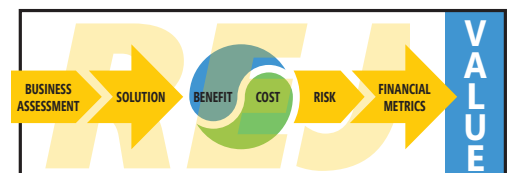


# Rapid Economic Justification

ENTERPRISE EDITION

*A Step-by-Step Guide to  
Optimizing IT Investments that Forge  
Alliances Between IT and Business*



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# REJ Project Team

Giuseppe Mascarella PUBLICATION DIRECTOR





# Welcome

Dear Partner and Customer,

Today our customers and partners want to fully understand the business value of their IT decisions. To respond to the business requirements, we are making significant investments in our customer and partner relationships. In addition to significant investments in our people and relationships, we are also investing in new tools and capabilities.

In 2004 we formally created Microsoft Business Value Center of Excellence. This center of excellence is designed to improve the business value capability of Microsoft as an enterprise supplier and partner. Today, we are very pleased to introduce Rapid Economic Justification (REJ) Enterprise Edition, a framework that is also offered as know-how transfer in the new [Microsoft Technology Strategy Services \(MTSS\)](#).

REJ Enterprise Edition is a comprehensive and open framework that allows organizations to make thorough decisions. Whether self led, or with the assistance of a partner, REJ ensures all of the appropriate decision criteria are being fairly considered and evaluated. Moreover, within this comprehensive framework our customers and partners achieve the true benefit of value; they align their business interests with technology strategy. We encourage you to access this tool and other offerings from our Business Value Center of Excellence.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Simon Witts'.

Simon Witts  
Corporate Vice President  
Enterprise and Partner Group  
Microsoft Corporation





# TABLE OF Contents

## **Section I: INTRODUCTION TO RAPID ECONOMIC JUSTIFICATION 1**

Why Do An Economic Justification?	3
Why Use the <i>Rapid</i> Economic Justification Framework?	4
What About Total Cost of Ownership?	5
Do People Buy Into REJ Results?	6
Trigger Events for Conducting Economic Justification Projects	7
Applying REJ to Valuing IT at Government Agencies	8





## **Section II: PLANNING REJ PROJECTS** **9**

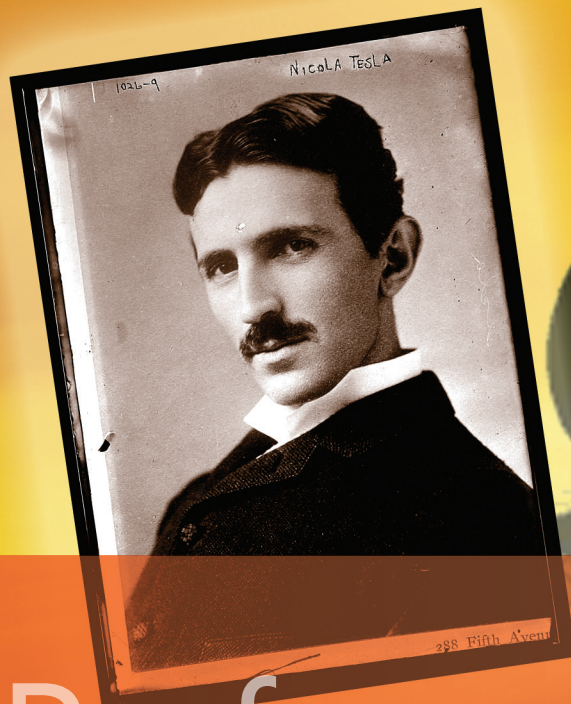
1. Assess How the Final Financial Decision Will be Made	10
2. Communicate with Each Potential Stakeholder	11
3. Identify Desired Structure of the Final Deliverable for all Stakeholders	12
4. Set Expectations for REJ Project Activities	13
5. Identify Required Resources	15
6. Plan an Effective REJ Kickoff Meeting	16

## **Section III: DEVELOP THE VALUE PROPOSITION WITH THE ECONOMIC JUSTIFICATION** **19**

Step 1: Assess Business Requirements	21
Step 2: Map Solution	47
Step 3: Estimate Benefits	65
Step 4: Estimate Costs	81
Step 5: Estimate Risks	93
Step 6: Build Financial Metrics and Value Proposition	99

## **Section IV: APPENDICES** **125**

Appendix A: Sample REJ Project Schedule	125
Appendix B: Peer Review Evaluation	131
Appendix C: Resources and For More Information	133



# Preface

*"Innovation is not what innovators do, it's what customers and clients adopt."*

—Michael Schrage, MIT, Marketing Matters

This guide is dedicated to Nikola Tesla, and the countless other brilliant and visionary people throughout the ages, who didn't have a tool as powerful as Rapid Economic Justification to forge a strong relationship between technology and business to achieve their goals.

Tesla, one of the most brilliant innovators of all time, had a vision for how new electrical technologies could perform faster and more efficiently. Unfortunately for him, and for society, his technologies remained unused for decades or were used for the wrong business reasons. Tesla died virtually unknown to society, and only many years after his death were his talents and scientific contribution acknowledged by his peers. One small testament to Tesla's innovative contribution to the field of science is the use of his name, Tesla, as the unit of measurement of magnetic fields.

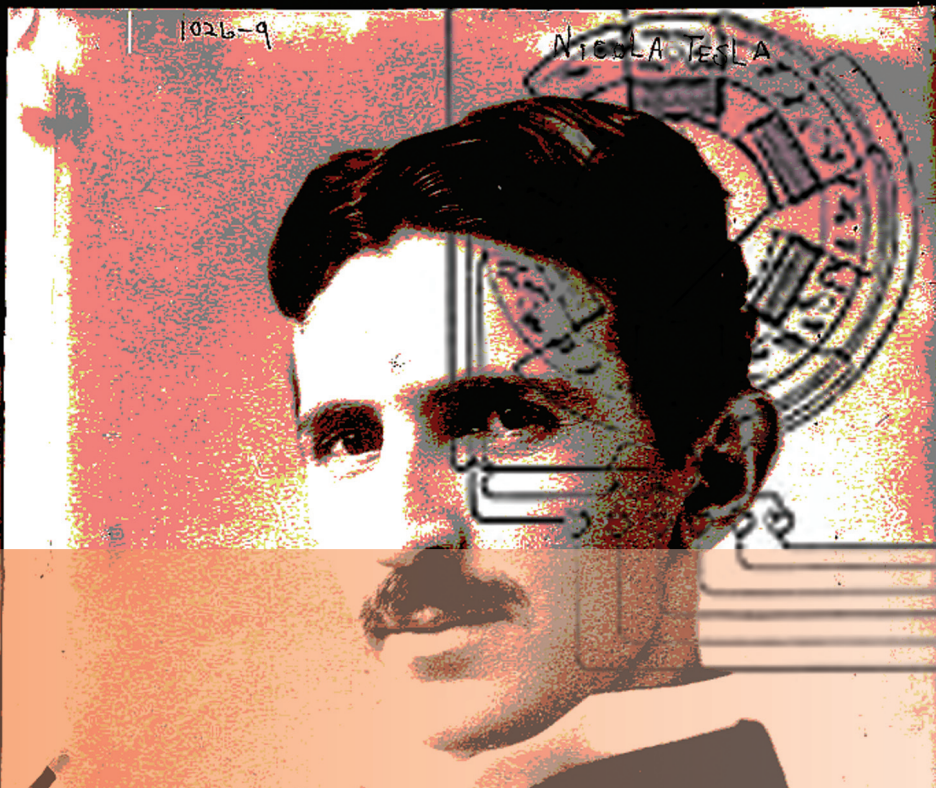
When in 1887 Tesla perfected the technology for the alternating current (AC) motor (previously electrical motors were based only on direct current (DC)), he was fascinated only with applying his genius to the technology and didn't realize that he might have helped the world more by balancing his passion for technology with an equal passion for its business application.

Had Tesla properly identified the correct business associates (stakeholders) who were aligned with his vision rather than the individuals he chose, who were interested only in short-term monetary gain, history might have turned out differently.

Had Tesla envisioned the business activities or processes in which his technology would have created the biggest impact in the long term rather than focusing only on technological innovation and selling his patent to the highest bidder, his name, rather than Thomas Edison's, would properly be associated with AC electricity. As a consequence of not thinking about the business or social applications of his innovations, Tesla's technology was not applied to electrical generators for many years and the world was deprived of lower-cost electrical energy production.

As a result of Tesla's lack of balancing his focus on both technology and business, he was a spectator to, rather than the acknowledged inventor of, the biggest step forward in





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electrical energy generation: George Westinghouse's introduction in 1895 of a version of the AC electrical engine in the hydroelectric station at Niagara Falls, which successfully transmitted electrical power over a distance of 25 miles to factories in Buffalo, NY. This event started a mini industrial revolution.

Rapid Economic Justification is a tool that helps technology visionaries focus on the business aspects of their vision, guiding them step-by-step through the work of identifying the right business stakeholders, the key measurements of business success (key performance indicators), and the alignment of business processes to be improved by the technology by mapping them to business critical success factors. The steps in the guide also help technology visionaries optimize their initiative for the maximum economic value by using the powerful and commonly used parameters of business such as return on investment, internal rate of return, and earning per share, to name just several tools of financial measurement.

Many may argue that technologists do not need to master the disciplines of business as well as science, yet history presents many examples of visionaries who have not done this and the world has not benefited as a result. Witness the difference between Tesla and Edison, or Galileo compared to Christopher Columbus, who received funding (rather than imprisonment) to send three ships on an expedition based on the same radical and innovative idea that the world was not flat. Columbus was successful in receiving funds not because he presented a scientific expedition to Queen Isabella of Spain, but because he aligned the value of his expedition with the most important goal of Queen Isabella: discovering faster trade routes so as to more easily gain gold and spices.

*"Nikola Tesla, the father of today's AC electrical system and other key inventions, often failed to bring his visionary ideas to real-world [business] fruition."*

—W. Bernard Carlson, *Scientific American*, March 2005

To ensure that your technology vision is applied, do what Columbus did: align your vision with the right stakeholders, the ones with equal vision and the means to accomplish them.

### Giuseppe Mascarella

Senior Strategist

Microsoft Business Value team



# How to Use THIS GUIDE

This guide is designed for the first-time user of the Microsoft® Rapid Economic Justification (REJ) process as well as the seasoned practitioner inside any organization. The first-time user will discover the beauty of having a proven, structured, left-to-right approach and concepts, while the seasoned practitioner will find new ways to get the job done faster or reach higher levels of efficiency.

Each section is designed to be as brief as possible so that you can apply the information quickly and easily. If you require more information on economic justification, go to the “Appendix C: Resources and for More Information.”

This guide has four main parts:

- **Section I: Introduction to REJ.** This section presents an overview of the economic justification process and the role of the REJ Framework. If you require more contextual information on REJ and the economic justification of IT investments, go to the Microsoft website <http://www.microsoft.com/value>. Partners can access additional information on REJ at <https://partner.microsoft.com/value>.
- **Section II: Planning REJ Projects.** This section helps you prepare for a successful economic justification project by using REJ, which helps you to identify the resources and time required before you start. You will find project management information tuned to the specifics of conducting an REJ project. If you require more specific information, please contact the Microsoft Business Value team ([rej@microsoft.com](mailto:rej@microsoft.com)) and we will help you locate an REJ practitioner or a local Microsoft office to provide additional guidance.
- **Section III: Develop the Value Proposition with the Economic Justification.** This section presents the six steps of the REJ process in an actionable format that enables an IT manager with a vision to assess the economic value of his or her IT initiative. These steps are procedural and provide step-by-step guidance to go through an entire economic justification process for an IT investment. Conventional financial analytics are used to calculate cash flows and returns on investment scenarios. This section is organized from an instructional design point of view, and it is organized hierarchically by step, activity, task, input, output, risk, and examples.
- **Section IV: Appendices.** This section provides more detailed information on specific aspects of conducting an economic justification with the REJ Framework.

This guide also applies structural and graphic conventions to make it easier for you to create the outputs (deliverables).

- **Outputs.** Completing each step in the REJ process results in specific outputs. Completing each activity in each step results in a specific part of the output for the parent step to be completed. Examples of completed outputs for each step are presented at the beginning of each step so you have a clear idea of the output that you will create. At the end of each activity, the example shows only the output for that activity, which is entered in red text into the final output for that step. The outputs for the remaining activities in that step are grayed out in the example. In this way, it is easy for you to know exactly where you are in the process of creating outputs.
- **Tables.** This guide contains many tables that are part of REJ outputs. You can use them as worksheets for your economic justification or simply as reference models for completing the step, activity, or task.
- **Icons.** Four icons are used as graphic conventions to alert you to specific points:



**Inputs.** Signifies specific requirements for completing an output.



**Outputs.** Signifies a specific deliverable that results from the completion of a step or activity.



**Tips.** Signifies a helpful hint that enables you to complete an activity or a task more easily.

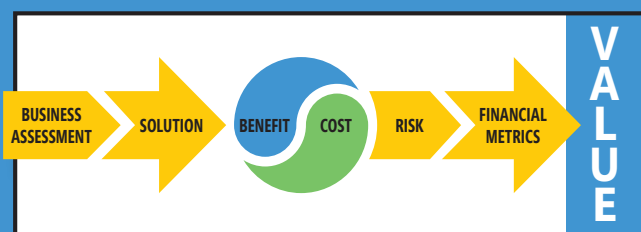


**Risks.** Signifies something to be concerned about, avoided, or mitigated as part of completing a step, activity, task, or output.

Users of this guide are encouraged to send suggestions and comments to the Microsoft Business Value team so that we can improve the next edition. Send your comments and suggestions to [rej@microsoft.com](mailto:rej@microsoft.com).







# Section I: INTRODUCTION TO RAPID ECONOMIC JUSTIFICATION

In an ongoing quest to understand why some organizations derive greater financial value from using the same information technologies than others, Microsoft has analyzed numerous customer organizations and identified key best practices for more effective IT decision making.

Among various best practices, Microsoft has identified common characteristics among organizations that have successfully implemented IT initiatives. These characteristics include: a shared vision of the valuable opportunities that exist across IT and business units; good business planning for every initiative; and the effective communication of a good Economic Justification.

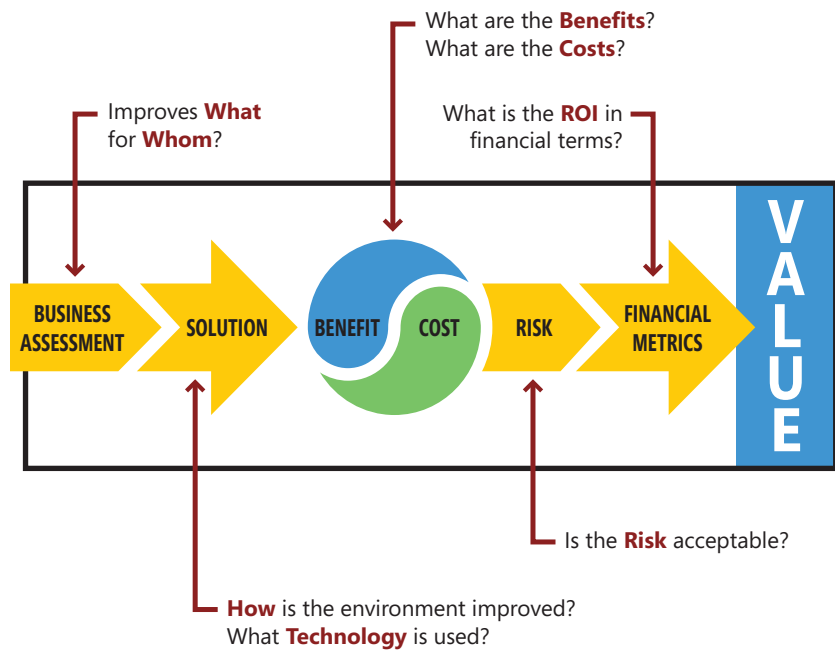


The Microsoft Rapid Economic Justification (REJ) Framework defines the value of an IT initiative as a business performance improvement that is aligned with the organization's critical success factors (CSFs), and that enables the organization to make optimal use of its resources within the context of acceptable risks.

A key catalyst for the effective application of these best practices is the efficient creation of an economic justification and a value proposition for the IT project. An easily implemented best practice is to view the value proposition not simply as a static document but as a dynamic mission-critical tool used for the improvement of business and IT governance within the organization.

As Robert McDowell states in his book *In Search of Business Value*, "Technology provides no benefits of its own; it is the application of technology to business opportunities that produces ROI."

This REJ Step-by-Step Guide provides IT managers, project managers, and IT consultants with the guidance, background information, and step-by-step instructions needed to economically justify specific IT investments. Figure 1.1 presents the logical flow of developing a value proposition using the REJ Framework.



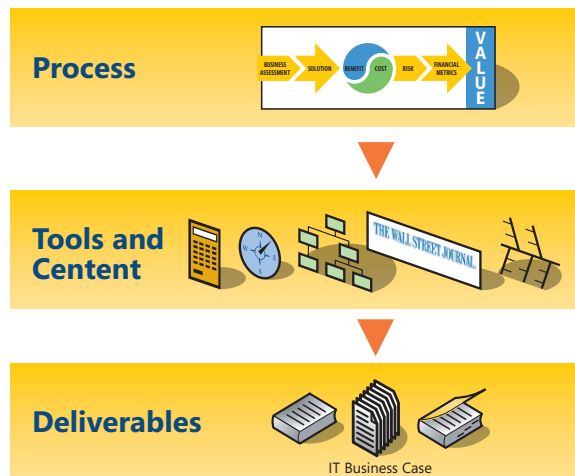
**Figure 1.1: The Rapid Economic Justification process for evaluating information technology**

The guide takes users through the entire process of identifying relevant business-critical success factors, discovering opportunities for improving business activities and processes, and estimating the benefits and costs that your organization would incur by implementing the target technology. The guide concludes by explaining how to create a cash flow analysis of the proposed solution and how to best prepare and present a value proposition to executive management so that your IT initiative can be funded.

The processes for economic analysis presented in this guide use generally accepted business school methods to evaluate the projected financial performance of proposed IT investments.

REJ is a framework and provides:

- **Process:** Step-By-Step Approach as described in Section 3.
- **Tools and Content:** REJ Workbook in Excel, ROI and TCO calculators; data, research papers, reusable evidence, documented patterns, etc.
- **Deliverables:** Templates, courseware, videos.

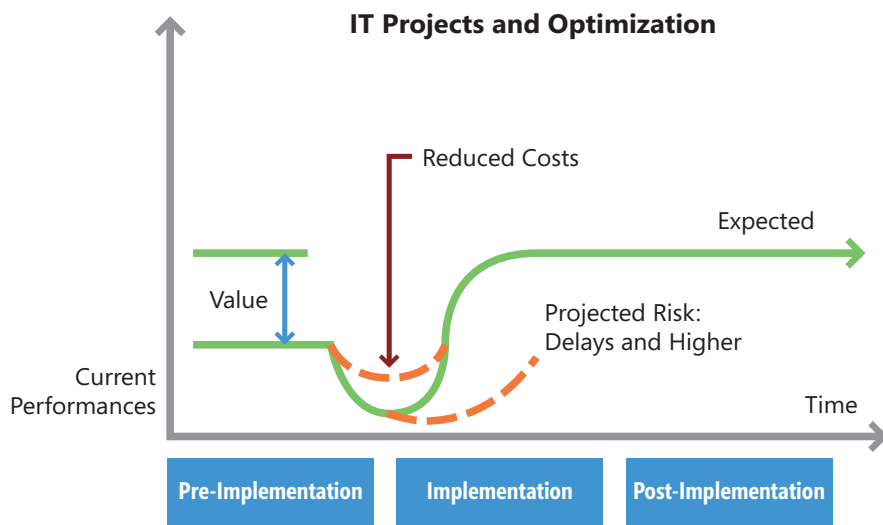


**Figure 1.2: REJ Framework**

# Why Do AN ECONOMIC JUSTIFICATION?

The concepts behind economic justification are not new. Most large-scale projects or capital investments require some form of economic impact analysis. Economic justification provides the answer to questions that executive managers need to know before they approve an investment, questions such as:

- How much will it cost to reach those benefits?
- Has anybody optimized this project from a ROI point of view?
- How soon will the business sponsor see the effect on the business activities and processes?
- How does this investment compare to other ways we can use our capital?



**Figure 1.3: Optimization of the enterprise by using information technology**

REJ is a proven management framework that helps IT managers identify targeted business benefits that justify the use of resources and the risks during change.

REJ goes beyond building bridges between IT managers and business executives: the REJ process enables “fusion,” a plan for IT managers to keep business critical success factors and key performance indicators (KPIs) in mind by using the common language of economics to demonstrate how IT investments can benefit a business.

REJ is not only about finding an economic ratio such as return on investment (ROI), although this is one result of completing the REJ process. The value optimization effort helps forge a bond between IT managers and line of business (LOB) managers. When well executed, an REJ project ensures that both business and IT stakeholders are committed and ready to capitalize on opportunities to produce final results.

The outcomes of an REJ project lead to successful change management and provide a higher probability of achieving tangible business benefits to an organization. Very often, the final ROI, or other metrics such as earnings per share (EPS) or internal rate of return (IRR) ratio, is just a formality. The really valuable output is the organizational capacity to be synchronized in achieving the measurable goals agreed to in the economic justification and the accountability of the stakeholders for the initiative.



# Why Use THE *RAPID* ECONOMIC JUSTIFICATION FRAMEWORK?

REJ emphasizes the word *rapid* for good reason. Either you conduct your analysis rapidly, or you will not produce a good intuitive optimization. First, business conditions change rapidly, and you might end up re-doing the work several times without being able to communicate the results. Second, information contributors (stakeholders) generally have a short attention span for something in which they don't see value. Beyond that brief period, they are unlikely to provide quality data or support.

So, in a world of constant change, how can you, as an IT manager, predict the value of an IT initiative? The most direct answer is that you can't.

The conventional methods of measuring IT value by assessing what is clearly measurable—costs—and expecting that automatic cost saving or cost avoidance will pay for the IT investment does not address the true value that IT provides the enterprise. In fact, the very obvious omissions of value in most IT value propositions are not being able to communicate the business value of the proposed IT solution and not obtaining business manager support until it is too late.

Often, the problem of inadequate communication is based largely on the fact that IT managers don't have an effective way to obtain the data needed to assess the benefits of a specific IT initiative. Since the introduction of REJ in 1997, some executive management teams have taken the principles of REJ and established a required procedure for building initiative proposals that can be evaluated by their investment committee. In this way, executives are able to compare, in an apples-to-apples comparison, the economic benefits of the IT initiative with the economic benefits offered by any other capital investment for the enterprise.

More than 2,000 REJ projects have been conducted with leading organizations around the world since 1997. Organizations that have benefited from REJ projects include Avaya (Japan), Banco BBA (Brazil), CIGNA (USA), Cytek (USA), Siam Commercial Bank (Thailand), Entex Information Systems (USA), Enterasys (USA), Guardia di Finanza (Italy), Home Shopping Network (USA), Interland (USA), Lockheed (USA), Marks and Spencer (U.K.), Otsuka (Japan), Panasonic (USA), RAI Television (Italy), Rhone Poulenc Rohr, Aventis, (USA), Siemens (Germany), Dollar Rent-A-Car (USA), Aegis (USA), and many others.

The greatest challenge of an REJ project is this: how accurate does an IT manager need to be to make a credible value proposition? As it turns out, pretty close is usually good enough.

For example, take the scenario of the stalking horse. On the U.S. western frontier in the late 1800s, ranchers were challenged to know the precise number of horses on their rangeland at any given time so they could recover any escaped or stolen horse. Every time they counted a group of horses, some horses had already moved to the next group before they finished counting. As a result, they were never sure if they were double-counting horses that had migrated to their new position. Rather than trying to get a 100-percent accurate number by counting the horses one by one, they estimated the number by making an accurate count of horses in a representative part of their rangeland and then multiplying by the number of times that area would fit into their entire rangeland. This estimated the headcount of all their horses on all of their land. Although they were not 100 percent accurate because the conditions kept changing, they were more accurate than if they tried

to count each horse one by one .

This same example applies to assessing the value of IT investments, where the changeability of market conditions, competition, technology, cost of capital, re-organization, people availability, and more all factor into the eventual economic benefits of an IT solution. Rather than taking several months to do an economic justification that is hoped to be 100 percent accurate, the REJ process enables IT managers to make a good enough analysis over a two to four week period and provide a credible estimate for effective decision making.

Two to four weeks is an estimated time to conduct an REJ study, depending upon the complexity of the initiative, access to information from the stakeholder, and the maturity of the organization. This “stake in the ground” economic analysis is usually more than sufficient to estimate the projected value of the IT initiative and to enable it to be compared with competing proposals for capital. It might not be a bad situation if what you are promising in two to four weeks is not “good enough” and the executives are asking for

more, since you have succeeded to transition from a push to a pull attitude.

## What About TOTAL COST OF OWNERSHIP?

As noted previously, many IT managers evaluate IT investments only on the basis of IT cost savings. While this approach is valid when the CSFs of the organization are focused on cutting costs, its usage over time might push the organization to focus on the impact of one isolated performance indicator—the total cost of ownership—and not on the overall value created by the innovative use of information technologies for the business. As a consequence, the strategic role of how investments in new IT initiatives can drive new business opportunities for the organization is neither acknowledged nor measured. Following this logic, mobile computing and remote access to e-mail should not be considered because it increases the total cost of ownership (TCO) per PC! Or, as Chip Gliedman of the Giga Information Group (now Forrester) often said, “if TCO is what you measure, use the pencil not the PC, because the pencil has a lower TCO.”

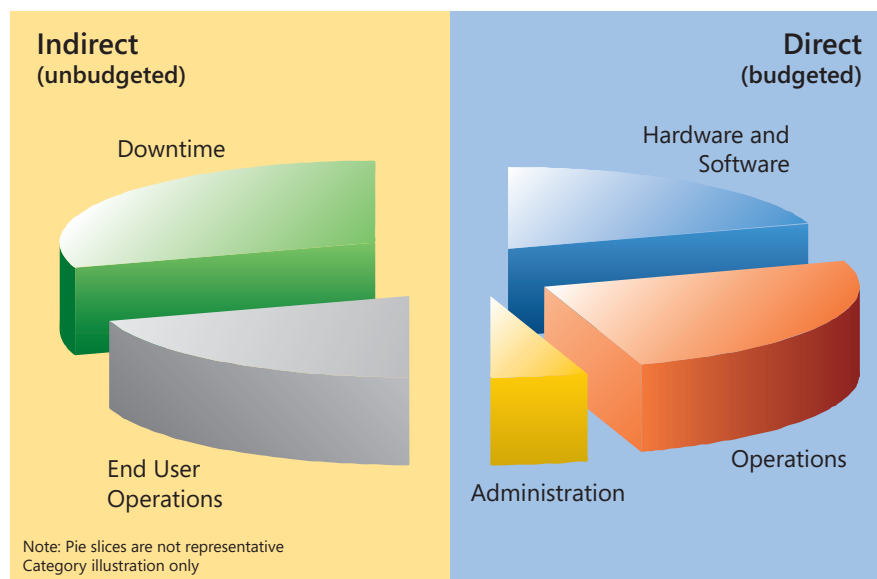


Figure 1.4: Gartner's TCO Chart of Accounts

One key problem with the TCO scenario is an apparent lack of communication between business and technology leadership when it comes to making strategic organizational decisions that include the application of new information technologies—and the distinct business benefits that can result.

Without the ability to see how and where IT can provide value to an organization, it is impossible to measure that value in concrete quantifiable terms. And, equally as important, without a financial guidepost to define value from increased business flexibility, it becomes difficult to develop a meaningful value proposition for investing in any IT initiative.

REJ considers TCO and its best practices as an important KPI indicator and as a component of the opportunity to create value if the organization's CSFs are to reduce costs. However, REJ also suggests that IT managers be cautious when using TCO without understanding the limits of its structure and outputs.

At the same time, REJ extends credit to TCO (as defined by Bill Kirwin from Gartner in the mid-nineties) as a step in the right direction, which helped investment stakeholders start considering the negative implications to business end users (in the form of self-support, self learning, and so on) when the IT investments were not optimized for value. Before the use of TCO calculations, this connection was often neglected in IT considerations.

The REJ Framework encourages IT managers to look beyond the end user factor of TCO: since there is more to TCO than just cost metrics oriented to the end user. As more IT

managers build their value propositions on the steps of TCO's tie to business, they see the need for an economic justification team, whose purpose is to reduce the TCO chart of accounts to considerations that focus only on IT costs and eliminate end user costs. The Estimate Costs section of this guide (Section III, Step 4) goes into further details.

## Do People BUY INTO REJ RESULTS?

REJ is not just about calculating a specific ROI metric. REJ is more about using a managerial framework to establish targeted business objectives in which organizations are interested.

Very often, when the size of the investment is significant and impacts the organization, you need to be as precise as you can in estimating costs, as well as estimating benefits and the investment's impact on KPIs and risks. Since estimating costs is easy and estimating future benefits scenarios is very hard, valuable IT initiatives are often not pursued due to the lack of definition of the value of the future scenario. Too many misfires of this nature could make the organization fail to see many market opportunities.

Herein lays a vexing paradox, first put forth by Robert S. Kaplan<sup>1</sup> in the Harvard Business Review: "Do you prefer to be precisely wrong or vaguely right?"

Kaplan insists, "Although intangible benefits may be difficult to quantify, there is no reason to value them at zero in a capital expenditure analysis. Zero is after all, no less arbitrary than any other number. Conservative accountants who assign zero values to many intangible benefits prefer being precisely wrong to being vaguely right."

It is universally acknowledged that IT improves business performances. However, it is often difficult to precisely define this value using conventional financial analysis tools. Though challenging, IT managers should not be as concerned with achieving a specific answer with near 100 percent reliability. Rather, it is more efficient to estimate an approximate value that provides a close-to-correct assessment, which in turn provides a guideline that the organization can use to reach the target value presented in the value proposition.

If you do not make any attempt at a quantification of benefits, by default you are assigned

productivity.



a zero economic value to the benefit. By providing a value only for cost, however, you are short-changing your organization of inestimable present value as well as future opportunity.

## Trigger Events FOR CONDUCTING ECONOMIC JUSTIFICATION PROJECTS

REJ is a project-centered framework designed to maximize the potential value of a vision for using a technology to produce clear business results.

