here are relevant for 90% of the businesses that consider investing in workflow solutions.

### **Business Objectives**

Obviously clarity here is paramount, but this is an area that's often overlooked. If you have the responsibility of recommending the best workflow solution for your organization, then you need to fully understand the desired business

outcome. IT professionals *can not* deliver real value to the bottom line if the specific business objectives and priorities are not effectively communicated by decision makers.

The reality is that IT is frequently given a request to find the technology without knowing what business leaders really want to accomplish. Connecting clear business objectives to your technology decisions may seem overly simplistic, but its importance can't be overstated. Don't assume everyone understands what *workflow* applications can or cannot accomplish.

### **Know What Your Business Leaders Really Want to Achieve**

**The term *Workflow* is widely used, but it covers a broad range of applications.** For example there are "business rule tools" that are specific to industries and limited to certain types of transactions. These applications may not support full process automation or help you effectively manage workflow. They simply allow you to establish business rules that you can reuse within a limited set of circumstances. They may be called workflow, but they do not provide the range of functions to fully manage processes across the enterprise.

**Some workflow applications have a full range of functions, but are not designed for business users.** This approach requires extensive and ongoing IT support. Although these applications are feature rich, they are not well suited for organizations with a dynamic business environment, frequently changing processes or diverse needs. They also tend to box IT resources into repetitive support responsibilities. Most organizations find this approach restricts their ability to leverage technology resources in areas that will help them innovate and grow strategically.

**Consider the business rules component when automating processes and implementing workflow solutions.** Do you simply need a rules repository or do you need a "decisioning" engine? There's a big difference and not all applications are created equal. Decisioning engines enable intelligent decisions within an automated workflow process. So the logic is transparent because the reasoning and appropriate actions are handled automatically and exceptions can be routed for appropriate action.

**There are also applications marketed as workflow systems that have a solid decision engine, but do not support multiple data or file formats.** Again this can limit the usability of the application and therefore your ability to deliver bottom line value if the business objective is to enable workflow across multiple data points, such as voice, web, email, and text.

**To deliver maximum value, focus on the *desired end results*.** Refer to the “big five” business drivers at the beginning of this whitepaper. When you are able to answer these questions, you’re ready to start looking for an effective solution that will maximize its value to you and your organization.

1. What does a successful implementation look like from your business sponsor’s perspective?
2. What is the primary intent for pursuing workflow technologies? Is it to minimize operating expenses, enable long term growth etc.?
3. Realistically, what is the expected life span of the solution?
4. Will your approach need to support the future architecture model while working within your current infrastructure?
5. Will the workflow application be used to enable consistent process execution and support uniform quality across multiple divisions and platforms?
6. Do you need to support exception monitoring?
7. How often do your business requirements change?
8. Is agility and rapid deployment of ongoing process changes considered a high priority?
9. How can business and technology resources best utilize their unique talents to maximize your organization’s performance results?
10. How quickly do your business leaders want to realize the desired benefits? *If you are like most organizations, the answer is probably yesterday.*

<p>By knowing what success looks like in the minds of the business leaders, IT professionals can significantly increase the value they deliver. Establishing clarity of objectives and priorities allows you to minimize risks and maximize the return on your workflow solution investment.</p>
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## **Critical Functions for Maximum Value across the Enterprise**

Workflow requirements can change rapidly, and rare is the organization that can assess every user requirement given the state of process documentation in most organizations. So the risks of misalignment between a process automation solution and the needs of an organization are higher than most organizations want to admit. But burying our heads in the sand will not eliminate the problem of inadequate documentation, changing business needs, or undefined future business models. However, there are workflow application approaches available that minimize these risks and ensure the best fit possible for your organization.

When assessing the functional requirements and gaps between the various options, consider the priority for each technical and business requirement.

Project success is directly related to your ability to fulfill the requirements that deliver the biggest business benefits. Based on our extensive experience, we've found the following technical and business functions have the greatest impact on workflow solution success rates.

**These workflow application features are highlighted because they directly impact your business's ability to operate effectively.** They are considered critical functions because most businesses require agility, are working with a limited budget, and need applications that are architected to satisfy both existing and future business needs.