Several events that are possible trigger points for conducting REJs include:

- **Fiscal year planning.** When you are requested to submit a proposal in the fiscal year initiative portfolio on how to best leverage for business results the competencies and technologies you are managing within your organization.
- **Technology in action.** As a manager with IT competency you have to keep yourself open to recognizing innovation. At a certain point you may have read about or seen a demonstration of a particular technology and want to be sure that your organization doesn't miss the opportunity to use this technology to create economic value.
- **Synchronization with line of business activities.** A line of business executive is highlighting a business performance problem, and you believe that there are specific technologies within your area or responsibility and competency that can address and resolve the issues.
- **Lack of executive sponsorship.** The decision to introduce certain technologies has been made, but the implementation is not done because other projects have higher priority.
- **Competing for best use of scarce resources.** The decision to implement a technology has been made, but the CFO or controller is questioning the economic effectiveness of using funds for the proposed project rather than other projects with a demonstrably closer relationship to business results.
- **Transparency for relevance in portfolio.** The CFO receives hundreds of requests for extra budgetary funds for obscure new IT initiatives and does not have a way to compare and relate them to the appropriate use of organizational resources.
- **Relationship with business units.** Funds spent on IT projects in your organization have been labeled "absorbed by the black hole of IT with no measurable business results." You suffer the fact that one of the reasons for this experience has been the lack of collaboration. You want to forge a stronger relationship between IT and business units by explaining your IT initiative in the language of the business decision-makers that you will need to believe in and support the change after the

proposed technology has been implemented.

This is a very short list of possible trigger events; no doubt you have experienced others.

## Applying REJ TO VALUING IT AT GOVERNMENT AGENCIES

Some IT managers might think that REJ can only be applied within organizations that are profit focused so that financially driven bottom-line decision making is improved. A case in point is justifying IT investments for government agencies.

Project performance indicator indices, such as ROI, are also critically important to government entities for the same reasons they are with profit-oriented organizations: the competition for relatively scarce funding within the organization.

With continuous budget cuts in virtually every government agency, IT initiatives are starting to compete against other proposals for capital allocation. As a consequence, agency controllers need a transparent way, and an index, to publicly explain how agency funds are apportioned. Without the ability to demonstrate tangible economic value for a proposed IT project, the IT manager is put in the uncomfortable position of making a value proposition based solely on the features and benefits of the proposed technology. In a public environment where the expenditure of public funds is under increased scrutiny, it is incumbent on both the IT manager and the agency director to use measurable indices to help measure success.

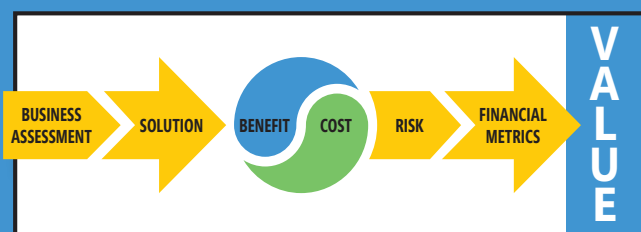
Politically appointed stakeholders also might want to show leadership in creating value for the community of electors.

Some IT managers may challenge that, even if an REJ is useful in the context of a government agency, the process for completing the REJ will be too difficult since government agencies are not driven by clear CSFs and KPIs. In actuality, the CSFs for government agencies are very clear, since they are directly related to laws, regulatory compliance, and rules of governance.

For example, during an REJ study for Microsoft Windows® Server™ 2003 that was used for secure identify and asset management at the Italian financial police, Guardia di Finanza, the REJ project coordinator asked, “what does success look like considering the Italian Prime Minister is a stakeholder?” Paolo Valle, the Chief Information Officer, replied, “we have a formal public directive that requires all the Italian law enforcement agencies to increase the perception of citizen safety by showing more presence in the street to discourage and prevent crime.” This is a very clear CSF, driven from the highest levels of government. Francesco Bosticco, the IT Architect, added, “how can we reduce, by even 20 percent, the time that a policeman has to spend in the office typing reports, doing paper-based research?” This is a clear example of a KPI driven by the CSF. In this example, the results of the REJ demonstrated very clear economic value, and the solution was implemented.<sup>2</sup>

You only have to review press coverage, or any event that influences public opinion for a government agency, to identify CSFs that are relevant to the related stakeholders. Even if the success metric is oriented toward positive public opinion on the expenditure of public funds rather than a bottom-line focus, agency managers must manage toward completing measurable goals and objectives. One of the goals for IT is to clearly demonstrate the effective use of public funds by reducing IT operational costs and/or increasing user

If you are an IT manager in a government agency that is interested in conducting an REJ



## Section II: PLANNING REJ PROJECTS

REJ ensures that a project delivers maximum value by paying attention to all activities related to:

- Forging a strong alliance between IT and business units.
- Identifying measurable, shared organizational objectives.
- Optimizing the initiative from financial ratios such as ROI, payback, earning per share, etc.

To reach these desired outputs, you should consider the REJ project as a project in itself and start with the end in mind. When you meet with stakeholders, don't limit your thinking to the tactical goal of collecting information. You need to think about their style and how they would like to see the information presented. For example, are they analytical, detail-oriented, or big picture people?

### REJ Project Initialization

This section helps you prepare for a successful REJ project by helping you to identify necessary resources and time requirements before you start. You will find project management information that is tuned to the specifics of conducting an REJ project. If you require more specific information, please contact a Microsoft Business Value team to locate an REJ practitioner or a local Microsoft office, and they will provide additional guidance. For more information, go to “Resources and For More Information” later in this guide.

Planning an REJ project includes the following work:

1. Assess how the final financial decision will be made.
2. Communicate with each potential stakeholder.
3. Identify the desired structure of the final deliverable for all stakeholders.
4. Set expectations for REJ project activities.
5. Identify required resources.
6. Plan an effective REJ kickoff meeting.



Remember that this is a rapid economic justification project. You need to deliver the level of detail sufficient to get resource allocation. That might include funding for functional specifications, process analysis, technical specifications, and project management. All these activities need to be funded.

# 1. ASSESS HOW THE FINAL FINANCIAL DECISION WILL BE MADE

Stay focused on the decision you care about—funding the initiative. Preparing an economic justification for all possible uses is not effective and can actually backfire. To understand how decisions about similar projects are made, consider the following scenarios:

- **Scenario 1:** The organization has a formal governance system and rhythm of business. Don't take shortcuts; follow procedures, and use the REJ Framework to collect information and fill in the required data. Most of the templates provided by the Excel-based worksheets in the REJ workbook are very similar. In this scenario, consider these steps:
  - Identify the members of the Opportunity Review Board and consider them stakeholders.
  - Identify the required proposal template and use it.
  - Obtain prioritization guidelines and organize the REJ project to meet them.

- **Scenario 2:** The CFO and the controller approve capital appropriations for initiative proposals.

Most often, this is the case for organizations that develop a budget in increments or decrements from the year before. These organizations can afford to use generic lists of projects in each segment of their investment portfolios. In general, these organizations don't have lots of rules; the leadership of the executive presenting the proposal compensates for any lack of quality in the economic justification. These leaders can make an economic justification in a few minutes because they know all the numbers necessary to build a compelling value proposition. In this scenario, leveraging all the REJ best practices is key to impressing the executive stakeholder and CFO. In this situation, it is wise to:

- Identify the owner of the budget category that could finance your project and consider the owner a key stakeholder. If you succeed in having more than one budget owner sharing project costs and commitments, this is even better.
  - Try to understand the principles that define the budget category and how much funding is left for the current fiscal year. Use this information to optimize the project from a financial point of view later on.
  - Find two or three previous successful value propositions to help you understand what works in your organization.
- **Scenario 3:** Proposals are accepted only each fiscal year or at mid-year reviews. The best moment to use an REJ is generally during fiscal year planning periods. In this scenario, you might want to wait for fiscal year planning periods before obtaining the best data and support from stakeholders. Another strategy is to prepare the work for mid-year review periods. If your initiative doesn't make it, you can always resubmit it later on. In either case, make sure that you plan the REJ for final delivery before the planning sessions and avoid arriving at the funding meeting with only a draft. Remember, you might have only one chance.

# 2. COMMUNICATE WITH EACH POTENTIAL STAKEHOLDER

Good communication is about what listeners appreciate, not about what is being said. Assess which potential stakeholders will be part of the decision making process and how to use good communication to enable them to make the best decisions. Try to understand their leadership style. Are potential stakeholders creative (do they think in terms of big concepts?), analytical (“Show me the numbers!”), control-oriented (“How are you going to get things done?”), or supportive (“How many managers support the initiative, and who is against it?”).

REJ best practices recommend filling in a blank Communication Table, such as the one provided in Figure 2.1.

Potential Stakeholder	Title	Role	Concerns or Help Expected	Style (Analytical, Big Ideas, Supportive)	Frequency of Communication	Communication Methods	Notes

Figure 2.1: REJ Communication Table

### 3. IDENTIFY THE DESIRED STRUCTURE OF THE FINAL DELIVERABLE FOR ALL STAKEHOLDERS

In addition to establishing good communication with each potential stakeholder, you must have a final deliverable. After collecting all the information gathered in Tasks 1 and 2, use the following checklist to confirm that the final deliverables you present to stakeholders and decision makers are complete.

Final deliverables will include the following content:

#### Financial Data

- ☐ Net present value (NPV)
- ☐ Internal rate of return (IRR)
- ☐ Return on investment (ROI)
- ☐ Economic value add (EVA)
- ☐ Payback period
- ☐ Organization-specific \_\_\_\_\_
- ☐ Organization-specific \_\_\_\_\_
- ☐ Organization-specific \_\_\_\_\_

#### Qualitative Data

- ☐ Process Analysis
- ☐ Industry benchmarks
- ☐ Interviews
- ☐ Testimonials

#### Validation

- ☐ Independent audit (Yes / No) \_\_\_\_\_
- ☐ Approved by \_\_\_\_\_
- ☐ Partners \_\_\_\_\_
- ☐ Consultants \_\_\_\_\_

#### Final deliverables will be in the form of:

- ☐ Written report (Microsoft Word template)
- ☐ PowerPoint® presentation (PowerPoint template)
- ☐ Report presented directly to the decision maker
- ☐ File in organization standard template



## Components of an REJ Value proposition

The goal of an REJ project is to develop a concise argument for investing in a particular IT initiative. This argument is commonly referred to as a value proposition. The value proposition provides an overview of the business problem that is being addressed, the proposed IT solution described in business language (not technical jargon), and an estimate of the initiative's benefits and costs.

Each REJ value proposition focuses on the benefits as opposed to the costs. Because the benefits cannot always be known or may be difficult to estimate, the REJ process provides techniques for managing uncertainty. These methods include risk assessment and techniques for quantifying difficult-to-measure benefits.

Component	Description
Executive Summary	Value proposition, financial ratio summary, and part of Business Assessment Roadmap
Presentation	A 6-to 8-slide Microsoft PowerPoint presentation
Gap Analysis	Business Assessment Roadmap and fishbone chart
Proposed Solution	Opportunity Table, demo screen shot, and solution description (such as process flows, screens, and demonstrations)
Benefits Analysis	Benefits Matrix
Cash Flow Projection	Table: cash flow spreadsheet
Risk Assessment	Line items in cash flows
Financials	Line items and charts (such as a payback analysis)
Decision Point	Text: 1 slide
<b>Appendices:</b>	
Methodology	1-page REJ banner with notes
Stakeholder Analysis	1-or-2 page alignment table
Process Analysis	Quotes
Benefit Estimates	Diagrams as required
Cost Analysis	Assumptions and calculation techniques
Risk Assessment	Value statements as required
Payback calculations	Spreadsheet: 1-page detailed cost
	Spreadsheet: 1-page assumptions and calculations
	Spreadsheet: 1-page calculations and source data

Figure 2.2: Components of a typical REJ value proposition

## 4. SET EXPECTATIONS FOR REJ PROJECT ACTIVITIES

Set expectations about when you expect something and when you will provide deliverables. The duration of an average REJ is two to four weeks, but the duration depends heavily on:

- Access to stakeholders (“power”)—how easy is it to schedule interviews with them?
- Availability of data and whether the organization’s culture is orientated toward measuring results.
- Your communication and leadership skills.
- The link between your initiative and business results. Justifying a line of business application is easier than justifying pure infrastructure.

The first time you do an REJ project, you might want to leverage external trained consultants from either Microsoft Consulting Services or a Microsoft Solution Provider. To find some pointers, refer to the appendices in this guide or contact Microsoft at the e-mail addresses provided in “Resources or For More Information” later in this guide.

Appendix B, “Typical REJ Project Schedule,” provides a sample REJ project schedule, which you can copy from the Excel-based interactive REJ worksheet or download from the Microsoft corporate website listed in “Resources or For More Information.”

As you see, the REJ process consists of actionable steps, which are defined in Section III of this guide. Each REJ project uses a multi-step process, which begins with project planning activities that define the scope, participants, and resources used in the REJ process. The remainder of an REJ project consists of steps that build the REJ value proposition. These steps include:

- **Step 1: Assess Business Requirements.** Identifying stakeholders, critical success factors, key performance indicators, and opportunities for business process improvements.
- **Step 2: Map Solution.** Proposing a solution by mapping the capabilities of a solution’s IT components to critical success factors and key performance indicators.
- **Step 3: Estimate Benefits.** Estimating the economic value of projected benefits of the proposed IT investment.
- **Step 4: Estimate Costs.** Estimating the economic value of costs incurred by implementing a solution aligned to specific business goals.
- **Step 5: Assess Risk.** Identifying the types and dollar values of risks and mitigation opportunities assigned to the IT initiative.
- **Step 6: Build Financial Metrics and Present the Value Proposition.** Preparing a cash flow analysis, writing the value proposition, and delivering the value proposition to your customer.

Consider these final points before you begin building an REJ value proposition:

- **Linear and iterative process.** Although the REJ process is linear, it is also iterative. After you complete one step and move on to the next step and its activities, you will probably uncover new information that is relevant to what was accomplished in the previous step or two. This situation requires you to go back to the relevant step or activity and refresh the output with new information. Although this might seem to be an obstacle to conducting a *rapid* economic justification, it is important that you do this because the value of the REJ lies in the cumulative value of each step, which builds upon previous steps. As you progress in the cash flow analysis, for example, you might find that you have to go back to earlier steps because your assumptions or assertions have not been accurate.
- **Effective project management.** Using the REJ Project Schedule, provided in Appendix A, as your project management framework will enable you to track your activities and outputs more effectively and keep your REJ study within its allotted timeframe. You can modify the REJ Project Schedule in the REJ workbook by going to the Project worksheet and making the changes that are appropriate to your circumstances.
- **Tools and resources.** The Microsoft REJ team routinely updates tools and calculators that can be useful to REJ practitioners. You can produce the output for each step by using one of the most important tools at your disposal, the Microsoft Excel-based REJ workbook. This resource contains all of the most important templates used in this guide.

## 5. IDENTIFY REQUIRED RESOURCES

During an REJ project you need to collaborate with several people, and this is good. Sometimes you must have access to a certain person for the skill and information he or she provides to the project. In this task, you will identify the skills and roles of potential REJ team members. You might need to include all standard REJ team roles or just a few of them, depending on how much you want to “socialize” the proposal before the final result is ready. This is a Catch-22 because, if you don’t expose the ideas to several experts, you might not find enough benefits and supporters. If you expose the proposal without enough data, you might lose the opportunity for an executive to become a supporter later on. The solution to this dilemma is explaining the REJ process and setting correct expectations according to the REJ process. Very often, discussing the REJ process itself is an opportunity to engage an executive, who might be initially skeptical about any change.

The REJ team usually includes the roles that are presented in the following table, but not every project calls for all of these roles or for individuals dedicated to them. Figure 2.3 describes the typical roles that individuals can play in an REJ project.

Role	Description	Responsibilities	Average Time Commitment
Project Manager	Responsible for overall project management and assembly of the value proposition. May be an employee or a consultant.	<ul style="list-style-type: none"> <li>■ Manages project</li> <li>■ Provides quality assurance of deliverables</li> </ul>	<ul style="list-style-type: none"> <li>■ 14 days</li> </ul>
Key Stakeholder (also referred to as the Executive Sponsor)	The business sponsor ensures that the REJ meets the specific needs of the organization that sponsors the study. The business sponsor is a customer employee, who is often the individual responsible for presenting the value proposition to senior managers.	<ul style="list-style-type: none"> <li>■ Ensures team has access to appropriate resources and data</li> <li>■ Endorses commitments to target benefits</li> <li>■ Could present value proposition to CFO</li> </ul>	<ul style="list-style-type: none"> <li>■ 1 day</li> <li>■ Plus 4 hours for each stakeholder</li> </ul>
Financial analyst (typically the controller of the customer organization)	Conducts the financial analysis required to identify key performance indicators and the cash flow projections. The financial analyst has a background in business finance, often an MBA or the equivalent.	<ul style="list-style-type: none"> <li>■ Provides data such as balance scorecards</li> <li>■ Collaborates in assembling cash flow projections</li> <li>■ Provides credibility to results</li> </ul>	<ul style="list-style-type: none"> <li>■ 2.5 days</li> </ul>
Process Subject Matter Expert (SME)	Reviews the current activities of the organization by using a variety of process modeling techniques. Generally has a background in systems engineering or process modeling.	<ul style="list-style-type: none"> <li>■ Analyzes critical activities</li> <li>■ Provides suggestions for improving activities</li> </ul>	<ul style="list-style-type: none"> <li>■ 2 days</li> </ul>
Information Architect	Reviews output of process models to determine the most appropriate solution to improve business activities. Generally has a background in enterprise architecture planning.	<ul style="list-style-type: none"> <li>■ Develops high-level IT solution</li> <li>■ Defines value of solution in business terms</li> </ul>	<ul style="list-style-type: none"> <li>■ 2 days</li> </ul>
Auditing authority (optional)	Controls accuracy of calculation, verifies integrity of assumptions, and verifies that final results are in line with industry trends.	<ul style="list-style-type: none"> <li>■ Eliminates errors and increase quality</li> </ul>	<ul style="list-style-type: none"> <li>■ 2 days</li> </ul>

Figure 2.3: REJ Roles and Responsibilities model

Keep in mind that these are roles, not job titles or individuals. Depending on the abilities and experience of the people performing them, roles can be combined. In some cases, a role can be eliminated. For example, your organization might have detailed process models for all business critical activities. This situation eliminates the need for a process architect. The point is, the responsibilities and activities that are represented usually need to be accomplished, but they might not be needed in your particular situation. Choose the REJ team based on the specific parameters of your organization and the specific needs of the economic justification you are conducting.

## 6. PLAN AN EFFECTIVE REJ KICKOFF MEETING

Niccoló Machiavelli remarked that when somebody is about to propose a change he (or she) has support from neither the people who enjoy the benefits (power) of the current situation, nor from the people that might benefit from the change, but they still don't see the benefit. This might explain why most economic justification projects die during kickoff meetings. Good planning for the kickoff is the key to success.

**Planning a Kickoff Meeting.** To prepare for an effective REJ kickoff meeting, complete the following activities:

- Plan to invite all of the executives identified in Tasks 1 through 4. If you succeed in getting all of them to attend, you can accomplish 50 percent of the value proposition in a single meeting.
- Prepare a memo that highlights open questions rather than answers. Have the memo sent by the highest-ranking person in the REJ Communication Table (Figure 2.1). In the memo, outline the objective, agenda, role of participants, and the desired outcome of the meeting. If you feel that there is a lack of interest, you might invite an appropriate guest to generate curiosity, and provide an endorsement from an authoritative subject matter expert.
- Have a pre-kickoff meeting with the person who sends the kickoff meeting invitation. Agree on the meeting's target outcome, such as whether the team agrees on allocating time, structure of the economic justification, limits of the vision and scope of the initiative, milestones, and the need for auditing and external resources.
- If this is your first REJ project, find a coach.
- Create kickoff meeting handouts.
- After the meeting, send a meeting recap reminding attendees of stated commitments and milestones.

**Holding a Kickoff Meeting.** The goal of the kickoff meeting is to ensure that everyone involved in the project understands and is able to commit time and attention to the project. Time required for the kickoff meeting will vary. Generally, you should schedule about 4 hours for the general session, in which you review the vision, scope, roles, responsibilities, and the project schedule. Additional time may be required to complete this activity. REJ project plans allow up to one day for the kickoff meeting. You might also need to conduct a one-day overview of the REJ process.

The program manager is responsible for running the kickoff meeting and ensuring that all of its objectives are met. The typical kickoff meeting will include the following activities:

- **Review the project vision.** Ensure that all members of the team are clear about the project objectives and vision. This task can end with a vision statement or objective statement for example:

*The objective of this project is to evaluate the business value associated with deploying Windows Server 2003 at all business units of the Acme Corporation.*

The more specific the vision statement the better, because it leads to a clearer definition of the scope of work to be performed and the scope of the solutions to be evaluated.

- **Review the scope of work and scope of solution.** Identify ways to limit the scope of the project but still provide significant value to your customers. Include a statement of the scope of the solution to be identified. For example:

*We will investigate two options for the Windows Server 2003 deployment. Option 1 is a phased rollout. Option 2 is an immediate full rollout.*

*The costs to be identified will be limited to X, Y, and Z. The benefits to be evaluated will be limited to those associated with functional areas A, B, and C.*

Finally, it is important to agree on how the evaluation will be measured. REJ projects use an open framework that can accommodate net present value (NPV), internal rate of return (IRR), return on investment (ROI), or any other conventionally accepted financial metric. It is important to agree with your internal customer on the relevant measure early in the project to prevent confusion or rework.

- **Finalize the project plan.** Finalize the timelines, budget, scope, and project vision into a single deliverable that can be reviewed and approved by your organization. Assign roles and responsibilities, both to consultants and internal team members.



Two to four weeks might be too little in certain cases. Make sure that "good enough for X weeks" is clear.

- **Conduct REJ training.** Conduct any REJ training to project participants as required.

The outputs of this activity include:

- **Kickoff meeting presentation.** The kickoff presentation provides your organization's stakeholders with an overview of the REJ methodology and describes the scope and goals of the REJ project. The presentation should clearly show what roles the stakeholders play in the REJ process.
- **Kickoff meeting handouts.** Kickoff handout documents summarize the kickoff presentation and include the kickoff data in a document format. They should be provided to meeting attendees as take-away documents.
- **Stakeholder list.** The stakeholder list should provide the names and titles of project stakeholders. The stakeholder chart should be included in the kickoff presentation and reviewed for approval during the meeting. Any changes to the stakeholder chart later in the process could result in serious changes to the scope of the study. Therefore, any changes to the list must be made as soon in the project process as possible.

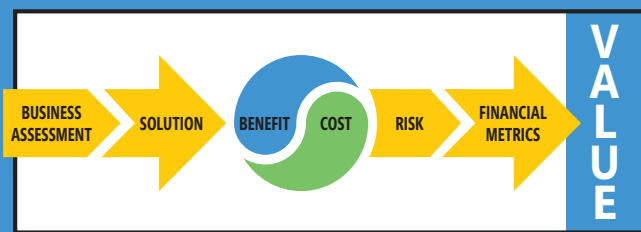
- **A finalized project plan.** The project plan identifies project participants, resources, and scope. Its major components include:
  - **Vision-scope document.** The vision-scope document clearly lays out the organizational and technological limitations of the project, lists the deliverables associated with the project, and describes the framework that will be used to complete the study.
  - **A finalized project schedule.** The schedule describes in detail which resources will be assigned to the study, deadlines for deliverables, and milestone dates.
  - **A project budget.** The budget describes the financial resources that will be assigned to the project.
  - **Communication plan.** The communication plan outlines how communication between team members will be handled, the schedule for status meetings, and who within your organization will be the main contact with the business sponsor.
  - **Roles and responsibilities.** The Roles and Responsibilities section of the project plan identifies REJ team members, their roles in the study, and their duties.
  - **Preliminary risk assessment.** This part of the project plan identifies potential problems or obstacles to successful completion of the initiative.



Common risks associated with the initiation of an REJ project include:

- The project does not have a business sponsor, or the business sponsor might change before project completion.
- The business sponsor cannot commit the appropriate resources to the project.
- One or more roles cannot be performed due to insufficient resources or lack of knowledge on how to perform them.
- Changing business priorities make the project unnecessary.
- The scope of work is too big for the timeframe, budget, or resources assigned to the project.
- Your organization lacks enough cost, goal, or performance metrics to run a credible project.





## Section III: DEVELOP THE VALUE PROPOSITION WITH THE ECONOMIC JUSTIFICATION

In Section III, you engage in a multi-step iterative process, in which you build an REJ value proposition. The value proposition provides an overview of your organization's business, the business problems that are being addressed, the proposed IT initiative, and an estimate of the solution's benefits, costs, and risks. Figure 3.1 provides an end-to-end description of the steps of building an REJ value proposition.

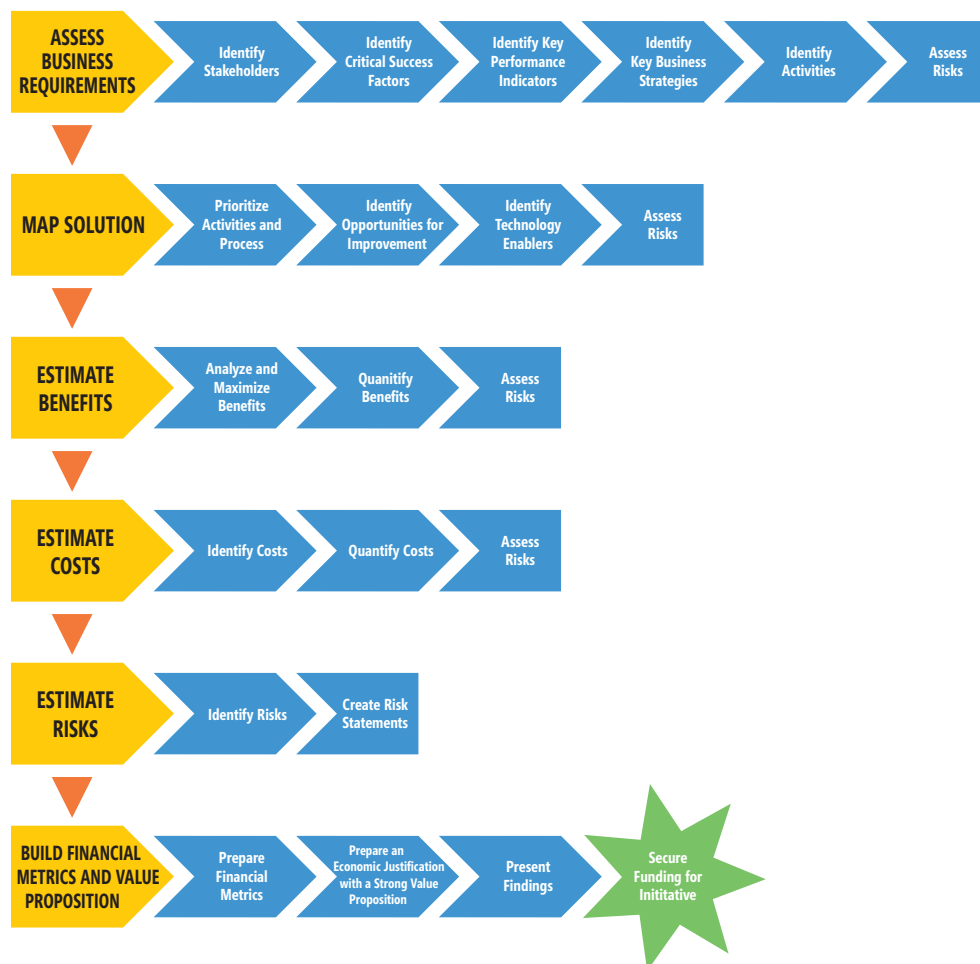
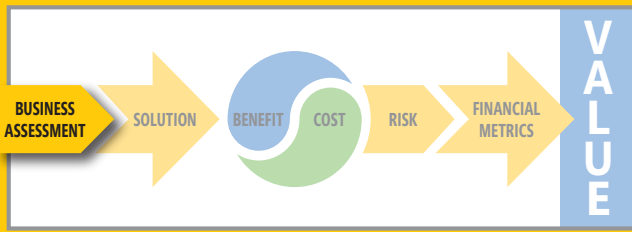


Figure 3.1: Steps to building a value proposition with the REJ Framework





# Step 1: ASSESS BUSINESS REQUIREMENTS



**Purpose:** Understand the organization's business dynamics and ensure that the IT initiative is aligned with business goals. Understanding the organization's current state is essential to ensuring that the economic justification team organizes and presents a value proposition that is aligned to the organization's strategic intent. The goal is to ensure that any IT investment decision can be shown to be consistent with the organization's business objectives.

Value, like beauty, is in the eye of the beholder; it is often a subjective assessment. The point of the REJ process is to replace subjective assessment with hard financial metrics that are based on definitions of business success presented by your stakeholders. This is why the business and IT team members need a clear map to achieve a common perspective of what really drives the business and its IT investments.

**Tasks:** To achieve alignment between your IT initiative and business needs, you will create a Business Assessment Roadmap. This roadmap enables you to identify the key stakeholders, their critical success factors (CSFs), the strategy required to achieve the CSFs, and the key performance indicators (KPIs) that determine success.

Your organization has its own CSFs and KPIs; your Business Assessment Roadmap uses only information pertinent to your organization.

This step includes six activities. The tasks of each activity are designed to help you compile the information necessary to complete each category in the roadmap.



Some risks associated with Step 1 include:

- Team members may not be knowledgeable about the business or activities they are analyzing.
- Team members don't have access to the appropriate executives.
- Business users don't understand the economic justification process or don't want to be involved.
- Key data is difficult to obtain, or developed in a way that's difficult to interpret or use.
- Analysis paralysis—too much information overwhelms the team, and the project does not move forward.



### Inputs

- ☐ Corporate mission statements.
- ☐ Fiscal year plans, executive dashboards, executive presentations, internal quarterly reports, Balance Score Cards, and so on.
- ☐ Annual reports.
- ☐ SEC reports (such as 10K reports) and other public filings.
- ☐ IT strategic plan.
- ☐ Organization charts.
- ☐ Reports from Reuters, Finlistic, Stratascope, or other online industry benchmark services.
- ☐ Financial analyst reports.
- ☐ Investor relations page of company website.
- ☐ Corporate newsletters.
- ☐ Recent press articles about the organization.
- ☐ Company advertisements.
- ☐ Company solicitations such as RFPs, RFIs, or RFQs.
- ☐ Any article, demonstration, video, or presentation of the innovative technology being considered for deployment.
- ☐ A vision of how to anticipate or address an organizational opportunity caused by the technological expertise of the individual proposing the IT initiative.



**Output:** The Business Assessment Roadmap.

**Example:** A completed Business Assessment Roadmap. Note that the last row is reserved for the initial hypothesis of the IT initiative.

### Stakeholder

Influential individuals, who are either affected by or who affect the decision of the IT initiative.

### Critical Success Factor

The most relevant business objectives that stakeholders must achieve to gain success in their specific role at a specific time.

### Key Performance Indicator

The measurable results that define whether the business strategy achieves the CSF.

Stakeholder	Critical Success Factor	Key Performance Indicator	→
CEO	Shareholder value	Earnings per share (EPS)	
COO	Business operation value	<ul style="list-style-type: none"> <li>■ Quote-to-cash</li> <li>■ Percent of perfect orders</li> </ul>	
		Cost of Goods Sold (COGS)	
CIO	IT value	<ul style="list-style-type: none"> <li>■ Number of milestones missed to deliver critical services to LOB executives</li> <li>■ Lower IT costs</li> </ul>	
IT Application Development Director	Technology value	<ul style="list-style-type: none"> <li>■ X% application availability</li> <li>■ Interoperability among processes and data</li> <li>■ Faster and cheaper applications</li> </ul>	
IT initiative: Shared workflow middleware	Solution value	Number of steps in the process that can be automated	→

**Strategy**

The means by which a stakeholder plans to reach a CSF.

**Business Activities and Processes**

The specific set of existing business activities and processes that prevent stakeholders from achieving their KPI improvement.

**KPI Current State**

The current value of the KPI.

**KPI Desired State**

The desired future value of the KPI.

←	Strategy	KPI Current State	KPI Desired State	Business Activities and Processes
	<ul style="list-style-type: none"> <li>■ Implement Six Sigma strategy</li> <li>■ Expand market share into new, more profitable markets</li> </ul>	\$0.30/share	\$0.40/share	
	Drive productivity initiative by investing in work automation activities	<ul style="list-style-type: none"> <li>■ 38 days</li> <li>■ 73%</li> </ul>	<ul style="list-style-type: none"> <li>■ 25 days</li> <li>■ 90%</li> </ul>	<ul style="list-style-type: none"> <li>■ Order management</li> <li>■ Returns and complaints management</li> </ul>
		\$542	\$499	
	<ul style="list-style-type: none"> <li>■ Governance with line of business executives to negotiate achievable SLAs</li> <li>■ Improve project management</li> </ul>	<ul style="list-style-type: none"> <li>■ 32 new services with less than 5% delay and 99% availability</li> <li>■ 3% budget reduction per year</li> </ul>	<ul style="list-style-type: none"> <li>■ 50 new services with less than 5% delay and 99.9% availability</li> <li>■ 5% budget reduction per year</li> </ul>	Business process design and reengineering
	Plan for reusable components with SOA to manage Web services as mission-critical applications	<ul style="list-style-type: none"> <li>■ 98% application availability</li> <li>■ 3% budget reduction year-to-year</li> </ul>	<ul style="list-style-type: none"> <li>■ 99.9% application availability</li> <li>■ 8% budget reduction year-to-year</li> </ul>	<ul style="list-style-type: none"> <li>■ Writing and managing lifecycle of code for workflows</li> <li>■ Data quality verification and conversions</li> </ul>
←	Reduce the number of C++ code components written to manage workflows	90% manual and paper-based workflow	10% manual and paper-based workflow	Software development for process automation

# Activity 1: IDENTIFY STAKEHOLDERS



In this activity, you create a hypothesis about the value of the IT initiative, and identify the most important stakeholders who have an interest in the IT initiative's success.

Stakeholders are individuals who make or influence go/no-go decisions or are affected by the IT initiative. Therefore, you must understand the target audience for your value proposition and focus it to meet their needs within the context of overall business requirements. For the IT initiative to be approved, each stakeholder must have decision-making capability and budget authority. If the individuals you identify as stakeholders do not have decision-making or budgetary authority, you will have wasted your (and their) time.

This activity has three tasks, two of which have their own deliverable:

- **Task 1: Create Hypothesis Table.** The table documents a hypothesis of the possible value that the IT initiative offers your organization. As part of this task, you will identify potential stakeholders and map the hypotheses to their specific needs.
- **Task 2: Prepare to verify alignment.** The last row of the Business Assessment Roadmap has a special function: starting the process of verifying the alignment between the hypotheses and the stakeholder interests.
- **Task 3: Select key stakeholders.** Reduce your list of potential stakeholders to those who have decision-making and budgetary authority. This list should consist of three to seven stakeholders.

## Task 1: CREATE HYPOTHESIS TABLE

The Hypothesis Table proposes the potential value that the IT initiative offers your organization before you develop a complete economic justification.

For improvements to take place in your organization, you must first identify business or workflow processes that can be improved by the proposed technology. The Hypothesis Table will help you identify which parts of your organization experience the greatest pains, and the characteristics of the solution that can be leveraged across your organization's business units. The last component in this table provides a list of potential stakeholders, who have a vested interest in the IT initiative.

You will transfer the results of the Hypothesis Table to the Business Assessment Roadmap, which you will create in the next activity.



The components of the Hypothesis Table are:

- **Enabling technology.** An IT manager has the responsibility to keep abreast of all the innovative technologies that are introduced into the market, and to develop a vision of how their organization can use these technologies to achieve greater performance before the competition does. When this vision aligns with the right business conditions and market timing for your organization to take advantage of the technology, you must be prepared to make the value proposition. To gain maximum leverage for the value proposition, you must keep this envisioning process alive until the right technology and market conditions exist. It is perfectly acceptable to be thinking of a business proposal with a technology innovation in mind. However, it is irresponsible to develop a case for investing in the technology simply for its own sake, and to deploy it without a thorough economic analysis that demonstrates its business value.

In this column, you list the innovative technologies that you think will solve specific problems or pains for your organization. You should be sufficiently generic in your description of the enabling technology, since you might need to come back to it later on and refine exactly which technologies should be considered. A good IT visionary has the responsibility to be familiar with technology trends and with organizational business strategies that guarantee IT and business fusion.

- **Pain that is addressed by the technology.** People, data, and processes that under-perform due to the lack of innovative technologies are the object of the economic justification. You might wonder, “should I start by identifying the pain or the technology?” This is similar to, “which came first—the chicken or the egg?” If you don’t see the pain, you would not be looking for technologies to address those pains. Therefore, you can start with either the pain or the technology.
- **Success factors of using the technology.** This column addresses the business consequences you should expect if the technology addresses the pain successfully.
- **High-leverage characteristics.** Analyze success factors from the previous column. Identify the recurring, high-level characteristics required by a process or activity that enable your organization to receive the maximum benefit. For example, if a success factor is better contract management and accuracy, the unique characteristics that the process requires are a lot of data and text manipulation from several subject matter experts. If a lot of text manipulation is not required, it is unlikely that this activity would be considered sufficiently important to include in the project. Exclude this process or activity from consideration because it will confuse you rather than help you create a crisp economic justification.
- **Groups most affected within the organization.** These are groups in which the unique characteristics identified in the previous column are present, and that have a strategic relevance to the group’s success. For example, the group most affected by good or bad document rework is likely to be the group that writes procurement contracts rather than a customer service group, where documentation is written for them and they just follow procedures.
- **Potential stakeholders.** The business managers that represent the groups identified in the previous column. Generally, it is the manager of that group, or a proxy if that person is not easily accessible. For example, the group responsible for efficient procurement is probably headed by the chief operating officer of your organization, but he or she might not be available to discuss this opportunity. Therefore, you might look into his or her line of direct reports, and identify who is most affected by not achieving the performance improvements described in the success factors column.



Some risks associated with building a Hypothesis Table include:

- Inaccurate assessment of the proposed changes in business processes.
- Underestimating or overestimating the impact of the IT initiative.
- Inaccurate assessment of the business unit affected.
- Inaccurate assessment of which stakeholders are important.



**Output:** The Hypothesis Table.

**Example:** A completed Hypothesis Table.

Enabling Technology	Pain that is Addressed by the Technology	Success Factors of Using the Technology	High Leverage Characteristics	Groups Most Affected	Potential Stakeholders
Microsoft Office System with Microsoft BizTalk® Human Workflow Services	<ul style="list-style-type: none"><li>■ Paper-based processes</li><li>■ Security rights management</li><li>■ Regulatory compliance</li></ul>	<ul style="list-style-type: none"><li>■ Better contract management</li><li>■ Faster time to market</li><li>■ Improved accuracy</li><li>■ Lower cost of goods</li><li>■ Avoid compliance penalties by embedding controls into e-data collection field</li></ul>	<ul style="list-style-type: none"><li>■ The activity currently requires lots of rework</li><li>■ Lack of rigid standards</li><li>■ Requires integration of information coming from new and different sources</li></ul>	<ul style="list-style-type: none"><li>■ Procurement</li><li>■ Legal</li><li>■ Marketing</li><li>■ Sales</li></ul>	<ul style="list-style-type: none"><li>■ COO</li><li>■ VP Legal Affairs</li><li>■ Promoters</li><li>■ VP of Marketing</li></ul>

## Task 2: PREPARE TO VERIFY ALIGNMENT

You will fill in the Business Assessment Roadmap from the bottom up, starting with your hypothesis and ending with the closest and most accessible stakeholders.

Work your way up to the less accessible, but usually more powerful, stakeholders. Ultimately, the top row of the Business Assessment Roadmap will identify who will be a good candidate to be the executive sponsor of your initiative. When you have gained the support of a business executive sponsor, you will have successfully transitioned from an IT initiative to a business initiative that will create value to your organization.

The last row of the Business Assessment Roadmap has a special function: verifying the alignment between the benefits hypothesis and stakeholder interests. This bottom-row information will remain consistent as you complete the Business Assessment Roadmap throughout Step 1. Be sure to transfer the information from the Hypothesis Table created in Task 1 to the bottom row of the Business Assessment Roadmap.

- The last column of the Hypothesis Table will be useful for filling in the first column of the Business Assessment Roadmap.
- The third column of the Hypothesis Table will be useful for filling in the second column.
- The second column will be useful for filling in the seventh column of the Business Assessment Roadmap.

### Task 3: SELECT KEY STAKEHOLDERS

Key stakeholders are decision-makers who have the budgetary authority to fund the IT initiative. A key decision-maker can be a member of the organization's steering or investment review committees, a CFO, or a controller; he or she is someone who directly controls the use of investment funds and reviews the value proposition. If you use these simple guidelines, you should have no difficulty in identifying key stakeholders correctly. However, you should also consider two other groups of potential key stakeholders:

- Management representative of the business unit that will receive benefit from the IT initiative. This individual can be considered a strategic resource who can ensure successful change management during the IT initiative.
- Management representative of a group that has something to lose if the IT initiative is implemented. An example of these types of stakeholder would be the manager of a customer service group that will be downsized by budget and personnel because the IT initiative proposes business process automation.

Consider the following points when you identify key stakeholders:

- Be sure that key stakeholders are from different business groups, so that you have a representative sample of business and IT personnel.
- It is best to target individuals at an organizational level appropriate to the scope and scale of the project. Identifying key stakeholders helps you refine the value proposition of the IT initiative specific to different areas of the organization.
- Develop a list of non-IT managers who will benefit or experience negative effects from the IT initiative. This list is very important to the change management part of the initiative.



To select key stakeholders, you must review the list of potential stakeholders from the Hypothesis Table. If the individual identified does not have decision-making or budgetary authority, you need to look at their management chain and identify the appropriate individual who has such authority. Set up an interview with that business manager to collect information structured in his or her language and point of view before selling your hypothesis back to him or her.



Some common risks regarding stakeholders include:

- Underestimating or overestimating the value or influence of a particular stakeholder.
- Inaccurately assessing the internal political and leadership landscape.
- Not including key stakeholders.

If the IT initiative can be co-funded by several budget owners, you should include representative stakeholders from each group that funds the project.

If you do not gain access to high-level executives, it is unlikely that the full scope of your vision can be realized. In this case, you either have to reduce the scope of your vision and target the available executive or search for a compelling event to gain access to the executive you want.

**Example:** The Business Assessment Roadmap with key stakeholder information filled in.

Stakeholder	Critical Success Factor	Key Performance Indicator	Strategy	KPI Current State	KPI Desired State	Business Activities and Processes
CEO						
COO						
CIO						
IT Application Development Director						
IT initiative: Shared workflow middleware	Solution value	Number of steps in the process that can be automated	Reduce the number of C++ code components written to manage workflows	90% manual and paper-based workflow	10% manual and paper-based workflow	Software development for process automation

## Activity 2: IDENTIFY CRITICAL SUCCESS FACTORS



Critical success factors define the key objectives required by stakeholders. Understanding the CSFs for each stakeholder enables the economic justification team to align the IT initiative and build a value proposition around the factors that are most significant to each stakeholder and the organization. Stakeholders define CSFs based on their specific roles and the time when the IT initiative is proposed.



What should you do if most of the stakeholders are unavailable and the only well-qualified stakeholder available is not interested? If the best-qualified stakeholder is not interested in the hypothesized success factors or has a “follower” approach, try to raise his or her interest by discussing latent or neglected industry-specific CSFs. Share relevant stories based on case studies of similar companies.

CSFs should be as specific to your organization as possible. The more specific the CSF, the easier it will be to measure success. CSFs that reflect general market or industry-related objectives are less effective.

Figure 3.2 shows an example of how to think about getting greater specificity in CSFs.



Figure 3.2: Gaining greater specificity in CSFs





### Inputs

To gather inputs for this task, consider asking the following questions:

- ☐ What are your top objectives or MBOs for this fiscal year?
- ☐ What are you measured on in the organization balance scorecard?
- ☐ What must you achieve to be regarded as successful?
- ☐ Which of your objectives are the most critical for you to be successful?
- ☐ Can we review a report that your office prepared and sent to senior or executive managers?



### Output: The Business

Assessment Roadmap with CSF information filled in for each stakeholder.

Following the example in Figure 3.2, consider the following sample CSFs:

- Organization-specific KPIs:
  - Attract new base of younger investors (full-service brokerage house).
  - Don't miss the opportunity window (space agency).
- Vertical industry-specific KPIs:
  - Cross-sell new high-profile financial services (banking industry).
  - Increase inventory turns (retail industry).
- General business KPIs:
  - Improve company profitability while margins in commodity products shrink.
  - Improve time to market (any organization).



Some common risks regarding CSFs include:

- Trying to force the stakeholder to accept a new CSF only because it is useful to you.
- Inaccurately identifying CSFs for any or all stakeholders.
- Incorrectly associating the wrong CSF with a stakeholder.
- Not getting stakeholders to agree to the CSFs you have identified for them.
- Stakeholders don't know or don't want to tell you what their relevant CSFs are.

**Example:** The Business Assessment Roadmap with CSF information filled in.

Stakeholder	Critical Success Factor	Key Performance Indicator	Strategy	KPI Current State	KPI Desired State	Business Activities and Processes
CEO	Shareholder value					
COO	Business operation value					
CIO	<ul style="list-style-type: none"> <li>■ IT value</li> <li>■ IT investment portfolio optimization</li> </ul>					
IT Application Development Director	<ul style="list-style-type: none"> <li>■ Technology value</li> <li>■ Application availability</li> </ul>					
IT initiative: Shared workflow middleware	Solution value	Number of steps in the process that can be automated	Reduce the number of C++ code components written to manage workflows	90% manual and paper-based workflow	10% manual and paper-based workflow	Software development for process automation

# Activity 3: IDENTIFY KEY PERFORMANCE INDICATORS



Key performance indicators are specific metrics that quantify how close you come to achieving each CSF. KPIs help the economic justification team understand how each stakeholder defines success.

The IT initiative and its value proposition should be expressed in terms of their impact on stakeholder KPIs.



KPIs are only units of measurement, not the value of the measurement. For example, miles per hour or liters of water are KPIs. Values of these KPIs would be 50 miles per hour or 20 liters of water.

In this activity, you identify the KPIs that must be met for the IT initiative to be successful.

There are three tasks associated with this activity:

- **Task 1: Identify KPIs for each CSF.** Identify the KPI that is essential for each stakeholder to achieve his or her mission within your organization.
- **Task 2: Determine the current and desired value of KPIs.** Identify KPIs that represent the current and desired states. Then conduct a gap analysis that identifies the order of magnitude of what the IT initiative must accomplish to meet the desired state.
- **Task 3: Verify alignment.** Verify that the IT initiative is aligned with selected stakeholders.



Some common risks regarding KPIs include:

- Stakeholders consider information confidential unless they see an incredible value in sharing it.
- Stakeholders are not used to the concept of KPIs but have their own informal way to measure progress toward their goals.
- Failing to distinguish between performance indicators and key performance indicators.
- Incorrectly associating a particular KPI with a particular CSF.
- Using a KPI that is not measurable and therefore not very useful.
- Not getting stakeholders to agree to the KPIs you have identified for them.



## Inputs

To fill in the KPI section of the roadmap, consider asking these questions:

- ☐ Does the organization have a balance scorecard?
- ☐ Does the stakeholder have a dashboard?
- ☐ What is in the monthly or quarterly report that the stakeholder provides to the organization?
- ☐ Does each specific KPI directly map to the appropriate CSF and stakeholder?
- ☐ Is the KPI measurable?
- ☐ Does the stakeholder have current-state benchmarks for each KPI?



## Output: The Business

Assessment Roadmap with all KPI-related information filled in for each CSF.

## Task 1: IDENTIFY KPIS FOR EACH CSF

The purpose of this task is to identify KPIs so as to better understand how your stakeholders define and measure progress towards achieving their CSFs.

If the stakeholder has no way to measure a CSF, you might not have identified a valid CSF. There is an old saying: “if you can’t measure it, it will never get done.” Therefore, if there is a CSF that the stakeholder wants to achieve, but there isn’t a way to measure it, something is wrong. During your conversation with the stakeholder, it is important to capture any specific metrics that they mention. It is likely that if they have a metric about something, they care about the associated CSF and are willing to make an investment to ensure that the metric either improves or at the very least remains constant.

Identifying KPIs is a way to verify that you have captured the correct CSFs. Identifying KPIs is the key to having the stakeholder believe the benefit projections that you will provide later. Since stakeholders know the value of anything that can change their KPI (by even by one unit), they will have a reference point to know how the IT initiative will affect them. Failure to identify a good KPI can make the stakeholder indifferent or unable to validate the proposed benefits.



Three key questions can be asked of each stakeholder to begin identifying their KPIs:

- How do you measure your success?
- How will you track progress against your CSFs?
- What are the current and the desired state for each KPI? How do you explain the gap?

KPIs should be as specific to your organization as possible. The more specific the KPI, the easier it will be to measure and to show progress toward the CSF. As with CSFs, KPIs that reflect general market or industry-related metrics should be avoided because they are less effective in relating to stakeholder interests.

KPIs could include return on investment, internal rate of return, return on assets, shareholder equity, earnings per share, inventory turns, or any other measurement that is important to the stakeholder and your company. KPIs can also be used to benchmark the performance of the company against industry standards.

One way to obtain KPIs is to look at the key metrics on the dashboard of each stakeholder. Figure 3.3 provides a sample stakeholder dashboard.

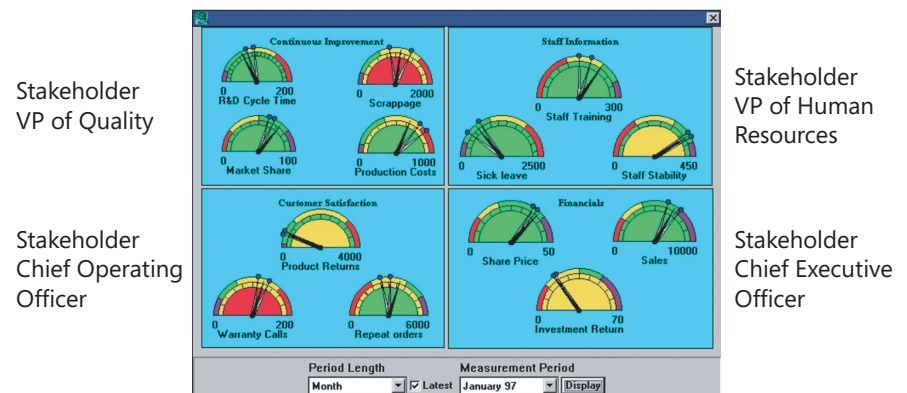


Figure 3.3: Sample dashboard with stakeholder KPIs

It is best not take this dashboard literally, as every organization has a different way of displaying similar information. The key point is to identify the KPIs, not how they are presented graphically.



**Output:** The Key Performance Indicator section of the Business Assessment Roadmap filled in for each CSF.

**Example:** The Business Assessment Roadmap with KPI information filled in.

Stakeholder	Critical Success Factor	Key Performance Indicator	Strategy	KPI Current State	KPI Desired State	Business Activities and Processes
CEO	Shareholder value	<ul style="list-style-type: none"> <li>■ Stock price</li> <li>■ Earnings per share (EPS)</li> </ul>				
COO	Business operation value	<ul style="list-style-type: none"> <li>■ Quote-to-cash</li> <li>■ Percent of perfect orders</li> </ul>				
		Revenue per employee				
CIO	IT value	<ul style="list-style-type: none"> <li>■ Number of milestones missed to deliver critical services to LOB executives</li> <li>■ Lower IT costs</li> </ul>				
IT Application Development Director	Technology value	<ul style="list-style-type: none"> <li>■ Percent application availability</li> <li>■ Interoperability among processes and data</li> <li>■ Faster and cheaper applications</li> </ul>				
IT initiative: Shared workflow middleware	Solution value	Number of steps in the process that can be automated	Reduce the number of C++ code components written to manage workflows	90% manual and paper-based workflow	10% manual and paper-based workflow	Software development for process automation

## Task 2: DETERMINE CURRENT AND DESIRED VALUE OF THE KPIS

The purpose of this task is to identify KPIs for the current and desired state, so you can conduct a gap analysis. The gap analysis tells you exactly what the IT initiative should achieve to satisfy the KPIs for each CSE.



Here is one way to look at this information:

- The current KPI measures the status quo.
- The desired KPI measures the target.
- The difference between the values of the current and desired KPIs is the gap that is closed by the IT initiative.



To assess risks related to determining current and desired KPI values, consider the following questions:

- Does the current value of the KPI accurately reflect the current state?
- Are there several sources to assess the current value of the KPI?
- Are the changes in KPIs *really* measurable?
- Are you too optimistic about the value of the desired state?
- Have you validated the KPIs with stakeholders?

Before you fill in the Business Assessment roadmap, it is helpful to prepare a separate worksheet that provides detailed KPI information. Figure 3.4 provides an example of current and desired state KPIs that you might use as inputs to the Business Assessment Roadmap.

Current State			Desired State		
CSF	KPI	Value	CSF	KPI	Value
Increase revenue	\$	\$10,000,000	Increase revenue	\$	\$11,000,000
Same-store revenue growth	% Y/y	-1%	Same-store revenue growth	% Y/y	+10%
Public status	Private/ Public	Private	Public status	Private/ Public	Public
Product line maturity	Average product age (years)	15	Product line maturity	Average product age (years)	5
Profit margin	% EBITDA	-5%	Profit margin	% EBITDA	+5%

Figure 3.4: Sample of current and desired KPI values



**Output:** The Business Assessment Roadmap with current and desired state KPI values filled in for each CSF.

**Example:** The Business Assessment Roadmap with current and desired state KPIs filled in.

Stakeholder	Critical Success Factor	Key Performance Indicator	Strategy	KPI Current State	KPI Desired State	Business Activities and Processes
CEO	Shareholder value	Earnings per share (EPS)		\$0.30/share	\$0.40/share	
COO	Business operation value	<ul style="list-style-type: none"> <li>Quote-to-cash</li> <li>Percent of perfect orders</li> </ul>		<ul style="list-style-type: none"> <li>38 days</li> <li>73%</li> </ul>	<ul style="list-style-type: none"> <li>25 days</li> <li>90%</li> </ul>	
		Cost of Goods Sold (COGS)		\$542	\$499	
CIO	IT value	<ul style="list-style-type: none"> <li>Number of milestones missed to deliver critical services to LOB executives</li> <li>Lower IT costs</li> </ul>		<ul style="list-style-type: none"> <li>32 new services with less than 5% delay and 99% availability</li> <li>3% budget reduction per year</li> </ul>	<ul style="list-style-type: none"> <li>50 new services with less than 5% delay and 99.9% availability</li> <li>5% budget reduction per year</li> </ul>	
IT Application Development Director	Technology value	<ul style="list-style-type: none"> <li>X% application availability</li> <li>Interoperability among processes and data</li> <li>Faster and cheaper applications</li> </ul>		<ul style="list-style-type: none"> <li>98% application availability</li> <li>3% budget reduction year-to-year</li> </ul>	<ul style="list-style-type: none"> <li>99.9% application availability</li> <li>8% budget reduction year-to-year</li> </ul>	
IT initiative: Shared workflow middleware	Solution value	Number of steps in the process that can be automated	Reduce the number of C++ code components written to manage workflows	90% manual and paper-based workflow	10% manual and paper-based workflow	Software development for process automation

After the KPI data has been collected, you should verify whether the business sponsor of the IT initiative can show how changing any KPI by at least 1% (or any specific percentage that is appropriate to the stakeholder), can change other KPIs by a factor of X.



### Task 3: VERIFY ALIGNMENT

Verifying the alignment between the initiative and the stakeholder CSFs helps you to verify that the positive impact of the IT initiative links to what the top executives monitor on their respective dashboards (that is, their KPIs). Verifying the alignment also highlights the CSFs against which you need to build the most effective economic justification.

Stakeholders often have some CSFs that are not aligned to the initiative and some CSFs that are “right on.” You want to focus on the CSFs that have a direct link and highlight that link. There are two techniques that you can use: Stakeholder Match Diagnosis and visual alignment of the Business Assessment Roadmap.

**Stakeholder Match Diagnosis.** For each stakeholder, visualize a high-level hypothesis-to-stakeholder link by using the Stakeholder Match Diagnosis tool. This diagnostic tool is used to visually check the existence of the match between the benefits hypothesis and stakeholder CSFs. This approach helps you identify which stakeholder to focus on during the economic justification process.



It is not critical to be quantitatively precise in this exercise. However, it is vital that you approximate the value of the benefit and the relative importance of the CSF so that you can visually see how closely they overlap. The degree to which they overlap is sometimes referred to as the handshake.

One of the best-known examples of an innovator who accurately studied the importance of alignment between what he proposed and the interests of the target audience was that of Christopher Columbus. In 1492, Columbus wanted to embark on a scientific expedition to prove that the earth was round. However, he knew that if he used this value proposition, he would not get funding, and he could end up in prison like Galileo. Instead, he smartly analyzed all the possible stakeholders (kings, princes, and bankers) and framed his value proposition by highlighting among all the consequences of his scientific discovery the ones that would be most aligned with the interests of the potential stakeholders.



Because Columbus didn't see a strong match between the benefits of his initiative and the CSFs of the princes and merchant families of Italy, he chose Queen Isabella of Spain as the ideal stakeholder of his expedition. He did this because he knew that Spain was a leading colonial power that needed a new frontier of expansion to support a massive—and expensive—navy.

Columbus hypothesized that if he presented the consequences of a positive output of his scientific expedition in terms aligned to Queen Isabella CSFs (financing a navy, finding a quicker trade route to the East Indies, and enriching Spain's war chest for conquering new lands), that he would stand a better chance of getting funded than if he presented his proposal based on scientific exploration. We all

know the result of Columbus' expedition. This was not cheating; rather, it is smart thinking to maximize the impact of a vision that started as a scientific idea.

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[LC-D401-22452, LC-USZC2-1589]

It is possible that Columbus had something similar to the REJ Business Assessment Roadmap in mind when he embarked on selling the concept of his expedition. It has been said that for Columbus to have effectively presented his economic justification to Queen Isabella, he needed leverage provided by intermediate stakeholders such as the bankers who financed the Spanish navy.

Figure 3.5 shows an example of using the Stakeholder Match Diagnosis tool to assess the effective link between Christopher Columbus’s hypotheses of finding a faster trade route to the East Indies to Queen Isabella’s CSFs to transform Spain into a leading cultural power.

### Example: 1492 Christopher Columbus Initiative

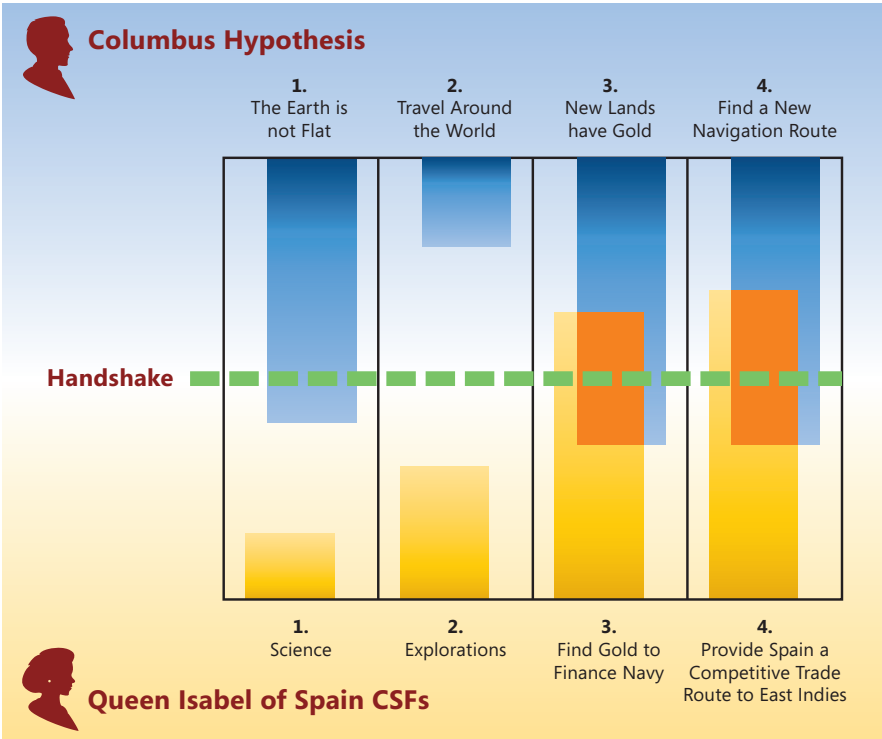


Figure 3.5: Christopher Columbus’ Stakeholder Match Diagnosis

The point of this story? Use the Stakeholder Match Diagnosis tool to ensure that the goals of the IT initiative align with the most essential goals of the most important stakeholders.