**A viable solution that satisfies the critical workflow requirements must have the ability to:**

- Leverage your existing IT assets such as databases, ERP systems and office applications into processes with little or no programming effort
- Minimize the inherent risks of automation and process change by providing an environment in which processes can be simulated in a fully visual environment
- Support ease of integration with your existing applications and processes
- Have "decisioning" technology at the core with a business rule engine for logic automation

- Be deployed rapidly (This significantly improves workflow project success rates because users start seeing benefits faster which creates momentum for ongoing improvements and expanded return on investment.)
- Support rapid process changes with an environment designed specifically for business users
- Provide a task management portal that is application independent
- Support active rules and monitoring
- Handle logic for multiple data formats (such as voice, web, your legacy systems etc.)
- Provide a well stocked library of ready-to-use elements for managing critical business functions
- Support a wide range of business rules – quantitative, qualitative, operational, productivity and cycle time, event based rules that span process or business divisions, approval requirements, application events that are generated from a back-end application such as a legacy application, ERP System database or external event such as a shopping cart request or a vendor request.

## **Know the Full Range of Benefits to Maximize Value**

**There are many benefits of process automation and workflow technologies that are not readily apparent.** Before you can determine the best solution for your organization, you'll want to fully appreciate the full range of benefits these solutions can provide. This allows you to partner more effectively with your business leaders and end users.

**When you understand the full range of business applications, you expand your ability to positively impact bottom line performance results.** By sharing both your technical and business knowledge you are able to help your entire organization better leverage workflow and automation technologies.

IT Executives can quickly reduce their list of options by comparing the value proposition of each workflow alternative. In other words, how much value does the solution deliver relative to the investment required? Does it meet all of your critical business and technology requirements? Is the option within range of your

budget? As a side note, very few organizations would ever entertain a build versus buy approach because the cost of developing a solution from scratch is simply cost prohibitive, and would require so much design and development time that it is simply not workable for most businesses.

Obviously, the best solutions meet all critical requirements and support the key business and technology drivers for pursuing process automation technologies. ,

**The primary benefits of process automation technologies are directly related to the “Big 5” and they are:**

1. Reduced operating expenses
2. Enabling revenue growth and expansion
3. Decreased cycle time and improve productivity
4. Increased customer retention/expand market share
5. Improved the quality of products and services

**There are other benefits that are not always top of mind.** They are listed here to help the Information Technology professional connect the application technology functions with the business impact. Having a comprehensive understanding of business benefits helps you fill in business requirements gaps that are sometimes missed by business users. Again, understanding the full range of opportunities enables you to: choose the best functional alternatives, improve the project planning process, and deliver far more value across the enterprise.

**Other Process Automation and Workflow Benefits:**

- Provides measurable and reportable statistics; the basic requirement for all process improvement initiatives.
- Reduces time and cost by reducing “dead time” between process steps.
- Allows processes to be repeated consistently.
- Enables clearly documented processes, which reduces the productivity and quality losses caused by employee turnover.

- Proactively drives a process and monitors deadlines so customers get timely delivery of products and services.
- Automates repetitive tasks and decision making to free up resources for higher pay off activities, such as product development, building strong customer relationships, marketing, and process improvements.
- Creates an audit-trail so you can demonstrate process compliance and deploy additional training or resources when needed.
- Defines and ensures understanding of roles and responsibilities.
- Manages process definition and lifecycle so opportunities for errors are reduced.
- Provides greater visibility to what is happening in the organization and enables predictable process optimization through modeling and simulation.
- Gives team members tools to monitor and effectively manage real-time performance and optimize resource allocation.
- Enables “on the fly” process changes with minimal operational disruption.
- Reduces risk and increases confidence and buy-in to process changes through simulation and testing.

### **Comparing the Value Proposition of Process and Workflow Technologies**

Here’s a method you can use to assess and compare the value proposition of various workflow and process automation solutions. You’ll also find a blank template in the *Tool and Resources* section at the end of this document.