After you have confirmed a handshake between the hypothetical success factors of the IT initiative and the CSFs of each stakeholder, use the Business Assessment Roadmap to visually map the link among hypothetical benefits to the CSFs, all the way up to the top-ranking stakeholder in the first column of the Business Assessment Roadmap.

If the links to the CSFs are well explained, it should be rather easy to show that every time the proposed initiative makes even a 1-unit percent change in the business, the KPI of the top-ranking stakeholders will be positively affected in a corresponding percentage. The tool also works the other way: if the initiative doesn't create any difference to the stakeholder KPIs, stakeholders will not believe or pay attention to projected benefits of the economic justification work.



Risks associated with the Stakeholder Match Diagnosis include:

- Inaccurately projecting expected future benefits.
- Using inappropriate CSFs.
- Potential mismatch of expected benefits and CSFs.
- Projecting too many benefits.
- Failure to assess areas of future benefit accurately.
- Underestimating or overestimating the potential areas of overlap (handshake).
- Substituting the visual handshake for hard economic analysis.
- Inaccurately linking the KPIs to the different CSFs to see if they map to the IT initiative.

**Alignment in the Business Assessment Roadmap.** After you complete a Stakeholder Match Diagnosis, you align CSFs and KPIs for each stakeholder in the Business Assessment Roadmap.



Risks associated with alignment verification include:

- Potential mismatch of expected benefits and CSFs.
- Inaccurate mapping of size of cause and effect in changes of KPIs from Hypothesis to Stakeholder KPI, due to lack of detailed information of the proposed solution activity that will be conducted later.
- Underestimating or overestimating the potential areas of benefit.
- Incorrectly substituting the visual review and neglecting the benefit of hard economic scenario simulation analysis.



#### Output: The Benefit

Assessment Roadmap and visual alignment circle.

The final output of this activity is a roadmap that highlights links between hypothetical benefits, CSFs, and KPIs for each stakeholder.

**Example:** The Benefit Assessment Roadmap with stakeholder CSF and KPI alignment verified

Stakeholder	Critical Success Factor	Key Performance Indicator	Strategy	KPI Current State	KPI Desired State	Business Activities and Processes
CEO	Shareholder value	Earnings per share (EPS)		\$0.30/share	\$0.40/share	
COO	Business operation value	<ul style="list-style-type: none"> <li>Quote-to-cash</li> <li>Percent of perfect orders</li> </ul>		<ul style="list-style-type: none"> <li>38 days</li> <li>73%</li> </ul>	<ul style="list-style-type: none"> <li>25 days</li> <li>90%</li> </ul>	
		Cost of Goods Sold (COGS)		\$542	\$499	
CIO	IT value	<ul style="list-style-type: none"> <li>Number of milestones missed to deliver critical services to LOB executives</li> <li>Lower IT costs</li> </ul>		<ul style="list-style-type: none"> <li>32 new services with less than 5% delay and 99% availability</li> <li>3% budget reduction per year</li> </ul>	<ul style="list-style-type: none"> <li>50 new services with less than 5% delay and 99.9% availability</li> <li>5% budget reduction per year</li> </ul>	
IT Application Development Director	Technology value	<ul style="list-style-type: none"> <li>X% application availability</li> <li>Interoperability among processes and data</li> <li>Faster and cheaper applications</li> </ul>		<ul style="list-style-type: none"> <li>98% application availability</li> <li>3% budget reduction year-to-year</li> </ul>	<ul style="list-style-type: none"> <li>99.9% application availability</li> <li>8% budget reduction year-to-year</li> </ul>	
IT initiative: Shared workflow middleware	Solution value	Number of steps in the process that can be automated	Reduce the number of C++ code components written to manage workflows	90% manual and paper-based workflow	10% manual and paper-based workflow	Software development for process automation

# Activity 4: IDENTIFY BUSINESS STRATEGIES



Strategies are plans and initiatives that enable an organization to achieve its CSFs as measured by KPIs. The purpose of this activity is to identify key business strategies that the proposed initiative supports to create value.

The basic workflow of this activity is to interview stakeholders to identify key business strategies. This should help you:

- Understand how the IT initiative will accelerate or make it easier for stakeholders to achieve their KPIs.
- Establish a context, within which the REJ team can propose alternative strategies.



## Inputs

To identify your organization's IT-related business strategies, consider asking these questions:

- ☐ What is the organization doing to achieve its current CSFs?
- ☐ How does the organization plan to achieve the new CSFs that are identified by the gap analysis?
- ☐ Are the organization's long-term business and IT strategies different than those identified in the business requirement assessment? If yes, how does the organization intend to address these differences?



You might be able to define key business strategies by searching internal planning documents or by reviewing your stakeholder interview notes. Where you gather the information is not as important as what it explains. Some questions that you might ask the stakeholders include:

- Do you have formal access to the strategic business plan?
- Do you have access to the IT strategic plan?
- What are you currently doing to achieve your CSFs?
- How do you plan to achieve your CSFs?
- Do you have long-term strategies that are different than your current short-term strategies?
- What are your IT initiatives for achieving business CSFs?



Common risks associated with identifying business strategies include:

- IT initiative is not aligned to business requirements.
- IT initiative does not support proposed business strategies.
- Business strategies are not measurable.



**Output:** The Business Assessment Roadmap with the Strategy section filled in.

Strategy information should be filled in for each stakeholder and should map to their respective CSFs and KPIs.

**Example:** The Business Assessment Roadmap with business strategy information filled in.

Stakeholder	Critical Success Factor	Key Performance Indicator	Strategy	KPI Current State	KPI Desired State	Business Activities and Processes
CEO	Shareholder value	Earnings per share (EPS)	<ul style="list-style-type: none"> <li>■ Implement Six Sigma strategy</li> <li>■ Expand market share into new, more profitable markets</li> </ul>	\$0.30/share	\$0.40/share	
COO	Business operation value	<ul style="list-style-type: none"> <li>■ Quote-to-cash</li> <li>■ Percent of perfect orders</li> </ul>	Drive productivity initiative by investing in work automation activities	<ul style="list-style-type: none"> <li>■ 38 days</li> <li>■ 73%</li> </ul>	<ul style="list-style-type: none"> <li>■ 25 days</li> <li>■ 90%</li> </ul>	
		Cost of Goods Sold (COGS)		\$542	\$499	
CIO	IT value	<ul style="list-style-type: none"> <li>■ Number of milestones missed to deliver critical services to LOB executives</li> <li>■ Lower IT costs</li> </ul>	<ul style="list-style-type: none"> <li>■ Governance with line of business executives to negotiate achievable SLAs</li> <li>■ Improve project management</li> </ul>	<ul style="list-style-type: none"> <li>■ 32 new services with less than 5% delay and 99% availability</li> <li>■ 3% budget reduction per year</li> </ul>	<ul style="list-style-type: none"> <li>■ 50 new services with less than 5% delay and 99.9% availability</li> <li>■ 5% budget reduction per year</li> </ul>	
IT Application Development Director	Technology value	<ul style="list-style-type: none"> <li>■ X% application availability</li> <li>■ Interoperability among processes and data</li> <li>■ Faster and cheaper applications</li> </ul>	Plan for reusable components with SOA to manage Web services as mission-critical applications	<ul style="list-style-type: none"> <li>■ 98% application availability</li> <li>■ 3% budget reduction year-to-year</li> </ul>	<ul style="list-style-type: none"> <li>■ 99.9% application availability</li> <li>■ 8% budget reduction year-to-year</li> </ul>	
IT initiative: Shared workflow middleware	Solution value	Number of steps in the process that can be automated	Reduce the number of C++ code components written to manage workflows	90% manual and paper-based workflow	10% manual and paper-based workflow	Software development for process automation



# Activity 5: IDENTIFY BUSINESS ACTIVITIES AND PROCESSES



It is necessary to identify existing business activities and processes that prevent stakeholders from improving their KPIs. The purpose of this activity is to identify the business activities and processes that require change for stakeholders to meet their KPIs and execute the business strategy.

Three tasks are associated with this activity:

- **Task 1:** Identify existing business processes that block achievement of KPIs.
- **Task 2:** Identify activities that your stakeholders are already driving.
- **Task 3:** Identify a subject matter expert for each business process and activity.



## Inputs

- ☐ A list of stakeholders.
- ☐ A list of strategies added to the Business Assessment Roadmap.
- ☐ Stakeholder interview notes.



**Output:** Business activities and processes that block stakeholders from improving their KPIs.



Often where there is a challenge there is an opportunity. Try to be part of the solution. Any activity identified in this activity is a possible compelling event for convincing the decision makers to approve the project now.



Common risks associated with this task include:

- Starting to project benefit values prematurely.
- Failing to establish a bond of trust with your stakeholders.
- Providing stakeholders with benefit values before completion of due diligence tasks.
- Failure to understand how IT initiatives connect to existing operations.
- Failing to identify relevant opportunities to which proposed technologies can be mapped.

## Task 1: IDENTIFY EXISTING BUSINESS PROCESSES THAT BLOCK ACHIEVEMENT OF KPIs

Scan and inventory existing business processes that block achievement of the KPI by listening to affected stakeholders. Don't start projecting changes based on this information; wait until the next step of the economic justification. Stakeholders need to feel that you are trying to help them succeed by understanding what they need. You should come back to them with a proposal only after you have done your due diligence work.

Stakeholders are not really interested in your project. They have an interest in the outcome of your project and how it will help them do a better job and meet their CSFs. Therefore, in this phase, just listen to the stakeholders; you will be amazed how far you will go in connecting with stakeholders and gaining their support by just listening.

You identify specific business activities and processes by focusing on two objectives:

- Understanding how the IT initiative connects with the organization's existing operations to achieve success.
- Establishing a list of opportunities to which the REJ team can map proposed technologies.

When you finish this task, you will have built a list of blocking business processes.

## Task 2: IDENTIFY ACTIVITIES THAT YOUR STAKEHOLDERS ARE ALREADY DRIVING

If your stakeholders already have an initiative in progress that will change the underperforming opportunity, make sure you find out more about the initiative and show interest in finding ways to optimize these processes further.

If the stakeholders are too busy, help them rank the processes according to the impact to the KPI. Don't try to add more work without assessing if you will be at the bottom of their priority list. You could become a problem, not a solution.



Common risks related to this task include:

- Annoying stakeholders and losing their support.
- Failing to identify all relevant stakeholder activities.

### Task 3: IDENTIFY A SUBJECT MATTER EXPERT FOR EACH BUSINESS PROCESS AND ACTIVITY



#### Inputs:

To identify the inputs for this task, consider asking the following questions:

- ☐ Which activities are you currently pursuing to execute your strategy?
- ☐ What challenges are you experiencing?
- ☐ What improvements would you like to see?
- ☐ Why are you not able to pursue these activities?

Very often, stakeholders do not have enough information about proposed processes or processes that operate across business units. In this instance, you should look for experts (internal and external to the organization) who the stakeholders trust. Be sure to interview these experts to get the required information.

It could be very useful to conduct a survey in collaboration with the stakeholder and the subject matter expert in the processes or activities that block achievement of each KPI. This is a very powerful tool to convince your stakeholder to support your initiative. Don't do a survey without a stakeholder reviewing the structure of the desired report and the questions you are going to ask.

Add the names of subject matter experts in the final column of the Business Assessment Roadmap. This is the last task of listening and collecting data about processes that block achievement of KPIs.



#### Output: The Business

Assessment Roadmap with business activities and processes filled in.



Common risks associated with this task include:

- Failing to identify all relevant experts.
- Failing to identify experts that stakeholders trust.
- Failing to validate information with stakeholders.

**Example:** The Business Assessment Roadmap with blocking business activities and processes filled in.

Stakeholder	Critical Success Factor	Key Performance Indicator	Strategy	KPI Current State	KPI Desired State	Business Activities and Processes
CEO	Shareholder value	Earnings per share (EPS)	<ul style="list-style-type: none"> <li>■ Implement Six Sigma strategy</li> <li>■ Expand market share into new, more profitable markets</li> </ul>	\$0.30/share	\$0.40/share	
COO	Business operation value	<ul style="list-style-type: none"> <li>■ Quote-to-cash</li> <li>■ Percent of perfect orders</li> </ul>	Drive productivity initiative by investing in work automation activities	<ul style="list-style-type: none"> <li>■ 38 days</li> <li>■ 73%</li> </ul>	<ul style="list-style-type: none"> <li>■ 25 days</li> <li>■ 90%</li> </ul>	<ul style="list-style-type: none"> <li>■ Order management</li> <li>■ Returns and complaints management</li> </ul>
		Cost of Goods Sold (COGS)		\$542	\$499	
CIO	IT value	<ul style="list-style-type: none"> <li>■ Number of milestones missed to deliver critical services to LOB executives</li> <li>■ Lower IT costs</li> </ul>	<ul style="list-style-type: none"> <li>■ Governance with line of business executives to negotiate achievable SLAs</li> <li>■ Improve project management</li> </ul>	<ul style="list-style-type: none"> <li>■ 32 new services with less than 5% delay and 99% availability</li> <li>■ 3% budget reduction per year</li> </ul>	<ul style="list-style-type: none"> <li>■ 50 new services with less than 5% delay and 99.9% availability</li> <li>■ 5% budget reduction per year</li> </ul>	Business process design and reengineering
IT Application Development Director	Technology value	<ul style="list-style-type: none"> <li>■ X% application availability</li> <li>■ Interoperability among processes and data</li> <li>■ Faster and cheaper applications</li> </ul>	Plan for reusable components with SOA to manage Web services as mission-critical applications	<ul style="list-style-type: none"> <li>■ 98% application availability</li> <li>■ 3% budget reduction year-to-year</li> </ul>	<ul style="list-style-type: none"> <li>■ 99.9% application availability</li> <li>■ 8% budget reduction year-to-year</li> </ul>	<ul style="list-style-type: none"> <li>■ Writing and managing lifecycle of code for workflows</li> <li>■ Data quality verification and conversions</li> </ul>
IT initiative: Shared workflow middleware	Solution value	Number of steps in the process that can be automated	Reduce the number of C++ code components written to manage workflows	90% manual and paper-based workflow	10% manual and paper-based workflow	Software development for process automation

# Activity 6: ASSESS RISKS



After you have completely filled in all sections of the Business Assessment Roadmap, you are nearly done with the business requirements assessment step. The only remaining activity involves assessing risks related to the business requirement assessment. These tasks include:

- **Task 1:** Validate REJ findings.
- **Task 2:** Assess risks to the IT initiative.
- **Task 3:** Summarize your findings to the stakeholders.

## Task 1: VALIDATE REJ FINDINGS

You will rely heavily on the information documented early in the REJ process.



Be sure to review all the facts and assumptions that you have documented. Validate all assumptions.

Ways to mitigate risks related to the business assessment include:

- Review information collected from all your sources of independent information (financial analysts, for example) to be sure that you have represented the results on the roadmap accurately.
- Consider, "if I were an independent analyst, and somebody showed me the Business Assessment Roadmap, what would I think?"
- Ask each stakeholder for feedback when you summarize the results to them in Task 3.

**Example:** In this case, the validation process required no changes to the Business Assessment Roadmap. Review the completed Benefit Assessment Roadmap example on page 44.



### Inputs

- ☐ Data collected from independent sources.
- ☐ List of initiative stakeholders and their feedback.
- ☐ Business Assessment Roadmap filled in with all relevant information.



**Output:** Updated, complete, and validated Business Assessment Roadmap.



#### Inputs

- List of potential risks.
- Percent probability of risk occurring.
- List of risk mitigation opportunities.



**Output:** Risk assessment table.

## Task 2: ASSESS RISKS TO THE IT INITIATIVE

Risks are anything that can block the progress of successfully completing the IT initiative. The purpose of this activity is to identify any risks that can occur during Step 1 of the REJ process.

For example, unless you verify that you have gathered the appropriate information to ensure that you have correctly performed the alignment of the IT initiative with the organization's strategic goals, you risk not completing an accurate economic assessment.

One way to review the information is to create a table comparing the risks, the probability of the risks occurring, and the opportunities for mitigation. A risk assessment table is an effective way to document these risks.

**Example:** A Risk assessment table filled in.

Description of Risk	Probability	Mitigation Opportunities
Couldn't interview COO; person used as proxy was not well connected with COO and final result might not be aligned.	40%	Have CIO send e-mail with questions and assumptions to COO.
Weak link between initiative KPI and top two stakeholders could result in a lack of support from COO and CEO.	60%	When the solution is defined in the next phase, propose a demo to those executives (CEO and COO) and verify assumptions.

## Task 3: SUMMARIZE FINDINGS TO STAKEHOLDERS

After you are confident in the information in the Business Assessment Roadmap and have identified risk and mitigation opportunities, you should present your findings to your stakeholders to avoid working against a moving target. When your stakeholders agree that the information is correct, proceed to Step 2.

Presenting the Business Assessment Roadmap to the stakeholders is the first opportunity to show that you are starting the initiative with the business in mind. Do this successfully, and it will help you obtain more attention later in the economic justification process. Use this opportunity to ask for support to use the time of the subject matter expert (SME), who has deep knowledge about processes and activities. Don't forget to set expectations on the amount of time you need and secure a new meeting to present possible solutions you will develop with the subject matter expert.

You might have to rework the roadmap and risk information and present it to your stakeholders several times to get all the information correct. If you do not complete this step correctly, you will probably have problems when you start assigning economic value to each activity later in the REJ process. Remember the old saying: garbage in-garbage out.



**Output:** List of findings presented to stakeholder for validation.

**Example:** Review the completed Benefit Assessment Roadmap example on page 44.



## Step 2: MAP SOLUTION



**Purpose:** Build a solution aligned with findings from the Business Assessment Roadmap.

In Step 1, you identified the CSFs for your organization and the strategies that will be used to attain the KPIs of the desired state. In this step, you identify and project the changes to business activities that are most likely to have a positive impact and map them to the CSFs. A solution is the combination of people, process, organization, data, applications, and technology that brings your organization to a desired state.

A solution includes all the changes that your organization could pursue to execute on its strategy. For each activity, you will identify a required technology enabler. Enablers are the features or capabilities of the proposed technology that can make the desired activity possible. If the required technology enabler matches the capabilities of the solution, it adds value to this activity. This approach helps the economic justification team define the solution in terms of how the technologies used in the IT initiative help improve critical business activities.

**Tasks:** To map the solution, you will produce a list of possible value statements that identify improvements of current business operations that will lead to achievement of CSFs. Potential value statements are transformed into actual value statements when you have considered cost, risk, and so on. Because you analyze only the activities that affect the CSFs, you will automatically be aligned with the CSFs that are important for your organization.

You work with the owners of key business processes by using flow charts, cause and effect diagrams, affinity diagrams, fishbone graphics, and process analysis to identify ways to apply the proposed technology solution and increase alignment with your organization's CSFs.

You will probably have to work with stakeholders and create several drafts of the solution map to ensure that the proper opportunities are identified and the right technologies are mapped. It is important to take your time doing this step, because any mistakes you make here will require significant course correction when you get to later steps.

You use the CSF and KPI information you identified in Step 1 and map it to specific opportunities for improvement that the IT initiative enables.

This step includes four activities:

- Prioritize activities and processes.
- Identify opportunities for improvements.
- Identify technology enablers.
- Assess solution mapping risks.

At this point consider using the REJ workbook (Microsoft Excel worksheets) to compile your findings.



#### Inputs

- ☐ Filled-in Business Assessment Roadmap taken from Step 1.
- ☐ Transcripts of stakeholder interviews.
- ☐ Value chain for the organization.
- ☐ Information gathered in the REJ workbook Alignment worksheet.



Common risks for this step include:

- Completing this step can be very time consuming.
- Access to end users and subject matter experts can be limited.
- CSFs may not be clearly defined, and the link with related processes might be not clear.
- Stakeholders may not be identified correctly.
- Analysis paralysis that results from overanalyzing processes and activities might set in.



#### Outputs: List of solution

maps and technology enabling statements

**Example:** An Opportunity Table with the highest-priority opportunity filled in.

Rank	CSF	Business Process or Activity	Opportunity to Improve CSF	Technology
1.	Increase revenue by cross-selling new, more profitable products	Today it takes 1.5 days to collect and analyze the most current sales data for our top 32 customers. Sales teams ask IT to collect data from SAP and product marketing systems. <b>Activity SME:</b> Customer Service Manager	A portal should be considered to collect and distribute product promotional material for use by the Sales department.	<ul style="list-style-type: none"> <li>■ SAP-Office 2003 integration</li> <li>■ Office SharePoint® Portal Server 2003 and Office 2003 integration.</li> </ul>



# Activity 1: PRIORITIZE ACTIVITIES AND PROCESSES



For each strategy you have identified in the Business Assessment Roadmap, start by asking, “what processes and activities are most likely to have a positive impact on this strategy?” Determine whether changes to those activities will lead to improvements in the CSFs. Then, focus on what changes can be enabled by your initiative. You will explore how those changes can be made and how they will affect the KPIs in Step 3, “Quantity Benefits,” later in the economic justification process.

To assemble an effective solution, you might need a long list of processes or stakeholder activities that the initiative can affect positively. However, in preparing your value proposition, you need to be very selective in choosing the right process or activity on which to focus.

In this activity, you leverage the list of business activities from the Business Assessment Roadmap created in Step 1.

Starting with the top-ranking stakeholder for each CSF, you identify the business activity or process that affects the most CSFs. Once the business activity is better understood, you might re-rank the processes. In the meantime, prioritize the activities where you are going to focus on the benefits quantification exercise that you will do in Step 3.

Using relevance diagrams is one way to identify which process is more relevant to specific CSFs. You can use a Cartesian Prioritization chart, where the x-axis is the impact to a CSF (alignment), and the y-axis is the likelihood that each CSF will be affected. Use this chart to graphically map the priority of each CSF. Inside a blank copy of the chart, draw a circle that is proportionate to the CSF’s capacity to influence the process. The biggest circle in the upper right quadrant should receive the highest ranking index in the Opportunity Table. Figure 3.6 shows a sample of a Cartesian Prioritization chart that you can use for this exercise.

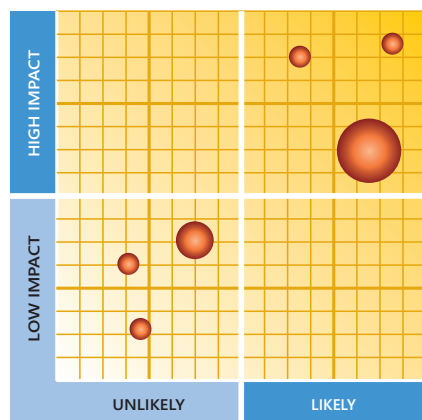


Figure 3.6: Cartesian Prioritization chart

Once you have completed the exercise and mapped each CSF graphically in the Cartesian Prioritization chart, you can transfer the CSF and associated business activity to the Opportunity Table. Perform this step in the order that each CSF was ranked. You also should identify the owner of the business activity.



**Output:** Ranked index list of business activities.

**Example:** The Opportunity Table with highest-ranking business activities filled in.

Rank	CSF	Business Process or Activity	Opportunity to Improve CSF	Technology
1	Increase revenue by cross-selling new, more profitable products.	Today it takes 1.5 days to collect and analyze the most current sales data for our top 32 customers. Sales teams ask IT to collect data from SAP and product marketing systems. <b>Activity SME:</b> Customer Service Manager.		

## Activity 2: IDENTIFY OPPORTUNITIES FOR IMPROVEMENT



Opportunities are ways to improve business activities. After you have determined the CSFs, KPIs, strategies, and activities for your organization in the Business Assessment Roadmap, you determine which key issues prevent your organization from achieving its goals.

Opportunities play an important part in this step of the economic justification analysis. Opportunities should resolve an existing problem or improve an existing process. The key to a successful REJ project is stating these opportunities explicitly, linking them to a CSF, and mapping the solution to a feature provided by the IT initiative.

There are several ways to collect the information for this step of the REJ process. Microsoft has developed a Framework called Motion that can be very useful in this work and in the completion of the following task. For more information on Microsoft Motion contact [motion@microsoft.com](mailto:motion@microsoft.com).

Identifying opportunities for improvement includes five tasks based on at least 5 patterns of GAP analysis:

- **1:** Identify factors that create obstacles in reaching CSFs. Use a cause and effect technique, such as a fishbone diagram, that highlights what causes the problem. By diagramming your analysis, you can propose a solution in which your initiative removes the causes and therefore should be funded.
- **2:** Identify high-level improvements. Identify the principles, of automation or synergy for example, that will generate improvements. Decide if you want to proceed with further analysis for improvement. Or, you might feel that you need to ask for help from a vertical solution provider such as SAP, who leverages your IT initiative.

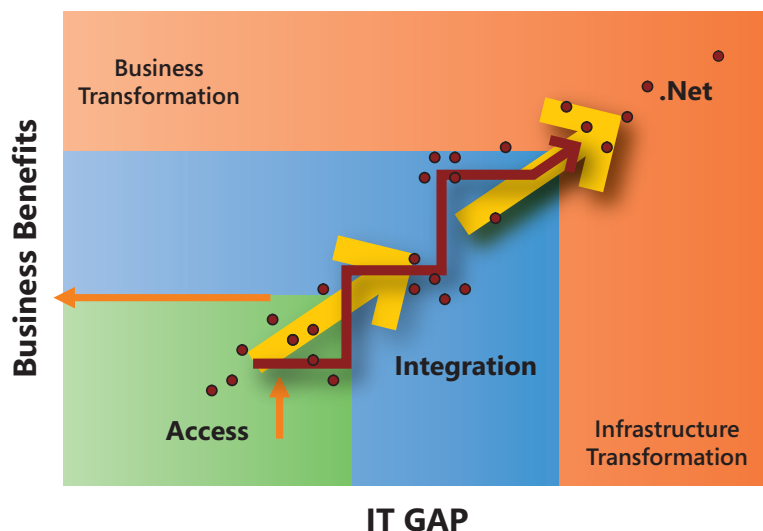


Figure 3.7: GAP Analysis Graph

- **3:** Identify improvements with detailed process analysis. To believe the economic justification, skeptical stakeholders might want to have a detailed description of how the organization is going to work after the introduction of the IT initiative.
- **4:** Identify improvements due to IT maturity or gaps in TCO best practices. The MIT Center for Information Systems Research (CISR) and Gartner Research have each introduced models and benchmark data that help identify areas of IT improvement based on industry data.
- **5:** Use the Cranfield University Benefit Dependency Network Framework. Certain stakeholders don't need metrics to estimate the size of the opportunity. Some CFOs or controllers might respect the decisions of strong leaders. In this case, you might want to consider using the Cranfield University Benefit Dependency Network tool.

The tasks progress to increasingly deeper levels of detail for each opportunity. By executing all the tasks, you will not only understand and explain the change and positive impact in a more effective and credible way, but you will have an increasingly easier way to quantify benefits in Step 3. You don't need to execute all of the tasks; you might be able to stop at the first or second task if you feel that the stakeholders don't need precise data. However, if you do not complete each task for each opportunity, you increase the risk that your proposal will not be considered accurate.

**Example:** The Opportunity Table filled in

This Opportunity Table shows high-level improvements in a contract definition workflow used in supplier management. Note that output for this task fills in columns 3 and 4.

Rank	Critical Success Factor	Business Activity Improvement Category	Opportunity to Improve CSF	Technology
	<ul style="list-style-type: none"> <li>■ Reduce Cost of Goods Sold (COGS)</li> <li>■ Increase time to market</li> </ul>	Acceleration	<ul style="list-style-type: none"> <li>■ From paper to paperless</li> <li>■ Handle workflow delays for officer on vacation</li> </ul>	<ul style="list-style-type: none"> <li>■ Workflow, digital signature with certificates</li> <li>■ Identity management with Active Directory® 2003 to allow task re-assignment or decisions to person with same role and security clearance</li> </ul>
		Disintermediation	<ul style="list-style-type: none"> <li>■ Legal and controller review are the bottlenecks</li> </ul>	<ul style="list-style-type: none"> <li>■ Contract in XML that separates data from text</li> <li>■ InfoPath form with budget code content is always updated online</li> <li>■ Logic in the form sends warning that controllers do review documents today</li> </ul>
		Synergies or Context	<ul style="list-style-type: none"> <li>■ Lack of information at the moment of filling in</li> <li>■ Contextual help and explanations</li> <li>■ Status and statistics to manage suppliers</li> </ul>	<ul style="list-style-type: none"> <li>■ Use Smart Tags</li> <li>■ Virtual workspace with actors that assign rework</li> <li>■ Windows SharePoint Services</li> </ul>

## Task 1: IDENTIFY FACTORS THAT CREATE OBSTACLES TO REACHING CSFS.

Once you have identified the business processes and activities, you analyze what prevents stakeholders from achieving better performance. Then, you propose a change that will result from your IT initiative. The successful completion of this task does not account for the magnitude of change or when the change will take place; it is solely focused on identifying the factors that create obstacles in reaching CSFs.

This is a typical cause and effect analysis, which can be conducted in several ways. A tool commonly used by many REJ practitioners is the fishbone analysis.<sup>3</sup> Figure 3.7 shows a sample cause and effect analysis that uses the fishbone diagram technique. The diagram illustrates a bank trying to increase the capacity to cross-sell new, high profit products such as boat loans.

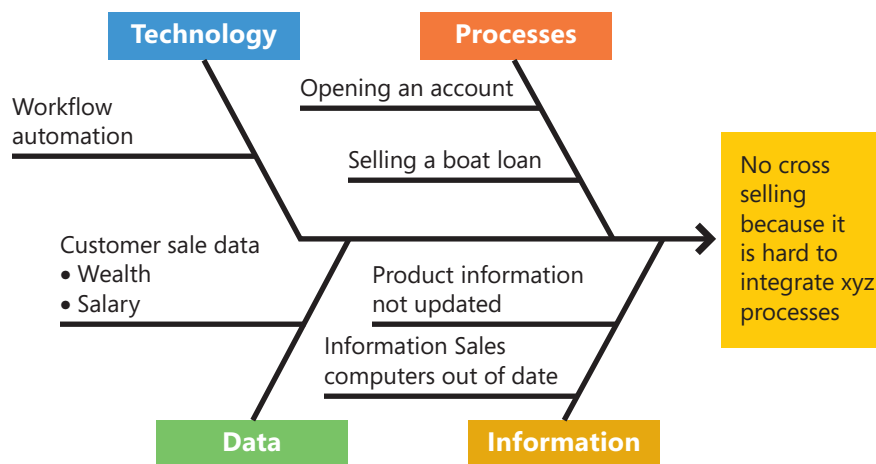


Figure 3.8: Example of fishbone cause and effect analysis

## Task 2: IDENTIFY HIGH-LEVEL IMPROVEMENTS

Once the stakeholder has highlighted that he or she is trying to find ways to improve a certain process, you might find a good idea that helps your value proposition. Consider using the following categories to find an idea for improvement and determine if your initiative can document it.