Priority: 1-Nice to have 2-Important 3-Very Important

Option Column -> Degree of Fit: 0-No Fit, 1-Partial Fit (May Require Customization), 2 -Good Fit

#	Key Requirements	Priority	Expected Benefit	Option I	Score	Option II	Score	Option III	Score	Notes:
1	Provides user friendly means of creating workflow processes	3	Reduces learning curve/ faster to deploy and realize benefits	2	6	0	0	1	3	Option I - graphical interface. Option II - requires programming Option III -complex text based system
2	Has decisioning engine and rules repository	3	Centralizes business process information throughout the enterprise. Improves product and services quality. Decreases operating expenses.	2	6	2	6	2	6	
3	Provides the ability for business users to create and change processes with minimal or no ongoing IT support	2	Optimizes resource allocation - increases speed to market for new products	2	4	1	2	1	2	Option I maximizes ability to deploy changes quickly
4	Supports rules monitoring	3	Improved quality & consistency. Decreases error opportunities, costs of nonconformance.	2	6	1	3	2	6	All support , but option I supports alerts
5	Ability to create changes on the fly/ deploy rapidly while eliminating production risks	2	Enables responsiveness, improved customer service & retention	2	4	1	2	2	4	
6	Ability to automate decisioning across multiple platforms and data types (email, legacy systems, web, voice, instant messaging)	3	Reduces operating expenses (eliminates dual data entry, reduces opportunities for errors & costs of nonconformance)	2	6	0	0	2	6	
7	Provides exception handling capabilities	3	Reduces cost of nonconformance, shortens cycle time	2	6	2	6	1	3	
8	Ease of integration in our current environment	2	Enables expected benefits faster/ maximizes ROI	2	4	1	2	2	4	Option I requires 2-3 weeks integration effort vs. 5-6 months for options II & III
9	Fits our future architectural model	3	Eliminates future reconfiguration costs	2	6	1	3	2	6	
10	Provides test / simulation environment	3	Reduces possibility of production downtime	2	6	2	6	1	3	
11	Supports Instant Messenger (AOL, Yahoo, MSN) Technology	2	Improves customer responsiveness/ retention and decrease operating costs	2	4	0	0	2	4	Great benefit for customer service dept. Reduces inbound toll call expense
12	Supports SALT, VoiceXML, SMS, HTML (Logic for voice and web systems)	2	Maximizes ROI of existing and future business models	2	4	0	0	2	4	
13	Meets Budget Requirements	3	Reduces financing costs and reallocation of other budget items	2	6	0	0	1	3	Option II - 5 times over budget, Option I - 2 times budget and Option I - comes in 15% under budget
14	Provides library of common workflow elements	2	Reduces deployment time / improves ROI	2	4	2	4	2	4	
15	Expands benefits of existing ERP and office systems	3	Increase Return on Assets company wide	2	6	1	3	1	3	
16	Supports all business rules requirements -quantitative, qualitative, operational, event-based, application events, and web portal customer requests	3	Maximizes the capabilities of existing future applications and process systems	2	6	1	3	2	6	Option I- easier for user to evaluate functional impact & deploy
<b>TOTAL VALUE SCORE</b>					<b>84</b>		<b>40</b>		<b>67</b>	

When you understand the full scope of benefits and the potential impact on business performance, you are in a position to significantly improve the value perception of IT within your organization.

## **Ease of Integration**

**As you analyze workflow options for ease of integration, you'll be assessing the degree of fit with both existing and future systems.** You'll want to understand how your existing interfaces will evolve, and the scope of work related to the integration efforts. Integration can be a nightmare or it can be relatively seamless depending on your environment, the number of integration points, and the workflow solution's communication capabilities.

**The attributes that enable ease of integration are:**

- A single paradigm that addresses different layers in the stack
- Support of multiple client types using their native communication capabilities such as HTML, XML, RMI etc.
- Segregation of all the business logic within a separate service layer for ease of maintenance
- Support of diverse communication technologies such as SALT, VoiceXML, SMS, Instant Messengers (AOL, MSN, Yahoo), HTML
- Extensibility for tight integration with existing and future applications
- A means of creating a single workflow portal to manage processes than span departments and platforms

**A simple architecture allows you to achieve high maintainability, reduce costs, and shorten the project lifecycle.** Keep it simple and you'll deliver the desired benefits faster.

## **Budget and Bottom Line Value**

**As an IT Professional, you can make better recommendations if you understand the entire evaluation process including the activities that occur after you forward your assessment.** When you understand the whole process you are in a better position to provide information in the format that supports

the needs of the governing body in your organization. You also reduce requests for revisions and additional research if you understand the process up front.

Armed with this knowledge, you are able to obtain all pertinent information from potential solution providers. This enables you to present your findings in a way that helps you best present the technical and business advantages of each solution. This helps you provide more bottom line value because decisions are made with a thorough understanding of both the technological and business impact.

**There are number of ways to calculate the return on a workflow or process automation investment, but typically some variation of the standard Return on Invest (ROI) calculation is used.** Basically a value is assigned to an expected reduction in expenses or forecasted increase in revenue that will result from the investment in the asset. *So the perceived value of any business or technology investment comes down to a measure of earning power of a company's assets.*

**Typically business leaders take on the role of assigning value, but this is not always the case.** In many organizations IT is asked to spearhead the financial analysis as well. The Sponsor then takes on the role of evaluating the recommendations and financial assumptions provided by the Information Technology Department. There may be other Senior Leaders or a Board of Directors that evaluates and approves the course of action. The process can vary widely depending on the size, structure and management style of the organization's leaders.

In addition, there are times when an organization's growth, resource availability or business environment drives the technology decision out of necessity. In this case, there is less emphasis placed on completing the ROI process because the need is self evident.

Assessing the value proposition really comes down to the value delivered by the solution provider relative to the size of the investment.
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**The value delivered should be outlined in both *quantitative* and *qualitative* measures.** If you only provide quantitative measures you miss an important part of the value proposition. The qualitative measures provide distinctions based on the unique attributes of the various options. It can distinguish one opportunity from another particularly if your decision is a close call between two vendor candidates. Qualitative comments fill in the gaps and help you provide a complete picture.

Quantitative measures help you rank the options based on the benefits that can be expressed as a measurement.

**So an ROI calculation would provide a means to quantify the value proposition for each of the workflow solutions you deemed viable.** Viability is defined as those solutions that fulfill your workflow or process automation objectives and meet your business and technology requirements. Obviously final recommendations would meet all critical needs.

Total Net Income Improvement	or	Total Benefit of Purchase
<hr/>		<hr/>
Total Cost of Asset		Total Cost of ownership

**The first calculation is closer to the traditional algorithm used to measure return on investment, and the approach used varies by organization.** The net income improvements may include both expected improved earnings and expense reductions. However, some organizations prefer a conservative approach and only use expected expense reductions when forecasting improvements.

**Total Cost of Ownership (TCO) analysis performs calculations on *extended costs* for any purchase; they are fully burdened costs.** So, they include the cost of software, hardware, and also include such things as service and support, networking, security, user training, and software licensing. The TCO has to be compared to the total benefits of ownership (TBO) to determine the viability of the purchase.

Acceptable return rates vary widely by industry and company. You'll want to check with your business leaders to understand your organization's minimum requirements. Doing so, allows you eliminate options that clearly will not deliver the minimum return on investment.

### **Overcoming Risks and Obstacles**

**In order to deliver the best possible workflow solution for your organization, you'll need to consider your organization's constraints.** When we are aware of potential limitations and obstacles, we can choose a solution that works best within our current environment, and create a plan that minimizes those risks.

Consider how the following areas may impact your ability to deliver bottom line value.

- Budget
- Hardware Availability
- Current Legacy Applications
- Application Platforms
- Future Strategic Direction (Business and Technology)
- Resource Availability (Business and Technology)
- The Nature of Your Business Needs (Dynamic or Static)

**The critical success factors necessary for successful workflow and process automation are:**

- Strong executive sponsorship and management support of the project mission and project team
- Adequate staffing given the solution, expected goals and required timeline
- Clear roles and responsibilities to ensure accountability, ownership, and quality
- A committed and well-informed project manager and project team with a thorough understanding of the project goals, milestones, and the relationship to the business objectives
- A comprehensive project work plan and quality management approach
- A defined and maintained process documentation infrastructure
- A thorough understanding of potential obstacles and assumptions so they can be adequately addressed