- **Category 1: Acceleration (automation).** Can the process do perform a current process faster? This is an easy way to define project benefits, but compared to other options, it generally provides little change in return on investment (ROI).
- **Category 2: Disintermediation (restructuring business process).** Use IT to accomplish a specific business function or an entire process faster or with less cost. This is achieved by removing unnecessary interactions with end users that generates costs, possible errors, and time consuming phases.
- **Category 3: Synergies (linkage).** Improve results by connecting several processes or sources of information to create new or better services.
- **Category 4: Capitalize on competency.** Use new technologies to empower the organization to leverage its existing business competencies or processes by enabling them to achieve new results. For example, this approach might require the replacement of an internal process with Web services from a more competent producer. Or, it might offer your competency to others and create new business and partnership opportunities for both organizations.

<sup>3</sup> A useful source for tools is The Memory Jogger™ available from GoalQPC at <http://www.goalqpc.com>.

For every opportunity solution, you document the explicit links between IT capabilities that enable business process improvements.

For each process, you develop a value statement: a hypothetical statement that shows how the process might be improved, and its impact on the KPIs.



You can compensate for the lack of detail in this approach by creating a graphic image that shows possible scenarios of how the users and the process will differ after the introduction of your IT initiative. Figure 3.8 presents an example of a graphic presentation (in this case, a screen shot) using Microsoft Office SmartTags to show how you can reduce errors by using updated menu options, which guide a user to fill in a purchase requisition.



#### Inputs

- ☐ List of IT capabilities that enable business process improvements in Activity 1 of Step 2.
- ☐ List of business process improvements identified in Step 1.



#### Output:

A list of opportunities to improve CSFs.

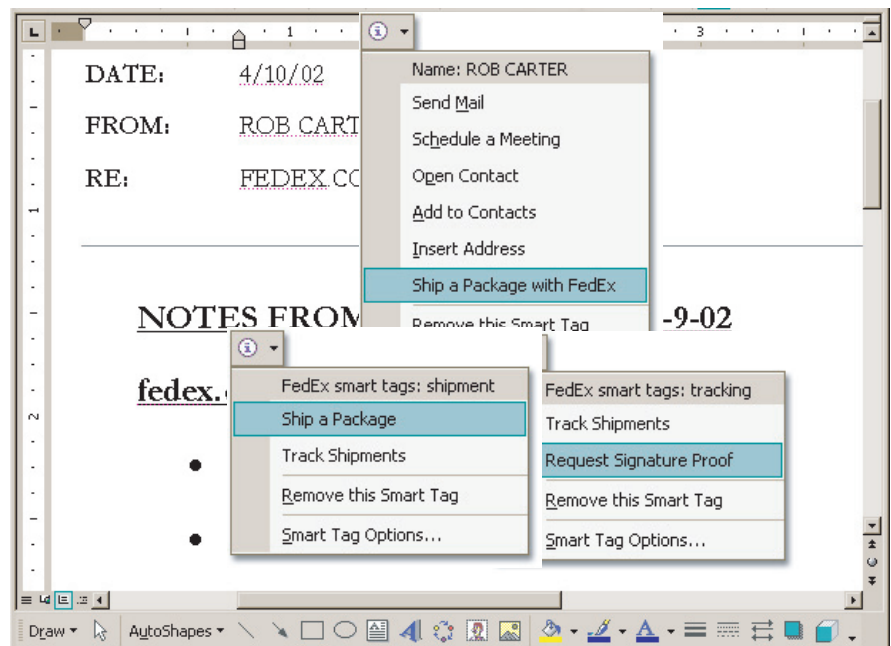


Figure 3.9: A screen shot that shows an opportunity for improvement

**Example:** The Opportunity Table with Opportunities to Improve CSFs column filled in

Rank	CSF	Business Process or Activity	Opportunity to Improve CSF	Technology
1	Increase revenue by cross-selling new, more profitable products.	Today it takes 1.5 days to collect and analyze the most current sales data for our top 32 customers. Sales teams ask IT to collect data from SAP and product marketing systems. <b>Activity SME:</b> Customer Service Manager.	A portal should be considered to collect and distribute product promotional material for use by Sales department.	

### Task 3: IDENTIFY IMPROVEMENTS WITH DETAILED PROCESS ANALYSIS

Depending on the complexity of the change and the culture of your organization, some stakeholders might require a clear description of how the processes will work after the initiative is implemented. This extra step might require additional work, but it will dramatically increase the chances of getting your initiative funded.

Figure 3.9 shows the pros and cons of a sample initiative.

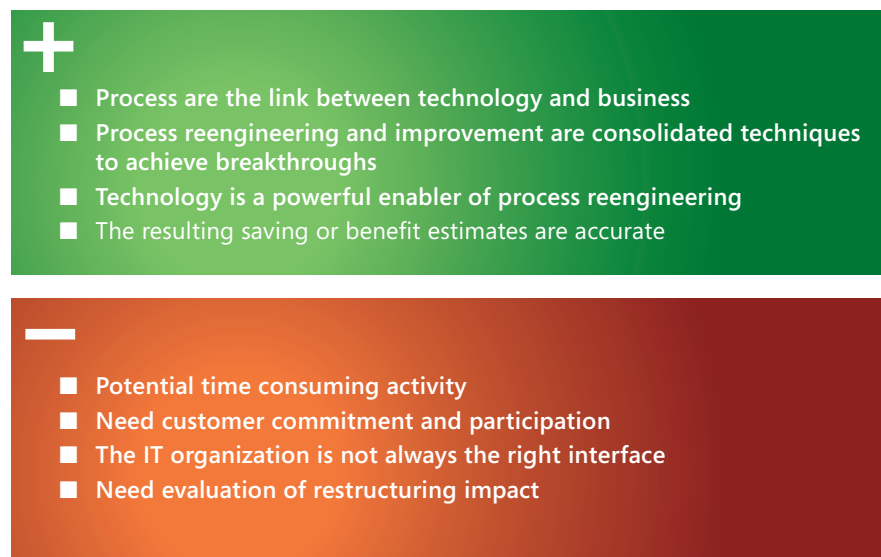


Figure 3.10: Pros and cons of detailed process analysis



Consider these points when you work on this task:

- Don't oversell the approach. REJ is about value restructuring, not business reengineering.
- Keep the analysis simple and at a high level.
- Consider using third-party tools such as those from Mega or Wizdom Systems.

In the REJ context—with *rapid* being the key attribute—the Business Value team recommends using process analysis techniques to graphically convey the changes that will result. Note that it is important to present your work at a high level rather than in great detail. In this way you reduce your up-front effort and can delay working out the details until after you receive funding.



### Improvements with Process Change



Another way to envision process improvements is to create a logic diagram of the workflow process before and after the IT initiative is implemented. Figure 3.11 presents an example that documents a paper-based form, with manual entry as the current state, compared to an electronic XML-based form as the desired state.

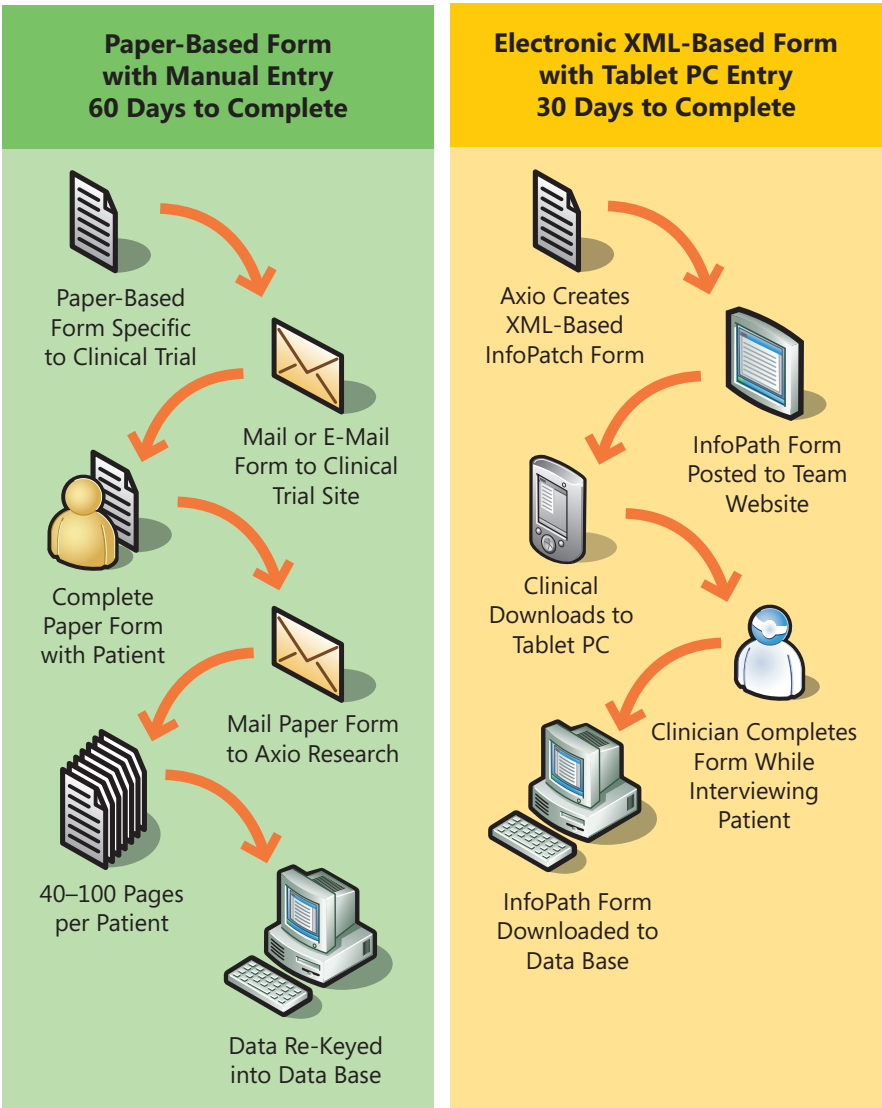


Figure 3.12: Logical diagram of before and after workflow

## Task 4: IDENTIFY IMPROVEMENTS DUE TO IT MATURITY OR GAPS IN TCO BEST PRACTICES

The MIT Center for Information Systems Research (CISR) and Gartner have each introduced models and benchmark data. These tools help identify areas of IT improvement based on industry data. If aligned to your organization's CSFs and respected by stakeholders, this information can make developing the economic justification easier. Because industry benchmark data such as impact on TCO is readily available at those research institutions, it is more reliable than data gathered from more conventional sources.

You may also consider using the Gartner Decision Engine for Cost Management (DECM) version 2.5 or higher. The Gartner DECM tool will help you go through a series of questions to assess the opportunity gap using IT industry-based best practices. The combination of the information about the gap in IT maturity or capacity to enjoy the lowest TCO per asset combined with the average IT cost data will enable the tool to generate a benefit projection for your initiative.



Using Gartner DECM software is very powerful because of the credibility of an independent research firm. As strong as this data is, you will still need to explain the logic beyond the result with some of the previous tasks. If you don't, you might face the challenging objection "...our organization is different from the average organization; hence, these numbers are not achievable by our company."

**Example:** This example shows a Gartner TCO best practices chart with Windows Server 2003 as the IT enabler.

Opportunity to Lower TCO (CSF) with Gartner TCO Best Practices	Definition	Technology Enabler—Windows Server 2003
<i>Change Management:</i> Automated deployments and server-based client image control	<ul style="list-style-type: none"> <li>■ In this managed user environment, a network or desktop administrator can use rules-based logic to control which applications, settings, network resources, databases, and other IT assets a user can use.</li> <li>■ This environment is defined by user ID.</li> </ul>	<ul style="list-style-type: none"> <li>■ Active Directory and Group Policies can be used to assign and enforce standard configurations for users and machines.</li> <li>■ User State Migration tool enables users to migrate personal data and settings from old system to target system during an operating system upgrade.</li> </ul>
<i>Change management:</i> Process		<ul style="list-style-type: none"> <li>■ IntelliMirror® software installation enables just-in-time installation, self healing applications, and full rollback after failure.</li> </ul>
<i>Operation Management:</i> Virus protection	Tools processes, and procedures that prevent and eliminate manual intervention for virus attacks and ensure smooth operations.	<ul style="list-style-type: none"> <li>■ Central distribution of virus signatures through Active Directory.</li> <li>■ Virus software can be controlled and locked down through Group Policies.</li> </ul>
<i>Operation Management:</i> Data Management		<ul style="list-style-type: none"> <li>■ Automated data synchronization between client and server with automated server progressive back up.</li> <li>■ User data recovery after disaster is automated.</li> <li>■ System Preparation utilities can image new PCs while IntelliMirror and Group Policies restore user applications, state information, and data.</li> </ul>
<i>Customer Service:</i> Service desk technology		<ul style="list-style-type: none"> <li>■ Leverage of professionally documented MS TechNet and the Microsoft how-to resources will improve service.</li> </ul>
<i>Change Management:</i> Automated deployments +plus server-based client Image control	<ul style="list-style-type: none"> <li>■ In this managed user environment, a network or desktop administrator can use rules-based logic to control which applications, settings, network resources, databases, and other IT assets a user can use.</li> <li>■ This environment is defined by user ID.</li> </ul>	<ul style="list-style-type: none"> <li>■ Active Directory and Group Policies can be used to assign and enforce standard user and machine configurations.</li> <li>■ User State Migration tool enables users to migrate personal data and settings from old system to target system during an operating system upgrade.</li> </ul>
<i>Change Management:</i> Process		<ul style="list-style-type: none"> <li>■ IntelliMirror software installation enables just-in-time installation, self healing applications, and full rollback after failure.</li> </ul>
<i>Operation Management:</i> Virus protection	Tools, processes, and procedures that prevent and eliminate manual intervention for virus attacks, and ensure smooth operations.	<ul style="list-style-type: none"> <li>■ Central distribution of virus signatures through Active Directory.</li> <li>■ Virus software can be controlled and locked down through Group Policies.</li> </ul>
<i>Operation Management:</i> Data management		<ul style="list-style-type: none"> <li>■ Automated data synchronization between client and server with automated server progressive back up.</li> <li>■ User data recovery after disaster is automated.</li> <li>■ System Preparation utilities can image new PCs while IntelliMirror and Group Policies restore user applications, state information, and data.</li> </ul>

In addition to Gartner, there are other providers of TCO best practices and simulators. One of these is TCONow! by CIO View. The TCONow! tool can help you identify opportunities, and help determine the financial costs and benefits of consolidating your servers to Microsoft Windows Server 2003. Five options can be considered:

- **No Consolidation:** Keep your Microsoft Windows NT® version 4.0 servers and simply replace their server operating system with either Microsoft Windows 2000® Server or Windows Server 2003.
- **Rack and Stack Consolidation:** Consolidate your current Windows NT 4.0 and/or UNIX servers onto new, faster, and more space-efficient UNIX, Windows 2000 Server, Windows Server 2003, Windows 2000 Datacenter Server, or Windows Server 2003 Datacenter Edition servers.
- **Resource Optimization:** Consolidate your current servers onto new UNIX or Windows servers that are divided into partitions; each partition has its own operating system and application instance.
- **Application Consolidation:** Consolidate your current applications into a more unified software stack, and thereby take greater advantage of server consolidation opportunities as you move from your current Windows NT 4.0 and/or UNIX servers to newer UNIX, Windows 2000 Server Windows Server 2003, Windows 2000 Datacenter Server, or Windows Server 2003 Datacenter Edition servers.
- **Heterogeneous Workload:** Consolidate your current Windows NT 4.0 and/or UNIX applications onto Windows 2000 Datacenter Server or Windows Server 2003 Datacenter Edition servers that are each running a mix of applications in the same operating system instance. A heterogeneous workload can almost be thought of as mainframe-light in terms of workload management.

If you are interested in using TCONow! by CIO View, contact the Microsoft Business Value team ([rej@microsoft.com](mailto:rej@microsoft.com)). They will help you get the right information about using TCONow! with Windows-based systems.

## Task 5: USE THE CRANFIELD UNIVERSITY BENEFIT DEPENDENCY NETWORK FRAMEWORK

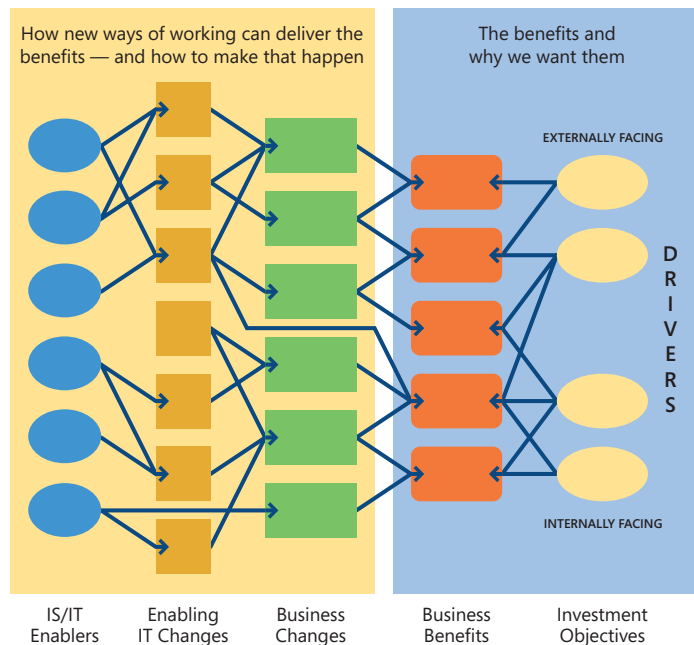
Certain stakeholders, such as CFOs or controllers, might not need financial metrics to estimate the value of the opportunity, because they respect the decisions of strong leaders within their organization. In this case, you might consider using the Cranfield University Benefit Dependency Network (BDN) tool as a graphical representation of the transition between content, outcome, and purpose of your initiative.

The BDN process works back from the business drivers (or CSF), to the objectives (required benefits and associated business changes), to the key technical solutions and enablers. It can therefore address the question, “What improvements can we get in terms of benefits to the particular individuals and groups (i.e., stakeholders),” which in turn addresses, “Where will the improvement happen.” Such an approach provides input into what key changes need to be made to be able to deliver the benefits, as well as any disadvantages that will have to be managed.

- The drivers say WHY the investment is being considered/made
- The objectives define the FUTURE STATE that the investment should produce for the organisation
- The benefits are WHAT improvements will appear in the business and ownership
- The change and enablers define HOW the benefits can be made to appear and ownership

The BDN process can be used as a very high-level visual tool or can provide immense detail for a specific project. However it is used, because the BDN components are interlinked, the resulting interdependencies can be clearly seen and hence priorities defined through the network, thereby highlighting what are the critical investments and realisation plan over time by focusing on stakeholder ownership of change and value-based metrics.

Figure 3.12 shows how to structure process improvement analysis using the Cranfield University Benefit Dependency Network.



**Figure 3.13: Example of Cranfield University Benefit Dependency Network**

For more information about Cranfield University and the Benefit Dependency Network tool, go to “Resources and More Information” later in this guide.

## Activity 3: IDENTIFY TECHNOLOGY ENABLERS



### Inputs

- ☐ List of CSFs identified in the Business Assessment Roadmap.
- ☐ List of opportunities for improvement identified in Step 1.
- ☐ List of business activities identified in Step 1.
- ☐ List of technical enablers identified in Step 2.



**Output:** List of technical enablers mapped to each opportunity

Technology enablers are those capabilities of the IT initiative that, with other factors, enable improvements in an activity. For this activity, you identify specific capabilities of the IT initiative and link them to the various activities to demonstrate how the proposed benefits will occur.

Technology enablers can also be considered features within a solution that solve a specific problem. For example, a technology enabler that supports the opportunity “improve communication and information sharing across locations” could be “collaborative messaging platform.”

A technology enabler can be a product, a feature, a set of products, or a custom line of business application.

The process of mapping the technology enabler to the opportunity and activity is very straightforward. You will repeat this process for every CSF identified in the Business Assessment.



Common risks in this task include:

- Inadequate understanding of the limits of the technology.
- Quality of the technology product identified.
- Quality of the supplier support services.

**Example:** The Opportunity Table with technical enabler information filled in for the highest-priority CSF.

Rank	CSF	Business Process or Activity	Opportunity to Improve CSF	Technology
1	Increase revenue by cross-selling new, more profitable products	Data collection time for cross-selling promotions. It takes 1.5 days to collect and analyze the most current sales data for our top 32 customers. Sales teams ask IT to collect data from SAP and product marketing systems. <b>Activity SME:</b> Customer Service Manager	A portal should be considered to collect and distribute product promotional material for use by the Sales department	<ul style="list-style-type: none"> <li>■ SAP-Office 2003 integration</li> <li>■ Office SharePoint Portal Server 2003 and Office 2003 integration</li> </ul>



## Activity 4: ASSESS RISKS



Risk assessment ensures that you have performed the required activities for this step successfully, and have identified potential situations where lapses in information or judgment can have a negative effect on the desired outcome.

It is not easy to complete this step without spending too much time in comparison to what is necessary at this phase in the lifecycle of your initiative. Some points worthy of consideration for this step include:

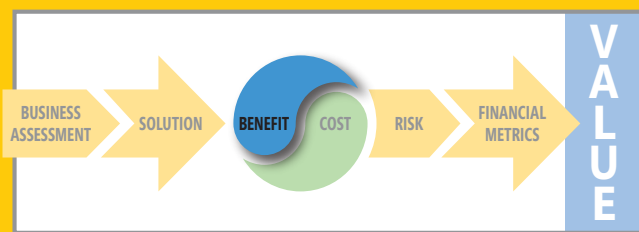
- **Duration.** The amount of time necessary to acquire the inputs and validate findings with your stakeholders can make this step very time consuming. You can reduce the time necessary for this step if your organization already has a blueprint of activities, such as process diagrams or a value chain. If information is not available, be sure to allow sufficient time to collect, collate, and validate this information.
- **Access to process subject matter experts and users.** You might need to go outside your organization to industry experts or to third-party benchmark data to provide guidance in completing this step. Be sure to allow time for these supplemental activities if they are required.
- **Critical success factors are not clearly defined.** During this step, it may become clear that you do not have a clear understanding of the CSFs or the strategies needed to achieve them. If this is the case, you should go back to Step 1 and repeat the process until you have captured the correct information.
- **Right stakeholders are not identified.** Once you understand the size and type of the process change, you might realize that previously chosen key stakeholders may not have been identified correctly. If this happens, you might not have revealed the key activities. Go back to Step 1 and to the stakeholders identified in the Business Assessment Roadmap and, using your current work, present the stakeholders with your discovery.
- **Analysis paralysis.** It is easy to get stuck overanalyzing processes and activities. Focus on maintaining an appropriate level of detail to get to the solution, and limit activity analysis to only the most critical tasks.
- **Not enough understanding of industry practices.** If you don't understand the process well enough to propose improvements at this point, you might want to call a specialized partner or supplier. Usually, they are happy to allocate the time of a specialist when they see preparatory steps have been completed.



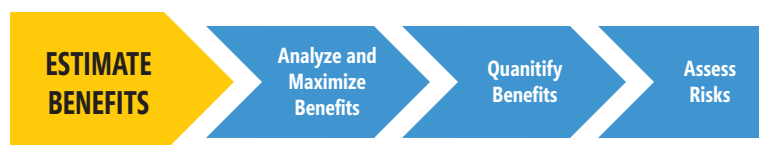
**Output:** The Risk assessment table.

**Example:** The Risk assessment table filled in.

Description of Risk	Probability	Mitigation Opportunities
Driven by the need to find the fit for your initiative, you might identify problems that don't exist or have little impact	30%	Disregard improvements that are hard to measure by using stakeholder KPI when quantifying benefits in Step 3
Given the current maturity of your organization and technologies, the desired state is too ambitious	60%	<ul style="list-style-type: none"><li>■ Get a business and technology architect to review the opportunity proposal</li><li>■ Identify internal and external specialists engaged in the project</li></ul>



## Step 3: ESTIMATE BENEFITS



**Purpose:** Quantify the opportunity to create benefits aligned with CSFs by using money as the unifying measurement that expresses the value of benefits.



A benefit is a benefit only if it is aligned with a CSF and it can be measured with a KPI.

The decision to invest in the IT initiative will be based on how well the solution meets the needs of your organization. For profit-focused organizations, this decision is based on how much cash is returned to the organization by the solution and how quickly it is returned. For non-profit organizations, the decision is often made by assessing how much cash is conserved by implementing the solution. In either case, your stakeholders need a clear understanding of the quantified benefits associated with the IT initiative. You will calculate the costs of the IT initiative later in Step 4, and use benefit and cost information to develop the cash flow analysis in Step 6.

The benefit-cost calculation conducted in the REJ process goes beyond a simple itemized list of benefits for the IT budget owners, and for IT savings generally highlighted under the TCO umbrella.

To get sponsorship for your IT initiative, benefits must be expressed in the language consistent with CSFs and KPIs used by the business decision makers—the language of business, money, and finance—not features and benefits of a specific IT application. Presenting a value proposition based on quantifiable evidence facilitates the change management component of value realization.

IT managers often say that benefits are too hard to measure. The result of that way of thinking is that business decision makers are left with clearly defined costs and qualitative, uncertain benefits. Under these conditions, no action is the most likely result of your effort to propose an IT solution. Decision makers need to make sure that the benefits are bigger than costs. To make benefits and costs comparable, you must use the only metric that is valid for comparing time: money, measured in the currency in which your company does business. KPI values are an important proxy for money, since all organizations know the economic value of reaching the desired state.

**Tasks:** In Step 2, you identified the business activities that are most likely to have a positive effect on CSFs and the technologies that provide the capabilities to accomplish the changes. In this step, you identify and then estimate the economic benefits that come from implementing the technologies of the IT initiative.

To secure a complete representation of the benefits of the initiative, the IT manager should fill in the REJ 2X4 Benefit Matrix as a visual tool that highlights the benefits of the initiative. As an IT manager, it is your duty (like Christopher Columbus's) to represent the consequences to the business in the other part of the benefit list.

Though benefits can be classified in several ways, you should use two categories of benefits: increase or protect revenue and reduce or avoid costs.

On the x-axis of the 2X4 Benefit Matrix, include the capacity to either increase or protect revenue or to reduce costs. For example, in competitive situations you sometimes must protect things you already own, such as market share, unique production know-how, or intellectual property.

On the y-axis of the 2X4 Benefit Matrix, you should include the capacity to affect the value created either inside or outside the IT domain. Examples inside the business domain include functions or processes in the value chain, while external examples include IT operations, IT services, or applications.

A *function* is a set of resources dedicated to produce a required internal or external result such as sales, legal, or customer services. A *process* is a set of tasks and activities executed by people in different roles. When executed in a coordinated manner, processes produce a desired service or product. For example:

*“The asset procurement process will require activities performed by product planners, legal experts, purchasing officers, controllers, suppliers, and customers.”*



Common risks for this step include:

- Information needed to estimate benefits may be difficult to obtain. If this is the case, offer to sign a Non Disclosure Agreement (NDA) or research industry average data on the Web.
- Benefits may be intangible or difficult to measure.
- Benefits are not easy to categorize in a Benefits Matrix. Feel free to modify the Benefit Matrix to match the language and culture of your organization.
- Benefits are real but cannot be realized until some future date. Consider this in Step 6 when you build a discounted cash flow. Business managers understand the value of money over time.
- Business sponsors have low confidence in the benefit estimates. Ask an auditing company like Gartner or Bearing Point to do a quality review. Feel free to contact the Microsoft REJ team for more information.



#### Inputs for identifying and quantifying benefits

- ☐ Opportunity to improve CSF from Step 2.
- ☐ KPI and KPI gap analysis taken from the Business Assessment Roadmap.
- ☐ Hypothesis Table built in Step 1.
- ☐ Benefits category and benefit Matrix worksheets from the REJ workbook.



#### Output: REJ 2X4 Benefits Matrix

This output can contain different information, such as:

- A Benefit Matrix with qualitative links to KPIs.
- A Benefits Matrix filled with quantitative benefits.

**Example:** A completed Benefits Matrix with qualitative and quantitative benefits filled in.

	Value Creation—IT		Value Creation—Business		Total \$
	IT Operations	Application Development	Function	Process in the Value Chain	
<b>Increase or Protect Revenue</b>					\$\$\$
<b>Reduce or Avoid Costs</b>					\$\$\$

# Activity 1: ANALYZE AND MAXIMIZE BENEFITS



The purpose of this activity is to analyze the benefits that can result from the IT initiative. This analysis can make the quantification exercise easier by showing (at a qualitative level) the impact of the benefits on the KPIs listed in the Business Assessment Roadmap.

Benefits are advantages that your organization may realize by implementing the IT initiative. Benefits are aligned with CSFs and expressed in terms of their impact on KPIs. A benefit cannot be counted as a benefit unless a stakeholder accepts it as a relevant benefit. Therefore, benefits define the value of the solution in terms significant to the stakeholder and in terms that each stakeholder owns.



## Output

- A list of direct and indirect costs mapped to each CSF.
- Qualitative description of all benefits linked to strategies and KPIs.



If you have a good potential benefit but it is not aligned to the CSFs of your current key stakeholders, either drop this benefit or go back to the Business Assessment Roadmap and find another stakeholder whose CSFs are affected by your benefit. Benefits will become real only if business behavior changes and somebody in the business area endorses the change during the change management process. Remember, no change equals no value!

There are two tasks in this activity:

- **Task 1:** Analyze benefits for each CSF
- **Task 2:** Maximize the Benefit for Each CSF

## Task 1: ANALYZE BENEFITS FOR EACH CSF

In this task, you analyze the benefits for each CSF by identifying the direct and indirect qualitative benefits, and then you fill in the Benefits Matrix. Benefits can be either direct or indirect.

### Direct benefits

These are the benefits gained in someone's budget through the changes made with your proposed solution. For example, self-repairing applications in Windows Server 2003 and Office XP lead to reduced end user downtime. In the 2X4 Benefits Matrix this affects two areas:

- IT operation costs for repairs (such as help desk calls or escalation technical dispatch) that affect the TCO of KPIs.
- Capacity of the procurement function to negotiate faster contracts or to reduce costs associated with each contract, which affects the cost of goods sold KPI.

## Indirect benefits

These benefits can be realized by extending an inherent ability of the technology. For example, Windows Server 2003 offline files can be used to enable a mobile sales staff to sell more products without having to go online.

In another example, Windows Server 2003 makes the new extensible Windows Active Directory directory service, available to your organization. With about one day of additional work for every 100 users, you can make available contact information such as title, division, managers, cost center, and security clearance level for every employee. This capability affects the lower COGS KPI by reducing the cost and time needed to develop a contract. Users can find the subject matter experts in any different division and role. In this case you will report:

- The benefit in the Reduce Cost-Value Opportunity in the process.
- The technical enabler (extending Active Directory attributes) in the list of technology enablers in Step 2.

Use the following benefit categories to populate the Benefits Matrix:

- **Cost savings.** Direct and indirect cost savings typically result from:
  - Eliminating low value-added activities.
  - Streamlining business or workflow processes.
  - Reducing time to access information.
  - Reducing management and oversight activities.
  - Improving inventory control.
  - Improving purchasing decisions.
  - Reducing or eliminating periodic upgrade expenses.
- **Cost avoidance.** Direct and indirect cost avoidance benefits typically result from the ability to modify a business process so that future costs are not incurred. For example, regulatory compliance requires that financial data changes inserted by any person must be validated by a controller who uses a specific set of rules. The implementation of Office 2003 SmartTags, which implement an automated validation workflow to quickly handle any problem, will avoid cost of sanctions, legal costs to defend shareholders legal suit, and so on. In this category don't forget to add the cost technology enabler to the Opportunity Table (Step 2).
- **Revenue protection.** This category of benefits includes the protection of existing assets or revenue streams that would otherwise be at risk to new competition or new channels. For example, advanced handling of encryption, such as public key infrastructure (PKI) or digital rights management in a proposed workflow automation initiative, would enable the organization to avoid the loss of confidential information. By using the 2X4 Benefit Matrix and working with the stakeholder, you might decide to report a likely scenario and the consequences of having to change procedures to make information sharing non-threatening.
- **Revenue enhancement.** The benefits result in incremental increases in revenue that are directly attributable to the IT initiative, such as e-commerce, mobile computing, etc.



## Task 2: MAXIMIZE THE BENEFIT FOR EACH CSF

Maximizing benefits should be seen from two points of view. For example, you can:

- Find new business improvements in different areas with the set of technology enablers already identified.
- Explore larger benefits that can be achieved with little marginal effort. This approach is similar to obtaining more stakeholders to support the IT initiative rather than resisting the initiative.

Use the 2x4 Benefits Matrix and the Protect Revenue and Avoid Costs categories to credit the project for all the business consequences, not just the obvious IT-centric savings or revenue-generating benefits.

IT initiatives can also realize strategic flexibility (also referred to as benefits with an option value). Option benefits can result from specific capabilities of the IT initiative that may not be deployed at the same time as the core capabilities but can be deployed in the future. Therefore, they are potentially available. The value your organization would receive is based on exercising the option to deploy these capabilities in the future. See Step 6 for more details on valuing option benefits.

Fill in the rest of the REJ 2x4 Benefit Matrix cells with the quantifiable opportunities you have discovered. Add this information to the list of Technology Enablers in the Opportunity Table.

**Example:** A Benefits Matrix filled in with qualitative benefits.

	Value Creation—IT		Value Creation—Business		Total \$
	IT Operations	Application Development	Function	Process in the Value Chain	
Increase or Protect Revenue			Supplier Mgmt		\$\$\$
Reduce or Avoid Costs	TCO				\$\$\$

## Activity 2: QUANTIFY BENEFITS



The common language of IT and business managers is money. For example, the CIO of Federal Express has said “If I can’t measure it, it will not get done.” Benefits quantification is a managerial tool for change management.

If you cannot define a benefit in measurable terms, your value proposition is weakened significantly, and your chance for funding is diminished. If this happens, it is likely that the funds you requested for the IT initiative will be used for some other investment. In this situation you may have lost a strategic opportunity because you could not explain the value proposition of your IT initiative effectively.

In this task, you estimate the economic benefits of the IT initiative. If you are using the REJ workbook, use the Solution Benefit Analysis worksheet.

There are several ways to define quantitative value, but the following approaches are usually very effective:

- The value of one.
- Expected monetary value.
- Real options.
- Goal seeking.
- Projecting data from external benchmarks for your scenarios.

### The Value of One

This is a very simple quantitative technique to use. First, you need to agree with the stakeholders on what the value of the solution would be if they increased the agreed upon KPI by 1 unit.

Then, discuss with the stakeholders how many units could be achieved with this initiative. Use best-case and worst-case scenarios to get two data points. You then negotiate a target number of KPI units that can be reached with your initiative. This would be a number between the two data points just identified; note the requirements for the cost estimate.

Then, you calculate the value by using this formula:

$$\text{Benefit value} = [\text{Value of 1 KPI unit}] \times [\text{Target number of KPI units}]$$

## Expected Monetary Value (EMV)

The monetary value can also be estimated by the expert opinion of a professional with several years of experience. If the stakeholders or the controller are not ready to support any estimate, ask what the probability of achieving the KPI value would be and multiply the estimated value by the probability. This technique can be applied to any estimate, even one produced with the value of one approach. Calculate the formula for EMV by using this formula:

$$EMV = [Value\ of\ 1\ KPI\ Unit] \times [Number\ of\ KPI\ Units] \times [Probability\ that\ the\ change\ will\ happen]$$



If you use EMV, make sure to note any risk mitigation activity. Promise to make the stakeholder agree on the probability of that

number.

## Simulations

This approach is used mostly by fans of activity-based accounting (ABC). If you use it, identify the current revenue or cost structure of your organization or functional area. Quantify how the IT initiative will change that cost or revenue structure incrementally.

This approach is most appropriate when the benefits and changes are incremental, and baseline data such as a detailed balance sheet is available electronically. You can implement this method by using Excel, or by using tools such as those proposed by Finlistics, Gartner TCO Analysis, or Gartner DCEM. These tools can help you run simulations.



For example, if you are comfortable that you can change a certain KPI by X, simulate how the rest of your organization's financial metrics and the balance sheet will change. You might want to simulate revenue or cost metrics before and after the change and take the difference as a measurement that you enter into the Benefit Matrix. Whatever approach you choose, make sure to publish the source, and try to have the data provider review the use of the data.

For example, suppose that you believe that by following Gartner TCO best practices, you can reduce the Number of IT Interventions Due to Security Problems KPI by 50 percent. Using Gartner DCEM, you simulate the impact on TCO per PC before and after implementation. The delta is your cost savings in the Cost Reduction-IT Operation cell in the 2x4 Benefits Matrix.

## Real Option Theory

Many large organizations find it hard to quantify the future value of any investment, not just IT investments. To deal with this challenge, many forward thinking business managers are starting to use sophisticated techniques typical of those used with success in the financial investment community. One technique, real option theory, can be used at a basic level with a decision tree, or at an advanced level by taking advantage of the applied economic theories of Fischer Black and Myron Scholes.

For example, at a basic level the real option theory works because it takes into account both the probability of an event occurring in the future and assigns an economic value to that event at the time it occurs, and the probability of the event not occurring and assigns value to the scenario with the initiative implemented but not with the key event.

Starting from a 100 percent baseline, you can assess what the benefit of using the proposed technology is if event A can occur in 30 percent of the cases. Then in the remaining 70 percent of the cases (which we would define as business as usual) the IT initiative will produce a smaller contribution.

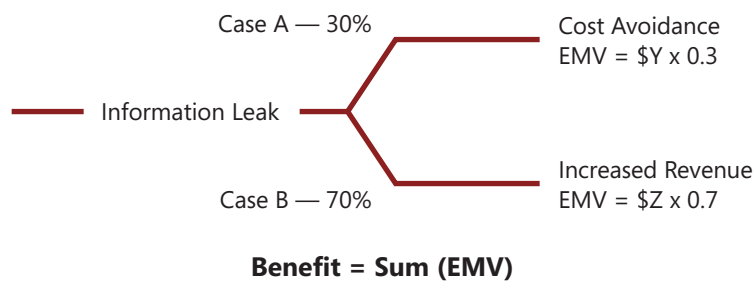
For example, consider the following scenario:

**Scenario:** A security initiative for information workers in the credit card marketing department of a bank.

**Initiative:** Use the digital rights management capabilities from Microsoft Office XP and Microsoft Windows Server 2003 that will allow tracking of who has used the information and to whom it was sent, and prevent the forwarding of the same information from unauthorized personnel. Consider the possibility of two events:

- **Event A—30% probability.** A list of very important customers that responded to an expensive marketing promotion is leaked to a tabloid newspaper, to competition, or to hackers. Assume that it will cost \$Y in legal fees to cover damages, principally because client confidentiality is a key service of the bank.
- **Event B—70% probability.** No tragic leak event occurs, but employees in the credit card department, knowing the trustworthy level of security due to the new technology, stop hiding information and start sharing information. Sharing the database helps to create new opportunities and ideas that generates \$Z in new revenue.

Figure 3.13 graphically presents the decision tree and the calculation using EMV.



**Figure 3.14: Decision tree and real option modeling**



It is possible to make a case for quantifying all the possible optional uses of the proposed technology, yet the counter argument is that a core principle of conducting an REJ is to forge stronger relationships between IT and business units. If you therefore present a value proposition in which you have quantified and accounted for hundreds of optional ways that the same technology could be applied without the correct stakeholder caring about each use, it could confuse the stakeholders. One caveat is that, if the key stakeholder is a CFO, this problem is minimized.

Real option modeling is sometimes the only option when building a value proposition for IT infrastructure projects as opposed to a specific LOB application, because most infrastructure projects provide value across multiple business units.

Here is one way to calculate the option value of future benefits in the REJ Framework:

1. Draw a decision tree describing the current status at the root.
2. Go back to the Opportunity column in the Opportunity Table in Step 2 and add a branch to the decision tree for every opportunity. Feel free to add opportunities not aligned with the current stakeholders or that can come up in later years.
3. Use the Benefits Matrix category to identify their maximum qualitative and quantitative impact (such as protect revenue, reduce cost, etc.).
4. Use EMV to quantify each event.
5. Summarize all the final EMVs using the 2X4 Benefits Matrix categories. This helps you see all the possible consequences that the introduction of this technology has the opportunity to generate over an X year timeline.

As in the example, you would identify \$Y million in potential cost avoidance from implementing the process to deal with event A, and \$Z million in revenue increase from implementing the process to deal with event B over the 3 year timeline of the initiative. You will include all inputs from each category in the 2X4 Benefits Matrix.

### Goal seeking

Suppose that you have a clear understanding of the cost of your initiative and the monetary value of most of the aligned benefits, but you need more benefits to compensate for the large cost of the project, especially when you consider risk mitigation requirements. At this point, you can set the desired value of the benefit. Look in the Opportunity Table in Section II for the Opportunity for Improvements and associated KPI that has either more flexibility to reach a higher result if you pay more attention to it, or the opportunity that is associated with the KPI that has more potential.

Use the Goal Seek function of Excel to search for the value that this KPI must have for the benefit to equal the desired benefit. Discuss your results with stakeholders and process subject matter experts (SMEs) to determine what can be done to extend the proposal to reach the new desired level of performance. Demonstrate a commitment to follow-up by making sure that the new conditions will be respected.

### Project data from external benchmarks for your scenarios

When baseline costs or revenue data are available in sufficient detail but desired state information is not easily quantifiable, you can calculate the benefits by using external benchmarks. With this technique, you can provide context for data that comes from external sources and apply it effectively to your economic analysis.

The Microsoft Business Value team has collected IT-related information from enterprise organizations around the world. They can share relevant data points from the organizations that have authorized the use of their REJ metrics. Industry databases, such as those from Gartner, IDC, Meta, KPMG, Glomark, Wipro, Navigant, Lawrence Associates, and others, might provide useful benchmark data that you can apply to your environment.



Most IT managers have a solid understanding of how to track and measure costs. But measuring the benefits of an IT investment can often be tricky. Traditionally, IT investments were measured by estimating the reduction in labor costs associated with the IT initiative. This approach may not be meaningful in estimating benefits for specific user groups such as knowledge workers or salespeople. More appropriate measures of value might include, but are not limited to:

- More productive time for knowledge workers.
- Shorter cycle time.
- Less use of working capital.
- Lower support and infrastructure costs.
- Less uncertainty or risk of an outcome.
- Less turnover.
- Greater organizational flexibility.

Begin by reviewing each qualitative value statement developed in the previous activity. Next, determine how to translate the statement into a measurable benefit. For example, your team has identified a potential value statement as “increase sales by 50 percent.” But what exactly does that mean from a cash flow perspective? At the very least, doubling the efficiency of the sales staff has the same effect as doubling the number of sales people without actually hiring new salespeople.

In this example, assume there are 100 salespeople, and each is paid \$50,000 per year in fully burdened salary and commissions. The annual payroll for sales is therefore \$5,000,000 per year (100 X \$50,000). Doubling the productivity of the sales force would be the equivalent of hiring an additional 100 salespeople. In effect, the benefit to the organization would be an additional \$5,000,000 per year less the costs of hiring, training, salary, benefits, and overhead costs such as PCs, phones, and travel expenses.

Another way to measure the benefit would be to determine the productivity per salesperson and double it. However, it is important to validate your approach and its results with stakeholders or benefit owners, who in the case of this example is probably the vice president of sales.

For every benefit that you identify and quantify, it is essential that you engage with the stakeholder to determine which methodology you use to quantify the benefits for the KPIs.

### Using external benchmarks

You might want to use external benchmarks in your scenarios. REJ emphasizes five specific steps to quantifying benefits in economic terms. These include:

- 1. Determine current process outputs.** Define baseline assumptions. For example, if you want to measure productivity, the first step is to define productivity the way your organization defines it, such as:

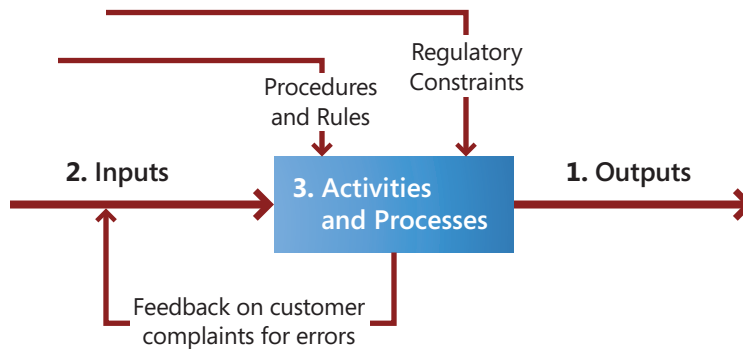
*Productivity: the measured relationship of the quantity and quality of unit produced per unit of time (outputs) and the resources required (inputs).*

Outputs are usually measured in terms of volume of business units. Get outputs from the metrics compiled by your stakeholders for specific KPIs.

- 2. Determine current process inputs.** Inputs are usually measured in terms of labor or material units. Get appropriate input metrics from your stakeholders.

- 3. Determine the effectiveness of current activities, current IT solutions, or both.** Your stakeholders will tell you whether the current activities have been effective and by how much. They will also tell you the metrics upon which they base their assessment of the effectiveness of relevant activities.
- 4. Compare current levels of productivity.** To see if your expectations are realistic, compare the levels of productivity your division or business unit currently experiences with those of other parts of your organization. You can also use benchmark data or evidence from other organizations with similar activities, or third parties who compile quantitative data.
- 5. Forecast future quantitative benefits.** It is important to agree with your stakeholders about the forecasting tools and methodologies you use. Always use the Business Assessment Roadmap (Step 1) to ensure that the benefit calculations use terms that are meaningful to the stakeholder (how to communicate outputs). Avoid using black-box tools, where metrics and processes cannot be explained because you must know how to explain your analysis when you present the final value proposition.

Figure 3.14 shows an example of basic output-input analysis.



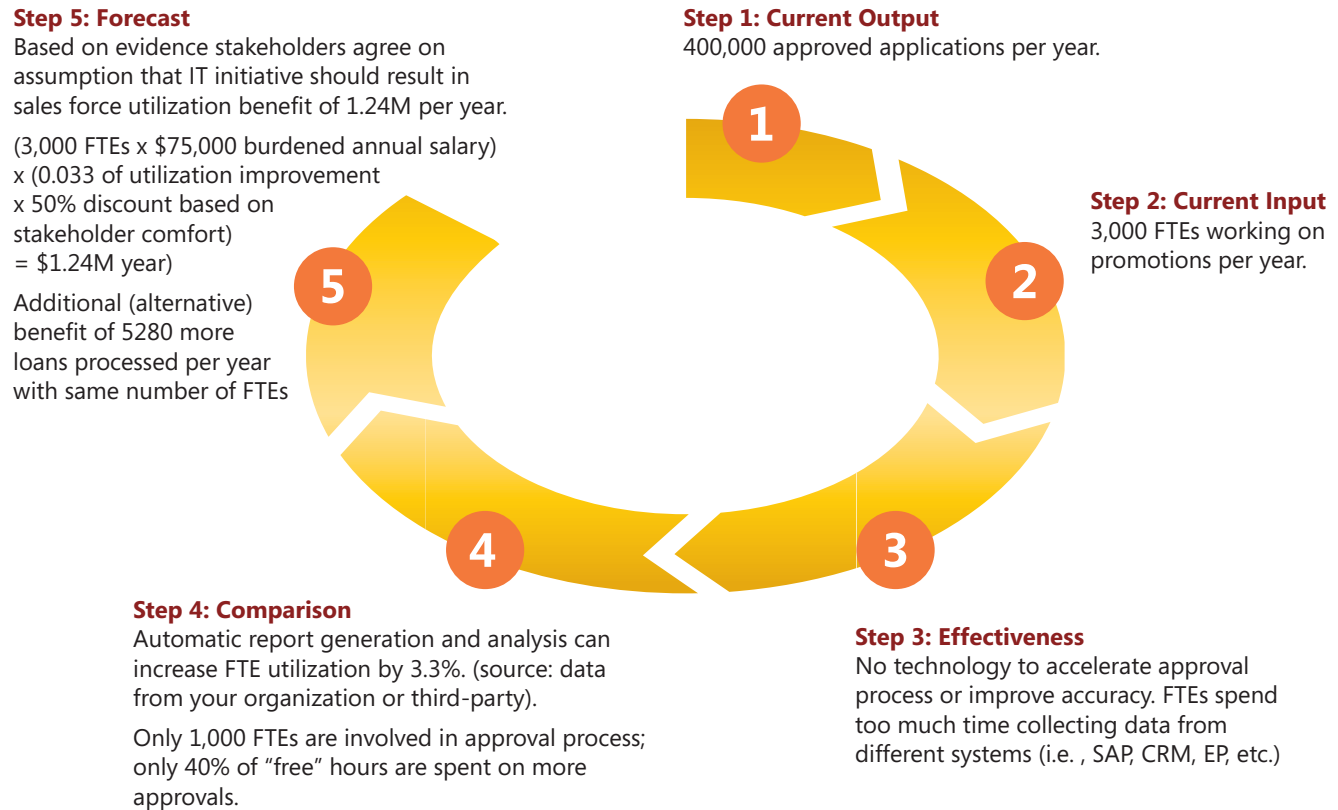
**Figure 3.15: Basic output-input analysis**

The process of forecasting is relatively straightforward:

- 1.** Multiply the number of FTEs affected by their fully burdened annual salary times the estimated improvement (based on evidence from your organization or that of trusted third parties) to get your estimated benefit.
- 2.** Then, ask your stakeholders how comfortable they are with the final benefit estimate. More than likely, they will want to discount it so that they have some buffer room.
- 3.** Take your original estimate and multiply it by the percent discount desired by your stakeholders, and you will obtain a reasonable estimate that you can use in your forecast.
- 4.** Take any raw metrics that result from your calculations and convert them into metrics that use the stakeholder's preferred units of measurement. Use inputs and outputs from other parts of your organization to gather the inputs and outputs for your IT initiative. Choose evidence that can be relied on for relevance and accuracy.



Figure 3.15 shows how to use these five steps to benefit quantification in an example. XYZ bank is considering the introduction of workflow automation that uses Microsoft Exchange Server 2003 and Office InfoPath™ 2003 for approval automation.



**Figure 3.16: Five Steps to benefit quantification**

Forecasting the value of future benefits has been likened to “quantifying the unquantifiable.” Because it can be challenging to figure out hard economic values, there is a simple but very useful tool that you can use as part of the forecasting process to make sure that your results are both relevant and accurate.

In Step 1, we asked you to consider how a 1 percent change in any KPI could have a significant impact on your organization. Now, let’s return to that 1 percent figure and apply it more concretely.

Here is a situation that you can use to assess the value of improving any KPI by 1 percent. Consider this example, in which a 1 percent increase in user uptime is gained by less desktop PC downtime:

- Each end user works 1,600 hours per year.
- An extra one percent of end user time is equivalent to 16 hours per user per year.
- Less downtime saves 400,000 hours of end user downtime:  
*25,000 PC users in the organization x 16 hours per user = 400,000 hours of user time regained*
- The 400,000 hours is equivalent to 250 FTE employees.
- The organization will avoid \$12.5 million of end user salary costs per year.  
*\$50,000 per year fully burdened salary per FTE x 250 FTEs “saved” per year = \$12.5 million.*

You've already done a qualitative assessment that you will avoid costs. Now, go back to the Benefits Matrix and fill in the cost avoidance category with the hard, quantitative metric of \$12.5 million per year.

From this example, you can see the basic process that you will use to quantify the unquantifiable.

You need to conduct the same analysis for each benefit associated with each strategy and KPI. There are no short-cuts. Since *this exercise and cost data will form the basis of your cash flow analysis*, it is essential that you quantify the benefits as best as you can during this activity.

When you get to Step 4, "Estimate Costs," you will most likely discover new information that *might* influence how you calculated benefits. When this happens, return to the worksheets you created in this step and make the necessary changes in your assumptions to make your expected benefits more realistic.

Note that there are significant risks associated with this process, which are presented in the last activity of this step.

**Example:** A Benefits Matrix with values filled in.



**Output:** A Benefits Matrix

with quantitative values filled in.

	Value Creation—IT		Value Creation—Business		Total \$
	IT Operations	Application Development	Function	Process in the Value Chain	
Increase or Protect Revenue					\$\$\$
Reduce or Avoid Costs					\$\$\$

## Activity 3: ASSESS RISKS



Risk assessment is necessary to ensure that you have performed the required activities for this step successfully and have identified potential situations where lapses in information or judgment can have an impact on the desired outcome. In Step 3, you completed the following activities:

- Identified benefits.
- Defined the benefits as either quantitative or qualitative.
- Assigned an economic value to the benefits.
- Filled in the REJ Benefits Matrix with your results.
- Mapped every benefit to a strategy and KPI in the Business Assessment Roadmap.
- Validated all benefits and the anticipated economic benefits with the appropriate stakeholder.



Risks associated with this step include, but are not limited to:

- Lack of information. It may be difficult to obtain the information needed to estimate benefits.
- Benefits are hard to measure. Benefits may be intangible or difficult to measure.
- Benefits are not realized in an appropriate timeframe. Benefits are real but cannot be realized until some future date.
- Low confidence in estimates. Business sponsors have low confidence in the estimates.

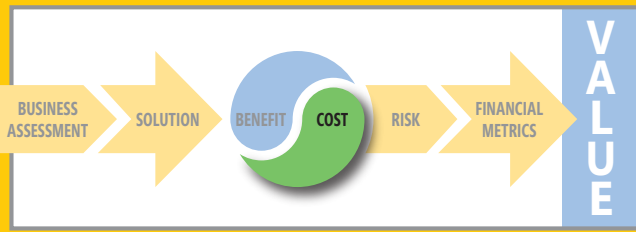


**Output:** Completed Risk Assessment Table

**Example:** A Risk Assessment Table filled in with benefit-related risks.

Description of Risk	Probability	Mitigation Opportunities
Benefit calculated with incorrect or obsolete sources	30%	Make the stakeholder review and endorse the possibility
Benefits are real but cannot be realized until some future date	50%	Make sure your report them in the cash flow analysis using the correct discount rate
Business sponsors have low confidence in achieving those objectives	25%	Work on changing the management plan





## Step 4: ESTIMATE COSTS



**Purpose:** In this step, you identify and quantify the costs needed to implement the desired changes established in the Benefits Matrix and documented in the Opportunity Table technology requirements portion of Step 2.

Costs refer to the expenses involved in implementing and managing the proposed IT initiative. Within the context of an REJ value proposition, cost analysis involves quantifying the expenditures associated with specific aligned benefits.

Cost analysis is also important because it helps to determine the minimal economic value that all of the benefits added together must meet. Some managers occasionally say that the initiative will be done because they must do it, for example because the company must comply with regulations. In this instance, the key question may be, “When should the implementation be done?” For example, should the company take a risk and delay the implementation and hope for an extension on corporate compliance? Another question that might arise is, “how automated should the solution be?” Or “dare we risk a financial penalty for not complying?” In other words, should the organization hire temporary contract workers and do everything manually to meet the deadline for compliance, or should they wait for the automated solution?

Cost analysis can also change the course of the initiative itself. In this case, the typical question is, “is there enough benefit to decide that we can obtain 98% or 99.9% availability because the extra 1.9% can double the cost of the project?” This situation occurs when the need for cost savings causes REJ practitioners to re-evaluate benefits and specify different solution components at the product level. Sometimes, though rare, cost savings analysis can even drive new IT investment.

**Tasks:** The general workflow for this step is to identify all types of costs relevant to the IT initiative, calculate the economic value of each cost, and then identify potential obstacles to an accurate cost analysis. The completed list of quantified costs will be used in the cash flow analysis.



### Inputs

- ☐ List of technology enablers identified in the Opportunity Table in Step 2.
- ☐ List of products and vendor bids related to this initiative.
- ☐ Simulations generated by Gartner TCO Analyst, Wipro Desktop Cost Deployment Calculator, or another reliable TCO tool.
- ☐ Company-specific data (wage and salary rates, outsourced training costs, IT infrastructure descriptions, IT budgets) used to calculate specific costs.
- ☐ Similar project cost data (proxies for company-specific information).



Common risks associated with cost estimation include:

- Inaccurately identifying initiative costs.
- Not including implementation cost in addition to hardware and software.
- Unavailability of defining precise costs for the initiative.
- Poor baseline benchmarks of costs with the existing system.



**Output:** A comprehensive list of all costs that the IT initiative will generate categorized into functional groups and assigned an economic value.

In this phase of the initiative lifecycle, you should plan for accuracy of  $\pm 25$  percent. This list includes all the costs incurred by the acquisition, development, and use of the technology enablers identified in the Opportunity Table in Step 2.

**Example:** A list of costs for a Web portal enhancement over its 3 year lifecycle.

Implementation Costs			
Hardware and Software Costs (calculated)	Initial/Year 0	Year 1	Year 2
Hardware costs	\$750,000	\$250,000	\$0
Software costs	\$1,000,000	\$330,000	\$0
Planning, Engineering, and Testing (calculated)			
Planning and Engineering	\$1,000,000	\$100,000	\$0
Application testing and migration	\$500,000	\$150,000	\$0
IT Staff training	\$500,000	\$250,000	\$0
Deployment and Training Costs (calculated)			
PC rollout	\$250,000	\$100,000	\$0
Server upgrade	\$500,000	\$125,000	\$0
Helpdesk costs	\$500,000	\$200,000	\$100,000
End user training	\$250,000	\$100,000	\$100,000
End user downtime	\$250,000	\$100,000	\$50,000
<b>Total Implementation Cost</b>	<b>\$5,500,000</b>	<b>\$1,705,000</b>	<b>\$250,000</b>

# Activity 1: IDENTIFY COSTS



Before you can quantify the costs of your IT initiative, you must first identify which types of costs map to the IT initiative's projected benefits. The purpose of this activity is to identify and categorize the costs of the IT initiative in preparation for the cash flow analysis. In this section we will limit the content to costs of distributed computing.

No value equation would be complete without considering costs. When performing REJ studies, you include two types of costs in cash flows: deployment costs and ongoing support costs. Deployment costs, also known as the Total Cost of Acquisition (TCA), include all expenditures involved in deployment. These include direct costs, such as hardware and labor, and indirect costs, such as business disruption. The Gartner TCO Chart of Accounts can be used to identify and calculate costs. Figure 3.16, which is taken out of the REJ workbook, presents common TCA costs.

TCA Direct and Indirect Costs	
Direct Costs	
Hardware	
	Servers and PCs
	Storage
	Networking
	Upgrades
	Spare parts
Software	
	Operating systems
	Shrink-wrapped applications
	Application development
Planning, evaluation, & procurement	
	Planning
	Consulting
	Pilot costs
	Inventory management
	Purchasing
	Product evaluation
	Vendor management
	Project management
Image engineering	
	Engineering labor
	Testing
	Troubleshooting
Temporary increase in operations	
	Helpdesk
	IT downtime resolution
Direct roll-out labor	
	FTE labor
	Outsourced labor
Training	
	IT FTE training
	User training
Other	
Indirect costs	
	Business disruption
	User downtime

**Figure 3.16: Direct and indirect TCA costs**

Ongoing Direct and Indirect Costs	
Direct Costs	
Hardware	
	Spare parts and supplies
	Maintenance contracts
Software	
	Annual licensing payments
	Technical support
IT operations	
	Datacenter FTEs
	Helpdesk FTEs
	Management FTEs
Administration	
	Asset management
	Vendor management
	Ongoing training programs
Indirect costs	
	End user operations
	User data management
	Self support and self learning
	Peer support
	Downtime
	Lost user productivity

**Figure 3.17: Ongoing direct and indirect costs**

On-going costs are generally associated with a Total Cost of Ownership (TCO) metric and occur over the lifespan of the IT solution. Figure 3.17 shows common ongoing direct and indirect costs.