- Early documentation planning and coordination across all impacted divisions, departments, and subsidiaries to maximize timely, cost-effective, enterprise-wide documentation and implementation
- Documentation representatives are engaged to facilitate consideration of performance quality management objectives
- A feature-rich, high quality business process management workflow system that supports dynamic business needs, is business user friendly and affordable

## Conclusion

**Process automation technologies and workflow solutions will continue to grow in importance out of sheer necessity.** Resource availability will continue to shrink as baby boomers retire and the pool of available resources declines. According to the U.S. Bureau of Labor, among the broad occupational groups, the executive, administrative, and managerial occupations will experience the greatest turnover. Those 45 and older make up 41 percent of this group, and 42 percent of these older workers are expected to leave by 2008. That is equal to nearly 3 million job openings in this field due to retirements, resulting in a significant loss of managerial skills and experience. The gap will continue to increase as the number of aging boomers outpaces the number of people entering the job market. <sup>1</sup>

**As a result, workflow and process automation technologies will become essential to business operations as businesses look for ways to improve productivity and automate repetitive tasks.**

Rules based decision tools and workflow technologies can produce significant improvements on the bottom line across the enterprise. The trick is to navigate past the hyperbole, so you can get to what the software application can actually deliver functionally and technologically. Keep the approach as simple as possible, and use the tools and resources provided here to help you assess the solution that enables you to best meet your business and technology objectives.

## Tools and Resources

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In this section you'll find templates to help you assess and evaluate the best solution for your organization. We acknowledge at Transparent Logic that are

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<sup>1</sup> [U.S. Bureau of Labor Statistics Labor Force Effects Study](#)

solution may not be the best fit for every organization. However, if you'd like to speak with a technical representative or have questions about workflow optimization, email our [Technical Support Team](#).

### Workflow Value Proposition Comparison Template

An example of a process you can use to assess your workflow solution options is provided in the *Workflow Benefits* section of this whitepaper.

Priority: 1-Nice to have 2-Important 3-Very Important										
Option Column -> Degree of Fit: 0-No Fit, 1-Partial Fit (May Require Customization), 2 -Good Fit										
#	Key Requirements	Priority	Expected Benefit	Option I	Score	Option II	Score	Option III	Score	Notes:
1					0		0		0	
2					0		0		0	
3					0		0		0	
4					0		0		0	
5					0		0		0	
6					0		0		0	
7					0		0		0	
8					0		0		0	
9					0		0		0	
10					0		0		0	
11					0		0		0	
12					0		0		0	
13					0		0		0	
14					0		0		0	
15					0		0		0	
16					0		0		0	
Total Value Score					0		0		0	



[Institute of Electrical and Electronic Engineers](#) The IEEE, a non-profit organization, is the world's leading professional association for the advancement of technology. The full name of the IEEE is the Institute of Electrical and Electronics Engineers, Inc., although the organization is referred to by the letters I-E-E-E and pronounced Eye-triple-E. The IEEE is a leading authority on areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics among others.

[Object Management Group](#) The Object Management Group (OMG) is an open membership, not-for-profit consortium that produces and maintains computer industry specifications for interoperable enterprise applications. Our membership includes virtually every large company in the computer industry, and hundreds of smaller ones.

[The Project Management Institute](#) The Project Management Institute represents a global community with more than 200,000 professionals, representing 125 countries. PMI professionals come from virtually every major industry including, aerospace, automotive, business management, construction, engineering, financial services, information technology, pharmaceuticals, healthcare, and telecommunications.

## **Books and Whitepapers**

*Business Process Management: Profiting From Process* by Roger Burlton

This book explores a complete framework for managing business, process, and human change. It offers insights about managing process projects effectively and efficiently in addition to methods to align technology, organization, and facility transformation.

*Practical Service Oriented Architecture* by Heath Oderman

This 3-page whitepaper provide a quick overview of practical service oriented architecture as well as the advantages of implementing SOA.

*The Project Manager's Desk Reference* by James P. Lewis

James Lewis is the leading authority in project management. This reference guide shows you how to develop project plans, conduct risk analysis and communicate effectively with all levels of your team.