**Total Cost of Ownership, Cash Flows, and Return on Investment.** There is no industry standard definition for total cost of ownership (TCO). However, the three most commonly accepted definitions are:

- **Single TCO metric.**  $TCO = TCA + (annual\ ongoing\ support\ costs * years\ in\ lifecycle)$
- **Annual TCO metric.**  $TCO = (TCA + (annual\ ongoing\ support\ costs * years\ in\ lifecycle)) / years\ in\ lifecycle$
- **Steady-state annual TCO metric.**  $TCO = ((Hardware + Software) / years\ in\ lifecycle) + annual\ ongoing\ costs$

Mixing TCO and cash flow can be tricky. TCO metrics are stateless metrics, which consider past, present, and future costs equally. Since TCO does not consider the impact of the time value of money (TVM), the timing of the costs are not important.

On the other hand, for cash flow timing is everything, and sunk costs are excluded from the analysis. When inserting TCO metrics into a set of cash flows, it is necessary to remove all sunk costs and re-distribute costs into the appropriate years.

## Cost Simulation Tools

There are several good tools on the Microsoft Web site. Microsoft Value Experts generally use two tools to estimate costs: the Gartner Decision Engine for Cost Management (DECM) and the Wipro Desktop TCA tool. Both tools predict costs based on data gathered from deployment customers. However, the scope of these tools is limited to an assessment of operating system costs.

- **Gartner DECM.** Gartner's TCO tool evaluates steady state annual TCO, as described above. The tool can estimate the costs for both desktop PCs and servers and includes more than 20 different operating systems. The tool can also be used to compare a current environment against a proposed environment. The cost savings between the “before” and “after” states can be used as a benefit in building an REJ value proposition. One strong point of the DECM tool is that it not only considers IT assets, but it also includes management processes. This approach allows the tool to estimate savings for products like Active Directory and Microsoft Systems Management Server. Gartner DECM engagements require a trained consultant and generally take 3 to 5 days to complete. Microsoft consulting and Microsoft Certified Partners can help.
- **Wipro Desktop Total Cost of Acquisition (TCA).** The Wipro TCA tool was designed specifically to support the Gartner TCO tool. Since the Gartner tool only considers steady-state annual TCO, deployment costs with the exception of hardware and software are excluded from the model. The Wipro tool fills this gap for the PC desktop. The tool can be used for all versions of Windows, Office, and Linux/StarOffice. It is extremely simple to use and requires the user to answer 18 questions about the current deployment state and rollout plans. The tool was designed to be used without user training; a typical analysis can be completed in less than 10 minutes. The output of the Wipro tool maps directly to the Gartner tool.
- **Assessing Costs Beyond the Operating System.** While the Gartner and Wipro tools are valuable assets, they are limited. In situations where information beyond the operating system is required, the user must collect cost data manually from the customer using the REJ Framework.

Use the tables in the example as a worksheet to determine what costs are relevant to your initiative. Note the question in the second column: “Is this cost relevant to your IT initiative?”

**Example 1:** TCA direct and indirect costs

TCA Direct and Indirect Costs	Y	N
<b>Direct Costs</b>		
<b>Hardware</b>		
Servers and PCs		
Storage		
Networking		
Upgrades		
Spare parts		
<b>Software</b>		
Operating systems		
Shrink-wrapped applications		
Application development		
<b>Planning, evaluation, &amp; procurement</b>		
Planning		
Consulting		
Pilot costs		
Inventory management		
Purchasing		
Product evaluation		
Vendor management		
Project management		
<b>Image engineering</b>		
Engineering labor		
Testing		
Troubleshooting		
<b>Temporary increase in operations</b>		
Helpdesk		
IT downtime resolution		
<b>Direct roll-out labor</b>		
FTE labor		
Out-sourced labor		
<b>Training</b>		
IT FTE training		
User training		
<b>Other</b>		
TBD		
TBD		
TBD		
<b>Indirect costs</b>		
Business disruption		
User downtime		

**Example 2:** Ongoing direct and indirect costs

Ongoing Direct and Indirect Costs	Y	N
<b>Direct Costs</b>		
<b>Hardware</b>		
Spare parts and supplies		
Maintenance contracts		
<b>Software</b>		
Annual licensing payments		
Technical support		
<b>IT operations</b>		
Datacenter FTEs		
Helpdesk FTEs		
Management FTEs		
<b>Administration</b>		
Asset management		
Vendor management		
Ongoing training programs		
<b>Indirect costs</b>		
End user operations		
User data management		
Self support and self learning		
Peer support		
Downtime		
Lost user productivity		

The chart of account needed to estimate the solution needed to reach a benefit changes depending on the nature of the solution. Here you find an example of another chart account for a solution in the context of a data center.

Hardware	
Number of production servers	
Cost of production server with Fail-over	
Number of development servers	
Cost of development server	
Number of test servers	
Cost of test server	
Cost of production disk subsystems	
Cost of development disk subsystems	
Cost of test disk subsystems	
Production server maintenance per year	
Development server maintenance per year	
Test server maintenance per year	
Other H/W related costs	
Software	
Cost of acquiring the software for production server	
Cost of acquiring the software for development server	
Cost of acquiring the software for test server	
Cost of additional software or tools needed	
Production server software maintenance cost per year	
Development server software maintenance cost per year	
Test Server Software maintenance cost per year	
Other software related costs	

Planning, Engineering, and Testing	
Hours for project management	
Hours needed to evaluate, plan and design the solution	
Hours needed to engineer and test the solution	
Number of applications to test	
Hours needed to test an application	
% of applications requiring change	
Hours needed to make changes per application	
Cost to train IT staff on the project	
Hours for project documentation	
Change management	
Deployment	
Hours needed to plan and implement	
Additional hours in support during rollout	
End-user costs	
Training costs	
Change Management	
Post-deployment (On-going operational cost)	
Benefit Realization and monitoring program	
Additional hours needed per year by IT operations to manage the new environment	

## Activity 2: QUANTIFY COSTS



Starting with the list of technology enablers from the Opportunity Table in Step 2, identify all the products and software components that need to be created or purchased to produce the solution necessary to deliver all the benefits described in the 2x4 Benefits Matrix.

One way to get actual cost information is to leverage information, including price quotes of hardware components, from the product sales representative and software development managers. Using the cost of deployment tools described in the previous activity define the complete cost of deployment for your initiative.

For the ongoing costs associated with your initiative, use the Gartner TCO Chart of Accounts (explained in the previous activity) and other measurement tools from firms such as Gartner, Meta, or Wipro. Complete the quantification of the cost components of your IT initiative.

First, you must find the cost data that you can enter into the tool you are using. Gather the wage, equipment, and deployment data you need, and talk with human resource specialists, IT managers, or project managers in your organization who have accurate, up-to-date cost data and the authority to share it.

Although company-specific data is ideal, you can use third-party information to serve as proxies and to fill in data gaps. The Microsoft Business Value team may be able to share relevant cost data points from other organizations that have authorized the distribution of their REJ metrics. Another alternative is to use industry databases from Gartner, IDC, Meta, KPMG, Glomark, Wipro, Navigant, Lawrence Associates, and others to provide useful benchmark data that can be applied to your IT initiative. (See Appendix C.)

Use the tables in the example as a worksheet to quantify costs for the relevant cost categories. Make sure that you include costs for every year that the relevant cost is incurred.



### Inputs

- ☐ A reliable TCO calculator tool.
- ☐ Wage, equipment, deployment, and other data you need in order to use a TCO tool.



**Output:** List of costs for your initiative over a 3 year period.

**Example 1:** Annual TCA direct and indirect costs for a 3-year initiative

TCA Direct and Indirect Costs	Year 0	Year 1	Year 2	Year 3
<b>Direct Costs</b>				
<b>Hardware</b>				
Servers and PCs				
Storage				
Networking				
Upgrades				
Spare parts				
<b>Software</b>				
Operating systems				
Shrink-wrapped applications				
Application development				
<b>Planning, evaluation, &amp; procurement</b>				
Planning				
Consulting				
Pilot costs				
Inventory management				
Purchasing				
Product evaluation				
Vendor management				
Project management				
<b>Image engineering</b>				
Engineering labor				
Testing				
Troubleshooting				
<b>Temporary increase in operations</b>				
Helpdesk				
IT downtime resolution				
<b>Direct roll-out labor</b>				
FTE labor				
Out-sourced labor				
<b>Training</b>				
IT FTE training				
User training				
<b>Other</b>				
TBD				
TBD				
TBD				
<b>Indirect Costs</b>				
Business disruption				
User downtime				

**Example 2:** Ongoing direct and indirect costs for a 3-year initiative

Ongoing Direct and Indirect Costs	Year 0	Year 1	Year 2	Year 3
<b>Direct Costs</b>				
<b>Hardware</b>				
Spare parts and supplies				
Maintenance contracts				
<b>Software</b>				
Annual licensing payments				
Technical support				
<b>IT operations</b>				
Datacenter FTEs				
Helpdesk FTEs				
Management FTEs				
<b>Administration</b>				
Asset management				
Vendor management				
Ongoing training programs				
<b>Indirect costs</b>				
End user operations				
User data management				
Self support and self learning				
Peer support				
Downtime				
Lost user productivity				

## Activity 3: ASSESS COST-RELATED RISKS



Cost-related risk assessment ensures that you have performed the required activities in this step successfully and have identified potential problems that can have a negative effect on the cost analysis.

In this activity, you identify cost-related risks and fill in a blank risk assessment table.



**Output:** A risk assessment table.

**Example:** A Risk assessment table with cost-related information filled in.

Description of Risk	Probability	Mitigation Opportunities
Failure to assign owners to each cost	10%	Map ownership of each cost to a stakeholder before the cost analysis begins
Benchmark or other third-party data is used inappropriately	8%	<ul style="list-style-type: none"> <li>Try to use company-specific data instead of third-party data</li> <li>Validate third-party data with stakeholder</li> </ul>
Business sponsors have low confidence in the cost estimates	12%	<ul style="list-style-type: none"> <li>Choose stakeholder carefully</li> <li>Validate costs early and often</li> </ul>
Operator error while using TCO tool (data entry mistake or field on form left blank)	15%	<ul style="list-style-type: none"> <li>Get familiar with tool before the cost analysis begins</li> <li>Run calculations more than once</li> </ul>
One or more cost category is omitted from the analysis	19%	Use procedure on page 4 systematically to avoid omissions
One or more costs may be omitted from a specific category	16%	Use procedure on page 4 systematically to avoid omissions
Costs may be difficult to quantify	17%	Look for unconventional sources of cost data Use proxies appropriate for your organization
Costs might be real but cannot be measured until a future date	10%	Use proxies appropriate for your organization







## Step 5: ESTIMATE RISKS



**Purpose:** Optimize the overall solution proposal from a risk point of view.

You want to present to the decision makers the risks that are not worth mitigating and that at the same time are acceptable in the cultural environment of your organization.

In Steps 1 to 4, you identified and estimated the benefits and costs of business aligned benefits that come from implementing the technologies of the IT initiative. In this step, you identify and attach economic values to the effects of unexpected or negative events that you don't want to mitigate with further optimization of the proposal with an additional cost or modification to the solution.



These are 2 typical scenarios of risks that you want to disclose as part of your proposal for business optimization:

- By not taking a certain risk, the solution will become so expensive that it is no longer worth pursuing. You have seen your organization take similar risks before, however.
- By modifying the solution to mitigate a certain risk, the solution increases the size and number of risks in other areas.

Risk assessment and risk management are well structured disciplines in the industry. This guide doesn't want to replace other well planned approaches to managing risk that your organization may already have in place. If you have such approaches in place please use them. If somebody on your team can do risk analyses following one of the many rigorous techniques that are available, please engage with him or her. One opportunity is to attend MSF (Microsoft Solution Framework) training.



### Inputs

- ☐ Information about previous projects that failed for lack of risk planning.
- ☐ List of risks that the organization agreed to take in approving previous proposals.
- ☐ Information gathered from the risk tables at every step.
- ☐ Stakeholder quotes on what will be acceptable risk if X or Y occurs.
- ☐ Opportunity Table.
- ☐ Standard organization template for risk evaluation.



### Outputs

- Overall Initiative risk statement table filled in with risk probabilities, risk impacts and risk-adjusted costs.
- Consolidation and elimination of addressable issues through project optimization.

The intent of this step is to provide you, as an IT manager who is not an expert in risk assessment, with enough guidance around risk so that you can optimize your project and avoid looking naïve about risk management to your stakeholders and executive management. At this stage in the economic justification process (awareness, consideration, adoption, implementation) you need to consider how much time you are spending on assessing risk.

Evaluating initiative-level risk might seem a low-priority job, but it isn't. You can have a great ROI, but if the decision maker perceives risk, he or she will not approve your initiative.

It is smarter to discuss the risks and contain them rather than neglect them. Very often, when the proposal has a good ROI but risks are the real issue, stakeholders might not express their concerns clearly. Instead, they just challenge the value proposition because they don't feel comfortable about the risk.

Risks are potential hazards that might delay or reduce the success of the proposed initiative. You assess risks to identify potential problems and to measure the exposure they represent to successful project completion. This approach enables the REJ team to develop adequate mitigation plans that can help prevent the risk from occurring. If prevention is not practical, mitigation plans can decrease exposure that the risks represent to a successful project.

In the context of an REJ engagement, risk is the probability that the outcome (as reflected in the value of benefits and costs) will vary from initial estimates. This definition compels us to accept that we cannot predict all outcomes for all situations in a project.

**Tasks:** In Step 4, you identified and estimated the value of benefits that come from implementing the technologies of the IT initiative. In this step, you identify risks and make risk statements. Specifically, you:

- Identify the types of risks relevant to the IT initiative.
- Group relevant risks into categories.
- Isolate scenarios, which include risks that exceed the customer's risk threshold.
- Create risk mitigation plans for scenarios that exceed the customer's risk threshold.
- Adjust the costs of high-risk scenarios.

# Activity 1: IDENTIFY RISKS



Identify the key scenarios most likely to have a negative effect on the value of the overall initiative. Then, determine which scenarios pose the greatest risk to value creation of your initiative and consolidate them using the following minimal guideline: a risk is not a risk if there is a convenient way to eliminate it with a mitigation activity.

There are three tasks in this activity:

- **Task 1:** List possible impact of risks.
- **Task 2:** Rank risks.
- **Task 3:** Mitigate risks.

Only the risks that are still in the top line of your Risk Table after tasks 1, 2, and 3 are completed deserve to be brought to the discussion with decision makers. Decision makers don't like to have a conversation about why you didn't plan for a particular scenario if there is an easy way to handle it.

## Task 1: LIST POSSIBLE IMPACT OF RISKS

Every risk has a probability, a measurable impact if the scenario occurs, and a cost for mitigation. Scan and inventory all of the risks you have identified in the risk tables in Steps 1 through 4. Now that you have the entire picture in front of you, you need to reassess them as a group and consolidate them. The following categories will be helpful for your consolidation:

- **Alignment risk.** Alignment risk measures whether the proposed solution fits the structure and strategies of the overall customer organization. The higher the alignment, the lower the risk.
- **Solution risk.** Assess the capacity of the overall solution to generate the total benefit projected because of technical issues, skill readiness, resource issues, change management issues, and so on. The more that is known, the lower the risk. Moreover, you don't want to be caught by surprise during your final presentation by a senior executive who has a lot of experience spotting causes for failure.
- **Financial risk.** Financial risk measures the likelihood that the initiative benefit will fail to bring the anticipated impact on financial ratios. For large projects this might impact the expectations set with shareholders and financial analysts.
- **Project (or organizational) risk.** This risk category measures the likelihood that the initiative will not finish on time or on budget. The lower the probability of on-time completion, the higher the risk.
- **Change Management and Operations.** The solution could be ready at a certain point, but it is questionable whether or not your organization has the processes and discipline to make this change a part of a predictable new way to work.
- **Technology risk.** Assess the capacity of the technology and the associated suppliers to deliver the expected benefits.

Gather the high-risk items from all six categories and list them in Figure 3.18, the Overall Risk Table. Be ready to include all the mitigation opportunities in the cash flow that don't compromise the value creation for the decision maker. When you do this, make sure that the financial ratios such as IRR or ROI still pass the sniff test for your organization. For example, if you are using IRR make sure that it is at least above the hurdle rate.

The difference between the Overall Risk Table (Figure 3.18) and the risk tables used in previous steps is that now you will define the economic value of the impact of the risk. In the Impact column you need to calculate the economic impact of the described risk if it were to become a reality.

Risk Statement	Probability	Impact (\$)	Mitigation Plan	Mitigation Plan Cost Explanation
Benefit projections for new service sales too aggressive	30%	\$60,000 (1% increase in cost of project)	Monitor incremental sales	Negotiate contracts where you can stop project if benefits don't materialize
Application compatibility issues make costs exceed projected values	10%	\$20,000	Have an external specialist assess the top 10 LOB applications	\$2,000 to test each of 10 applications
User resistance to changes in the workflow or method of organization	25%	Adds \$70,000 to previous cost estimate	Plan for training	10 classes at \$7,000 each

Figure 3.18: Overall Risk Table

## Task 2: RANK RISKS

As a result of completing task 1 it is likely that you will end up with a long list of risks. To prioritize the risks and focus on the most important ones, consider using a ranking technique based on the relevancy analysis chart first introduced in Step 2. This chart will help you identify the risks that have the greatest impact in terms of potential economic damage, the highest probability of occurring, and the highest cost of mitigation. It is these risks on which you need to conduct an impact versus probability relevance analysis. You will recognize this technique because it was presented in Step 2, Activity 1, “Map Solution.”

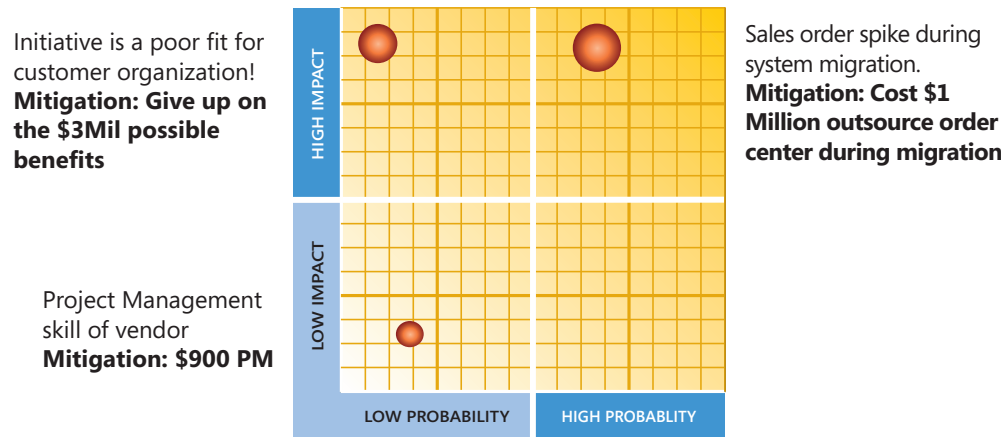
Use the same process of evaluating and ranking risks as you did when you evaluated and ranked potential solutions. The risks that you locate in the upper right quadrant are the greatest risks and the ones deserving the most attention.

**Example:** Risk ranking chart with data coming from the Overall Risk table.



**Output:** A Risk Ranking Chart of high-priority risk scenarios.

### Risk Ranking



## Task 3: RISK MITIGATION

Starting with the risk in the upper right corner of the Risk Ranking chart with the biggest circle, you need to simulate the following new proposals and choose the best option:

- Add risk mitigation** to the solution and mitigation cost to the cash flow and see if the project is still creating value from a financial ratio point of view. If this modification to the project compromises the performance too much, you might want to exclude this option and consider options 2 or 3.
- Include in the cash flow** the expected monetary value (EMV) of the risk. This number is calculated by multiplying the probability of the risk times the impact from the Overall Risk table. For example, if there is a risk of delaying the implementation by up to 3 months for uncontrollable problems in the procurement of necessary equipment, the formula would be:
 
$$EMV = [Probability\ of\ the\ 3\ months\ delay] \times SUM\ [3\ months\ missed\ possible\ revenue + cost\ of\ extending\ project]$$
- If the risk is hard to quantify** in terms of probability or the mitigation plan is inconvenient, you might want to consider this as a risk that the organization is willing to take. For any of these risks you need to create a tracking system.

## Activity 2: MAKE RISK STATEMENTS



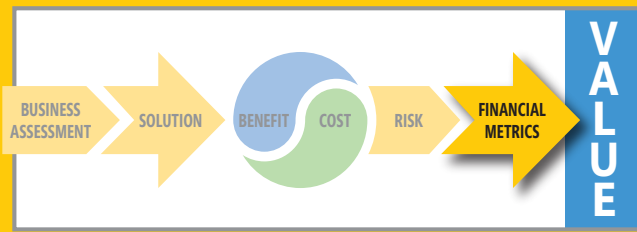
For the risks that are not mitigated or that are not controllable you need to prepare a statement that will be inserted into the final presentation and detailed written report.

- 1. Establish risk thresholds with your stakeholders.** Before you begin this activity, get a consensus of acceptable risks from your stakeholders and activity owners. Show what the organization has done before in similar situations.
- 2. Isolate the condition in which the risk will occur.** Make sure the decision makers understand the exact situation in which this will occur.
- 3. Explain what you have done to contain the risk.** Present a specific action plan that you have already implemented.

### Example:

**Risk statement:** During the migration the order processing people will have more work than usual. If at week 5 of the implementation we have a spike in sales orders of more than 10% of our usual volume we will not be able to process them.

**What we have done to contain the risk:** We have added funds for contingency works to handle the additional volume of sales in case it is needed (i.e., we have added flexibility to the organization). We have also planned a promotion to ensure that our resellers have more inventory.



## Step 6: BUILD FINANCIAL METRICS AND VALUE PROPOSITION



**Purpose:** Find the most effective way to express the maximum value that the initiative can produce. The entire REJ work is aimed at maximizing stakeholders and shareholders to convince decision makers to allocate resources. In this step you will define the final and comprehensive parameters for which the project should be optimized.

Once you have the best version of your initiative you need to make sure that the decision makers understand it during the decision making point. Don't do one activity without thinking of the other.

At the decision making point the decision makers need to know the financial implications of proceeding with one of the deployment scenarios of your proposed initiative, and they need to understand why, through the use of financial ratios, they should use capital for your initiative versus other investment opportunities.

Some people believe that decisions can be made and capital allocated without financial metrics and cash flows. This is dangerous because most IT projects go beyond a single fiscal year. In addition, there are financial and regulatory obligations to comply with, such as the Sarbanes-Oxley Act (in the U.S.), which make this compliance more relevant than ever before.

**Tasks:** In Steps 1 through 5, you identified target benefits aligned with CSFs in the language of your initiative stakeholders. In Step 6, you put them all together and summarize the results using the language of capital appropriation science: financial metrics. There are several ways to summarize an investment, including NPV, ROI, IRR, and other financial ratios (metrics), but they all share a common base: cash flow. You need to create and use a cash flow analysis to prepare the final presentation of your economic justification.<sup>4</sup>

<sup>4</sup> For more information on corporate finance and project accounting refer to any conventional textbook on these subjects.



### Inputs

- ☐ Communication Plan from Section II.
- ☐ Kickoff deliverable specification from Section 2.
- ☐ All the outputs of Steps 1 through 5 from Section III.
- ☐ Quotes from stakeholders endorsing target objectives or highlighting the gap.
- ☐ Business case templates and examples.



### Output

- Concise written economic justification report.
- Value proposition.
- Presentation of the business case to decision makers and stakeholders.

As critical as conducting an in-depth, accurate financial analysis might be, it is only one way to summarize all the findings. The final activity, presenting the business case to your executive managers and stakeholders, depends on a concise, compelling, and persuasive value proposition. You must convince the decision makers with budgetary authority that your IT initiative offers more value than it costs, and that it should be funded rather than other projects competing for the same investment funds. Although the Business Assessment Roadmap and metrics you have painstakingly developed in the previous steps must have substance, the final act of communicating that value determines whether you win or lose support of executive management.

Step 6 includes three activities that you must complete successfully before executive managers and stakeholders give you the green light to proceed. These activities are:

- Preparing financial metrics.
- Creating the value proposition, written report, and presentation.
- Presenting the findings to executive managers and stakeholders.



Common risks associated with this step include:

- Stakeholders don't make the decision.
- Stakeholders find errors in the proposal.
- Final financial ratio is negative.
- Bad value proposition.



# Activity 1: PREPARE FINANCIAL METRICS



In this activity, you summarize all the findings (benefit, costs, risks) you have developed in one homogenous framework and communicate the results in the common language of business: money. The deliverable of this activity will also enable your organization to compare the use of capital in your initiative versus other investments using certain financial ratios.

Your initiative will probably have benefits that differ by type, place, and when they are relevant to your value proposition. You need to transform the quantified benefit and cost line items created in Steps 3 and 4 into a single cash flow analysis. After you collect baseline benefit, cost, and risk information and calculate a cash flow using your organization's financial parameters, the REJ project team must translate the results into the financial metrics—IRR, NPV, payback period, and so on—used by executive management.

Since the financial ratios play a critical role in comparing your proposed initiative to other proposals for resource allocation, you should simulate several scenarios to optimize the project to reach the highest credible ratio.

Experience tells us that most financial decision makers prefer to see several cash flows for a business proposal with options such as “do nothing,” “do something slowly to wait for certain assets to become obsolete,” or “do something in a large-scale way, right now.” Providing implementation options gives financial decision makers greater flexibility and the ability to approve a good IT initiative, even if the global portfolio context would otherwise make an affirmative decision very difficult.

This activity includes four tasks:

- **Task 1:** Collect organization financial parameters.
- **Task 2:** Create initiative cash flow.
- **Task 3:** Calculate financial indexes.
- **Task 4:** Calculate ratios based on balance sheet data.



Risks associated with preparing financial metrics include:

- Inaccurate cash flows were calculated because not all the costs or benefits were included.
- Internal rate of return does not beat the hurdle rate.
- Payback is too long.
- Net present value is not large enough.
- Inaccurate forecasting of the timeframe in which the projected value will be realized.



### Inputs

- ☐ 2x4 Benefits Matrix from Step 3.
- ☐ Cost table from Step 4.
- ☐ Risk table from Step 5.
- ☐ Access to organization accounting rules.
- ☐ Discount rate from finance.



### Outputs

- Optimization of proposal according to chosen financial ratios.
- Value of ratios ready to be presented at decision making moment.

**Example:** Completed risk-adjusted cash flow analysis with option benefits and financial ratios.

	Year 1	Year 2	Year 3
Implementation costs	(\$6,256,871)		
Implementation risk	(\$917,142)		
Operating costs	\$0	\$0	\$0
Operating risk	\$0	\$0	\$0
Benefits		\$11,896,000	\$11,896,000
Benefits risk		(\$4,664,800)	(\$4,664,800)
Net Cash flow	<b>(\$7,174,013)</b>	<b>\$7,231,200</b>	<b>\$7,231,200</b>
Options	(\$1,600,000)	\$66,650,000	\$66,650,000
Options risk		(\$45,060,000)	(\$45,060,000)
Net options	(\$1,600,000)	\$21,590,000	\$21,590,000
Discount rate	15%		
NPV	\$3,984,186		
Payback (months)	12		
IRR	63%		

## Task 1:

## COLLECT ORGANIZATION FINANCIAL PARAMETERS

After talking with the controller (as was discussed in Section II, 'Planning') you have determined which metrics are most relevant to the investment committee or the CFO. Now you know which metrics to use in your cash flow analysis.



In doing this task you might want to secure the full support of a controller.

You can do a lot to make a project fit your organization's needs. For example, if there are no funds in the fiscal year budget, you can build an aggressive amortization schedule and postpone certain payments. Pay attention to any unusual attributes that your organization uses as accounting or financing conventions, for example: Do they calculate financials

using after-tax or pre-tax cash flows; do they use amortization conventions such as does your organization expensing software; or do they allow amortization of the investments? The more you can amortize, the easier it is to have positive financial parameters.

**Example:** How a large American corporation used American accounting rules in 2005.

Asset Category	Asset Class	Cap. Threshold	Map Life	GAAP Life	Comment
Computer equipment-other	Non-PC equipment	MAP & GAAP = \$1,000	Fully depreciated in month of acquisition except for external customer data center non-PC equipment, which are depreciated over 3 years.	2 Years	Monitors, hard-drives, memory, printers, and other peripheral type items. Also included as non-PC equipment are Windows CE devices, and PDAs.
	Networking equipment	MAP & GAAP = \$1,000	3 Years	2 Years	Routers, etc.
	Used network equipment	MAP & GAAP = \$1,000	1 Year	1 Year	Routers, etc.
	External customer data center non-PC equipment	MAP & GAAP = \$1,000	3 Year	3 Years	Monitors, hard-drives, memory, printers, and other peripheral type items purchased in external customer data center profit centers.
	External customer data center servers	No threshold	3 Years	3 Years	Equipment classified as servers by equipment manufacturer and purchased for use in external customer data center profit centers.
Software	Internally developed software	MAP & GAAP = \$500,000	3 Years	3 Years	<ul style="list-style-type: none"> <li>Internal use software must meet both of the following criteria to be considered for internal use. 1) The software is acquired, internally developed, or modified solely to meet the entity's internal needs. 2) During the software's development or modification, no substantive plan exists or is being developed to market the software externally.</li> <li>Capitalized costs include external direct costs of materials and services during development and payroll related costs for those employees dedicated to the software's development (G&amp;A costs are not capitalized). Upgrades and enhancements should be capitalized only if the modifications result in additional functionality such that the software is capable of performing tasks that it was previously not capable of performing. Capitalization is complete when the software is substantially complete and ready for its intended use and after the majority of all testing is completed.</li> <li>Preliminary project costs and any post implementation costs (i.e. training) should be expensed as incurred. (Ref: AICPA, ACC Sec 10,720. Statement of Position 98-1 )</li> </ul>
	Purchased software	MAP & GAAP = \$500,000	3 Years	3 Years	Separated into Packaged software and Custom software. Only the cost of the software is capitalized. Installation and consulting costs associated with software purchases are expensed. All software expenses under \$500,000 are expensed to account 728012, "Supplies Software."
PCs	PC equipment	No threshold	Fully depreciated in month of acquisition.	2 Years	Equipment classified as PCs by equipment manufacturer. Note: Windows CE devices are considered non-PC equipment.
Servers	Servers	No threshold	Fully depreciated in month of acquisition except for external customer data center nonPC equipment, which is depreciated over 3 years.	3 Years	Equipment classified as servers by equipment manufacturer.

To identify parameters to create the cash flow for your initiative, you need to:

- **Determine a cash flow period.** This period is the number of years or months after which (from a regulatory compliance and managerial point of view) the project will be considered complete. From a managerial point of view, IT changes quickly, so be sure that this period doesn't exceed 3 years. The longer the period, the more you risk inaccurate results due to possible changes in the technology and business contexts.
- **Identify the discount rate.** The discount rate that you use should come from your controller or other financial stakeholders. The rate you use depends on your organization and the industry in which it competes. Discount rates typically fall in the range of 5 to 15 percent. The decision on which rate to use in your organization is a strategic decision that applies to every investment proposal.
- **Define a benefits schedule.** Identify when the organization will start realizing benefits. The conservative approach is to claim the benefits only after the solution is completely implemented. If the solution is phased in over a period of time (more than two years, for example), the claimed benefits should be reflected in the implementation schedule. This approach will discount the benefits even more because some of the benefits can be claimed only when all parties involved have access to the solution.

Consider other key metrics that may be necessary for your analysis. These might include, but are not limited to:

- Assumptions of inflation, salary, and benefits growth rates.
- Terminal value discount rate.
- Project risk factor (useful when you use option pricing models).

To gain more information and definitions of financial terminology refer to Appendix C, "Glossary of Financial Terms," later in this guide, or go to websites such as <http://www.investorwords.com>.

Of the three parameters notes above—cash flow period, discount rate, and benefits schedule—one key question arises: Why do you need to know the discount rate?

The concept of the time value of money proves that the present value of money must be considered when an investment is made. Time value of money is a tool with which your organization can compare various internal projects and make the best decision about the use of capital. Note, that "best decision" of the use of capital may not be the IT initiative you are proposing. Here's an example:

*Give a person \$21 in cash. Then, ask them if they would trade the \$21 today for \$20? The obvious response is no. But ask if they will trade the \$21 for \$20 today—if they can't use the \$21 for 5 years. Then, the answer would be yes. Why? Because in 5 years the \$21 will be worth less than the \$20 today.*

Figure 3.19 provides a graphical view of the time value of money.

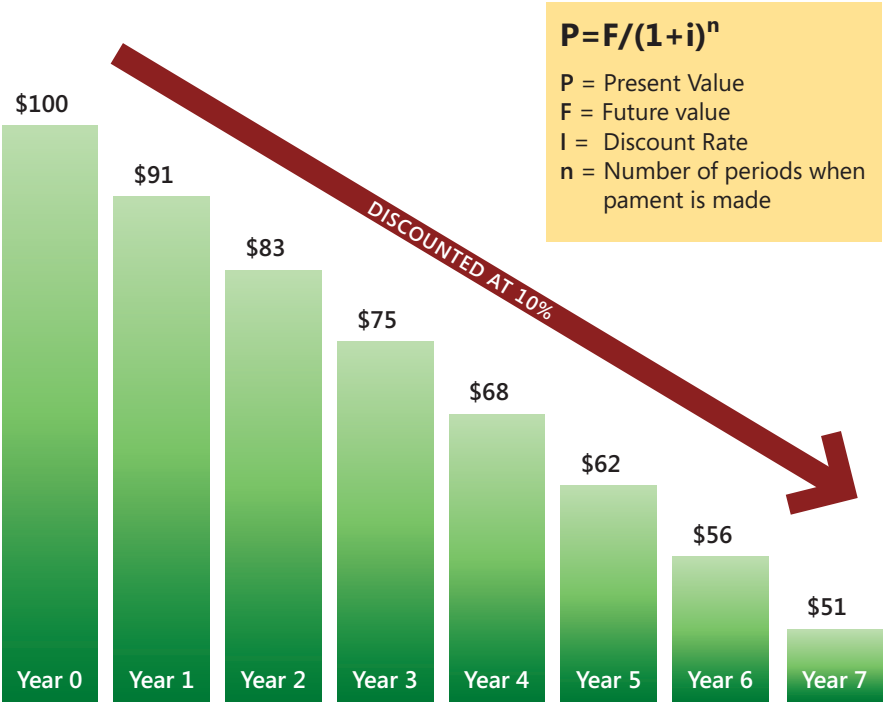


Figure 3.19: The time value of money

**Example 1:** A Completed table of preferred financial parameters

	Type of Metric	Source	Metric to Use
1	Cash flow period	Controller	18 months
2	Discount rate	Controller	15%
3	Benefit schedule	Controller	12 months
4	Other		
5	Other		

 **Output:** Preferred financial parameters for your organization based on discussions with stakeholders.

## Task 2: CREATE INITIATIVE CASH FLOW

You need to assemble all the financial data in one table. You can do this with Excel by using the templates in the REJ kit<sup>5</sup>. If you want to create the cash flow with professional third-party software, consider using a cash flow calculator by Finlistics and Glomark or another reliable source.

Finlistics provides the *Business Value Insight Manager* that can be used for economic justifications heavily based on financial ratios, which are in turn based on data from balanced sheet and SEC filings.

Glomark provides three tools that may be of assistance:

- **Genius Analyzer:** For value proposition (business case) experts that want to include advanced risk assessments using a Monte Carlo-based simulation built into the value proposition.
- **Genius Compare:** For comparing various value propositions used by IT managers and IT governance.
- **Genius Track:** To track and measure business value.

The real challenge in preparing a cash flow is deciding which level of detail you want to use to address your organization's requirements. Use the following procedure to assemble financial data and insert it into the cash flow calculator. If you are using the REJ workbook, use the Cash Flow worksheet.

- 1. Implementation costs.** Calculate all costs associated with deploying the IT initiative. Include software, hardware, FTE salaries, and supplier costs. Identify the implementation timeframe to set the cash flow period.
- 2. Additional operating costs.** Calculate any costs needed to operate the new IT environment. Include FTE salaries, outsourcing costs, and other operating costs that are relevant for the entire cash flow period.
- 3. Benefits.** Calculate the total amount of direct and indirect benefits derived from the IT initiative for the entire duration of the cash flow period.

After you have entered the cost and benefit data into the calculator:

- 1. Calculate net cash flow.** Calculate the cash that accumulates or is lost at the end of a given year for each year of the cash flow period based on the costs and benefits for that year. The Excel workbook will calculate this for you.
- 2. Calculate cumulative cash flow.** This is the cumulative cash flow for each year of the cash flow period. The Excel workbook will calculate this for you.

The potential value of the option benefit is not included in the initial cash flow analysis because it will not be realized during the typical 3-to-5-year amortization period of the investment. The value might be realized at any number of different times in the future, depending on when your organization decides to deploy those specific capabilities.

As discussed in Step 3, "Estimate Benefits," you can include some option pricing models. This approach is based on economic theories used on Wall Street to assess the future value of stocks or commodities. These models are based on real options theory as presented in the Black-Scholes model. You can use these models to estimate the value of strategic flexibility. Although option benefits would ultimately result in one of the four types of benefits, they are different because they are not immediately realizable.

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<sup>5</sup> The REJ kit can be downloaded from <http://www.microsoft.com/value> or <https://partner.microsoft.com/value>

After you have entered the option-related cost and benefit data values into the calculator, you can:

- **Re-calculate net cash flow.** Based on the costs and benefits for that year (including the option costs and benefits), calculate the cash that accumulates or is lost at the end of each year of the cash flow period. The Excel workbook will calculate this for you.
- **Re-calculate cumulative cash flow.** Calculate the cumulative cash flow for each year of the cash flow period, including the option costs and benefits. The Excel workbook will calculate this for you.



**Output:** Annual cash flow values for each year of the project lifecycle

**Example:** Completed cash flow for an 18-month project.

	Today	6 Months	12 Months	18 Months
Implementation cost	\$(3,400)	\$ -	\$ -	\$ -
Business benefits	\$ -	\$708	\$708	\$708
IT Operation savings	\$ -	\$944	\$944	\$944
Totals	\$(3,400)	\$1,652	\$1,652	\$1,652
Total cash flow	\$1,556			

### Task 3: CALCULATE FINANCIAL INDICES SUCH AS PAYBACK

Summarize the entire initiative in a single metric. This is not just an exercise you use to communicate with the CFO team. This is the most powerful opportunity you will have to understand value and optimize your project.

If the financial ratio is too low you might get the resource allocation vice versa. If the financial ratio is or too high, you have to deal with a potential credibility problem and you might need to review the entire REJ process. In any case, given that financial metrics are the criteria use to compare proposals, you should review the entire project to optimize your initiative.



Some managers, once they know they have a high value for the key ratio, for example ROI (or whatever ratio your economic justification team is using), prefer to not over promise on the potential benefits of their initiative. Instead, using the GoalSeek technique, they set a target value for the ratio and set the target benefits as big enough to create the desired ratio.

You will be surprised what you can learn by simulating a few scenarios of how your initiative can be implemented. Very likely, the dynamics of the results that can contribute to or jeopardize the success of the project will become clearer. You might want to prepare an overall mitigation plan by creating a Project Tracking program that monitors the variables that can make the project more feasible.

Figure 3.20 provides a graphical example of simulating three alternate implementations for a single project, in this case an initiative to upgrade to Windows Server 2003 and Windows XP®.

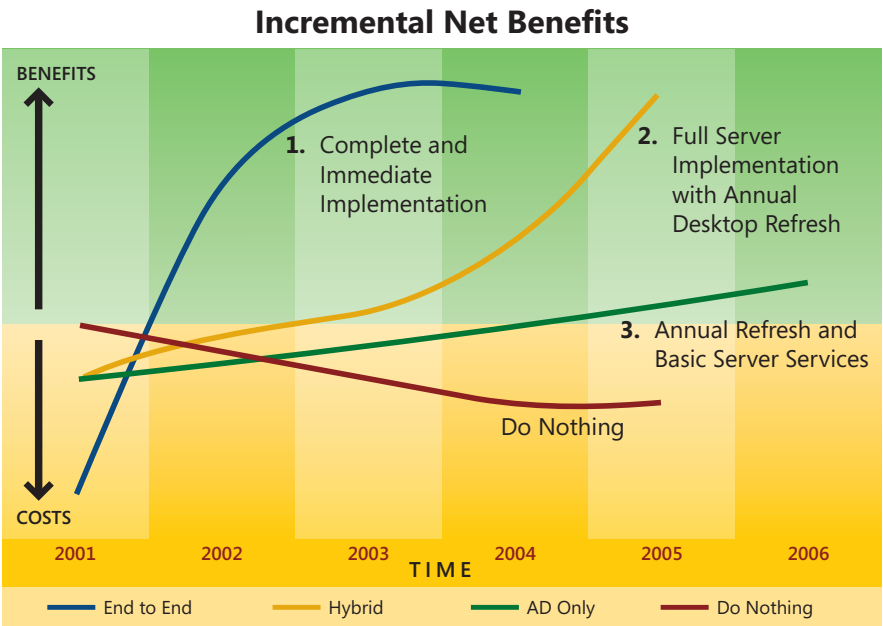


Figure 3.20: A single project and the relative value of three deployment options

In Figure 3.20 you can see the upgrade initiative can be optimized by using a single financial ratio such as incremental net present value. This kind of graphic will help decision makers understand the value proposition, and help you sell the value of your hard work in doing an REJ analysis.

The key point of this exercise is to make the financial ratios that are used to determine whether the value of alternative IT initiatives is comparable. This way your stakeholders and decision makers can compare apples and apples, not apples and oranges.

Another way to look at this is to create a chart of the relative benefits for a given period of time for the same project. Figure 3.21 provides an example of the net savings for each 6-month period of a proposed 18 month project on a Desktop 32-bit migration.

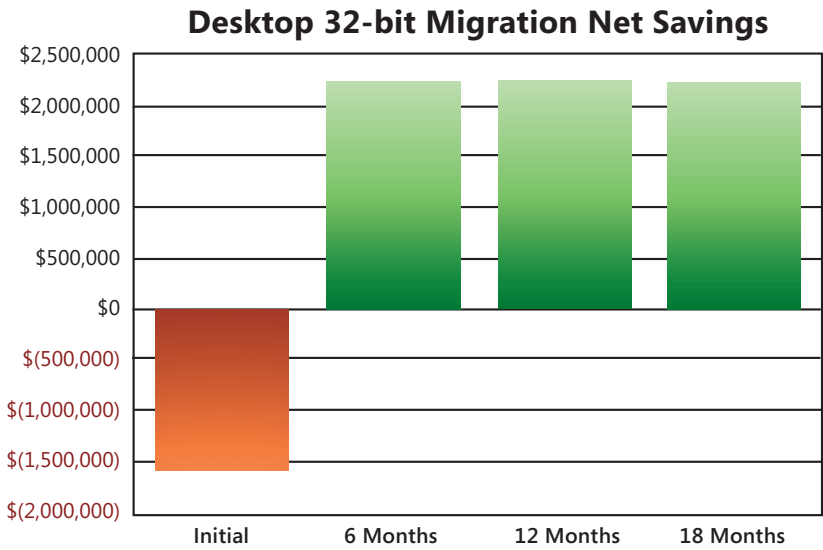


Figure 3.21 Net cash flow diagram for a 32-bit migration project



The most common payback measurements used by businesses are:

- Net present value (NPV)
- Internal rate of return (IRR)
- Return on investment (ROI)
- Payback period
- Hurdle rate
- Return on assets (ROA)
- Earnings per share (EPS)

While all measurements are valid, each should be used in the decision making circumstances to which they are best suited. They should also be normalized to the present value of money so they can be compared more accurately.

Figure 3.22 shows four decision-making circumstances and five types of financial ratios that can be used to compare projects and help your decision makers come to a correct conclusion on your IT initiative.

Type of Decision	NPV	ROI	IRR	Payback	Hurdle Rate
Go/no-go decision	X	X	X	X	X
Rank project portfolio	X	X	X		
Portfolio optimization		X	X		X
Reasonable ranges for metrics	Varies based on cash flows	5 to 200%	Less than 200%	8 to 18 months	10 to 20%

**Figure 3.22: Types of metrics that map best to specific types of decision making**

Your organization can use these financial metrics to compare proposed solutions against other opportunities. Consider these guidelines:

- Avoid high ROIs over a 3 to 5 year payback (use 200 percent as your maximum).
- Avoid high IRRs over a 3 to 5 year payback (use 200 percent as your maximum).
- Avoid low payback periods (less than 12 months).

To calculate financial metrics, use the data provided in Figure 3.23, the Cash Flow worksheet in the REJ Excel workbook, Microsoft Excel, or a reliable financial calculator.

	Today	6 Months	12 Months	18 Months
Implementation cost	\$(3,400)	\$ -	\$ -	\$ -
Business benefit	\$ -	\$708	\$708	\$708
IT operation savings	\$ -	\$944	\$944	\$944
	\$ -	\$ -	\$ -	\$ -
Totals	\$(3,400)	\$1,652	\$1,652	\$1,652
Cash flow	\$1,556			
Discount rate	15%			
Discounted cash flow	\$(3,400)	\$1,249	\$1,086	\$945
NPV	\$(120)			

**Figure 3.23 Sample data to use with metrics calculations**

If you prefer to calculate metrics manually, use the following formulas:

#### ■ Net Present Value

NPV is the total current value of a series of future payments:

$$NPV = -Cost + Benefit_1 / (1/i)^1 + Benefit_n / (1/i)^n + Benefit_n / (1/i)^n$$

Using the NPV function in Microsoft Excel:

$$NPV = -3400 + 1652 / (1/1.15) + 1652 / (1/1.29) + 1652 / (1/1.43)$$

#### ■ Internal Rate of Return

The IRR is the rate of return that would make (present value of future cash flows) + (final market value of an investment or business opportunity) = (current market price of the investment or opportunity).

The purpose of figuring out the internal rate of return is that it enables the stakeholder to compare the rate of return of the IT initiative against the hurdle rate (total cost). If the IRR is greater than the hurdle rate, the project is considered a good investment.

To find a discount rate that sets the NPV of the cash flow to zero, you can use Microsoft Excel's IRR function.

#### ■ Return on Investment

ROI is a standard measure of project profitability. ROI is the discounted profits over the lifetime of the project, expressed as a percentage of initial investment:

$$ROI = (Benefit - Cost) / Cost$$

The purpose of using ROI is to provide a measure of relative value associated with the investment required to fund an IT solution. ROI is often used to prioritize an organization's project portfolio. While there are many different ROI formulas, discounted ROI is the preferred method:

$$ROI = [NPV (Benefits) - NPV (Costs)] / [NPV (Cost of Investment)]$$

Many IT professionals estimate the value of IT investments in terms of ROI. There are two drawbacks to this approach: ROI means different things to different people, and most ROI estimates are not adjusted for the time value of money. For example, two common ROI estimates are:

$$ROI - Return on Investment = Benefits - Costs$$

$$ROS - Return on Sales = Benefits / Costs$$

In the first case, the project is worthwhile if the result is greater than 0. In the second case, the project is worthwhile if the ROI is greater than 1. But these ROI projections do not factor in the time value of money, that is, how soon the benefits are realized. To address these issues, many financial analysts prefer to think in terms of NPV and IRR, which compare investments solely on their cash flows.

Using the data presented in Figure 3.24, an example of an ROI calculated with the Microsoft Excel ROI function would be:

$$ROI = (1652 / (1+i) + 1652 / (1+i)^2 + 1652 / (1+i)^3) / 3400 = 104\%$$

	Today	6 Months	12 Months	18 Months
Implementation cost	\$(3,400)	\$ -	\$ -	\$ -
Business benefit	\$ -	\$708	\$708	\$708
IT operation savings	\$ -	\$944	\$944	\$944
	\$ -	\$ -	\$ -	\$ -
Cash flow	\$(3,400)	\$1,652	\$1,652	\$1,652
Discount	15%			
Discounted cash flow	\$(3,400)	\$1,249	\$1,086	\$945
Return on investment	104%			

Figure 3.24: Example of calculating return on investment

#### ■ Anticipated Payback Period (measured in months)

Payback period is the length of time required to recover an initial investment through cash flows generated from the investment. Another way to say this is the amount of time it takes for the cumulative benefits to overtake the cumulative costs. The payback period helps determine when the investment will pay for itself; that is, when the investment becomes cash flow positive. Many organizations have predetermined criteria for when an IT project must break even: 18 months or less for example.

Some limitations of using the payback period to determine the value of an IT investment are that it:

- Assumes the investment is paid up front.
- Assumes the income is fairly consistent.
- Ignores the potential for profitability if the investment is paid off quickly.
- Assumes that cash flow timing is not important.

The equation for determining the payback period is:

$$[\text{Investment} / (\text{Total Cash flows} - \text{Investment})] / [(\text{Number of months in cash flow analysis})]$$

Figure 3.25 shows the payback behavior of a 3-year project.

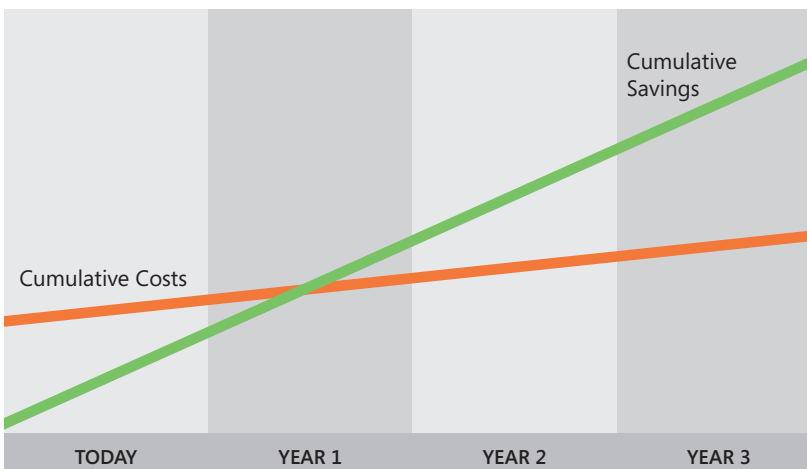


Figure 3.25: Payback behavior of a 3-year project

## Task 4: CALCULATE THE RATIOS BASED ON BALANCE SHEET DATA

Certain ratios cannot be calculated in isolation from the company financial and formal data by just using the project accounting information. Those ratios are very powerful but require extra work that often can be avoided.

When you read a financial analyst's reports about your organization, you notice that they compare and critique the performance of your organization based on metrics such as earning per share (EPS), return on assets (ROA), and economic value added (EVA). How do you explain the impact on your initiative to that audience if the stakeholders care about it? The answer: understanding the relationship between your initiative and the data in the balance sheet.

If an initiative has business impact, it should not be surprising that you can see it reflected in the formal business reporting and forecasting documents. Generally, this is obvious for big projects such as an Enterprise Resource Planning (ERP) implementation of SAP.

If you really want to impress your executives, consider the impact your opportunity would have on the organization's balance sheet. You could perform these activities by using very sophisticated products, but we shall assume that you are using Microsoft Excel.

### Understanding Return On Assets

This index measures the capacity of an organization to utilize the assets they own to generate value. Typically, this is a KPI for the Chief Operating Officer (COO).

If your organization has been criticized for its low ROA, you might want to project the impact of your initiative on this metric. To calculate ROA:

1. Load the most current balance sheet in Microsoft Excel and start a simulation using the following data.
2. Get all the data from the 2x4 Benefit Matrix in Section III, Step 3, add it in the line items of the balance sheet, and simulate the consequences. For example:
  - Get the data from the Increase Revenue table cell from the Benefits Matrix table and add it to the Cash Receivables line item on the balance sheet.
  - Get the cost of assets that are going to be amortized from the Benefits Matrix. Add this metric to the Fixed Assets line item in the balance sheet.

**Example:** Figure 3.26 shows the impact in an ROA calculation for a new reporting system based on Microsoft SQL Server™ 2005.

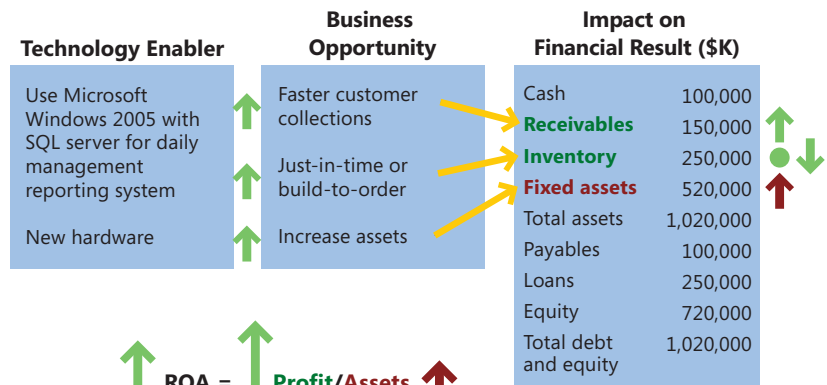


Figure 3.26: ROA calculation

## Understanding Incremental Earnings Per Share and Economic Value Add

Senior executives are responsible for returning value to the owners of the company. For a public company, the owners are the shareholders. Shareholder value can be measured in at least one of two ways:

- **Earnings per Share (EPS).** EPS is the amount of net income that the solution generates by increasing revenues or lowering costs.
- **Economic Value Add (EVA) from Stern Stewart & Co.** The amount of net worth that the solution creates. This is similar to EPS, but factors in the true cost of capital from all sources (debt + equity). Calculating EVA provides essential information to management about the value of your IT initiative, information such as:
  - How to improve returns with little or no capital investments (that is, how to reduce costs).
  - Why to invest new capital only in projects, equipment, or machines that can cover capital costs.
  - How to avoid investments with low returns.
  - How to identify where capital employment can be reduced.
  - How to identify if returns are below capital costs and divest those investments when improvements are not feasible.

IT projects that reduce costs enable shareholders to retain more earnings. IT projects that increase sales have the potential to increase shareholder equity. IT projects that improve the company's use of capital reduce the cost of funds, which results in an increase in retained earnings.

The following exercise will give you practice in determining the effect your IT initiative has on shareholder value. Refer to financial statements from your organization. The general workflow is to determine the shareholder value of the company by identifying EPS. Then, you determine the impact of your IT initiative on shareholder value by determining EVA.

The formula for EPS is:

$$\Delta \text{EPS} = (\text{Expected Income} + \text{Project Net Benefit}) - \text{EPS}$$

Use the data in Figure 3.27 to calculate EPS.

Earnings per Share		Source	Value
1	Earnings	Annual report	
2	Shares outstanding	Annual report	
3	Earnings per share	<i>(Earnings / shares outstanding)</i>	
4	Business benefits	REJ Benefit Matrix Step 3	
5	Incremental earnings per share	<i>[(Earnings + business benefits) / shares outstanding] – earnings per share</i>	

Figure 3.27: Sources of information for calculating EPS

**Example:** Figure 3.28 shows the opportunity to find a relationship between an e-commerce initiative based on a Microsoft Commerce Server and Office XP solution and the data in the balance sheet. The next step is to review this simplified way to roughly estimate possible incremental EPS due to the initiative data in the balance sheet.

Technical Enabler	Business Opportunity	Financial Results (\$K)
Commerce Server	New markets	Sales 100,000
Office XP end user productivity	Decrease unit costs	Cost of sales 50,000
Help desk FTE reduction	Reduce fixed costs	Gross margin 50,000
		Overhead 20,000
		Interest 10,000
		Depreciation 10,000
		Pretax profit
		Taxes@ 40% 4,000
		6,000

$$\Delta \text{EPS} = \Delta (\text{Net profit}) / (\# \text{ of shares})$$

**Figure 3.28: EPS calculation**

Calculating the possible EVA generated by an e-commerce solution can be done following the work highlighted in the structure in Figure 3.29. The formula for calculating the EVA is:

$$\text{EVA} = \text{Net Operating Profit After Taxes (NOPAT)} - \left( \text{Capital} * \text{Cost of Capital} \right)$$

Figure 3.29 presents data and structured approach you can use to calculate EVA.

Step 1: Caculate NOPAT (in thousands)		
	Net Sales	\$ 2,600
	Cost of Goods Sold	\$(1,400)
	SG&A Expenses	\$ (400)
	Depreciation	\$ (150)
	Other Operating Expenses	\$ (100)
	Operating Income	\$ 550
	Taxes (@40%)	\$ 140
	<b>NOPAT</b>	<b>\$ 410</b>
Step 2: Identify Sources of Capital		
	Total Liabilities	\$ 2,350
	Accounts Payable	\$ (100)
	Accrued Expenses	\$ (250)
	<b>Capital</b>	<b>\$ 2,000</b>
Step 3: Determine Cost of Capital		
Average Equity Proportion * Equity Cost	5%	Shareholder Equity * Investor Return Total Liabilities Debt * Cost of Money
Average Debt Portion * Debt Cost	5%	
<b>Total Cost of Capital</b>	<b>10%</b>	
Step 4: Determine EVA		
<b>Economic Value Ad</b>	<b>\$ 210</b>	<b>= 410 - (2,000 * .1)</b>

**Figure 3.29: An e-commerce initiative creates a \$0.1 EVA**

## Activity 2: PREPARE AN ECONOMIC JUSTIFICATION WITH A STRONG VALUE PROPOSITION



The purpose of this activity is to concisely and effectively articulate the potential value that your initiative offers to your organization. You need to provide first-class support points that will help your decision makers come to a well-informed conclusion about resource allocation for your organization.

Let's step back for a moment and clarify the difference between a stakeholder and a decision maker, as they are important distinctions.

- **Stakeholders** need to be convinced that your initiative can help them achieve their CSFs. They have a vested interest in the outcome of your initiative because it affects them directly. However, they may be able to exercise considerable influence on a decision maker so their needs must be taken into account.
- **Decision makers** are a smaller set of stakeholders that need to be convinced that your initiative creates value for the organization. As a stakeholder with budgetary authority, decision makers need to see how your initiative fits into the bigger organizational picture. Don't forget to leverage the alignment verification work from Step 1, activity 3, task 3. Sometimes a decision maker needs to understand the context of the initiative even if it doesn't immediately impact his or her business unit or department.

In this activity you review all the information collected in Section II, "Planning for the REJ Project." Pay particular attention to the original project specification that the team agreed upon during the kickoff meeting as you prepare the final economic justification report. This report contains all the data and outputs that you have produced in all of the previous steps and activities, and assembles them logically and in a straightforward manner so that they can be presented to your stakeholders and decision makers.

You need to have the value proposition clearly defined so that it rolls out of your mouth simply, easily, and elegantly—as if it were the most natural statement you could ever make. Be prepared to unequivocally state why the initiative is of value to your organization and to offer and defend three deployment options based on your economic analysis. If you have effectively aligned your initiative with the CSFs and KPIs of your stakeholders, then you stand a much better chance of getting your initiative funded.



### Inputs

- ☐ REJ Communication table.
- ☐ Pre-agreed upon final deliverable content checklist.
- ☐ Alignment verification in Business Assessment Roadmap.
- ☐ Gap analysis Business Assessment Roadmap.
- ☐ Opportunity Table.
- ☐ 2x4 Benefits Matrix.
- ☐ Cash flow analysis and financial ratios.
- ☐ Risk table.



### Outputs: Economic

justification with clear decision point:

- Value proposition.
- Written report.
- PowerPoint presentation.



As you write the economic justification and value proposition keep in mind how you will make your presentation. Because people have different modes of learning and decision making, you will want to take into account how you will communicate with each stakeholder. Refer back to Section II, task 2, “Communicate with Each Stakeholder” to help you determine how best to tailor your presentation to the people you will be presenting to. It might be necessary to incorporate several different styles of presentation to meet the communication needs of different decision makers in a single meeting. This can be a complex situation of different personalities, and you need to take this into account before the meeting, not while it is happening.

There are three tasks in this activity:

- **Task 1:** Write the value proposition.
- **Task 2:** Create the detailed written report.
- **Task 3:** Create the presentation you will deliver to the decision makers.



Some common risks associated with building a value proposition include:

- Writing and communication skills could not be the strength of an IT professional.
- Decision point not clear.

## Task 1:

## WRITE THE VALUE PROPOSITION

A value proposition concisely and efficiently summarizes the economic value that your organization can realize with the initiative.

The value proposition is crucial for creating interest and getting your decision makers to come to an affirmative conclusion about your initiative. Every component of the value proposition must be supported by a quantitative metric or qualitative statement in the value proposition; make sure that all your source inputs are referenceable.



The value proposition should be written after you have assembled all your documentation and have created your written report. However, the value proposition is the single most important element of the written report because it is here that your argument will be persuasive or not. You must demonstrate that your initiative has so much value that the only conclusion for the decision maker is not whether to implement your proposition, but rather which deployment option makes the most sense for your organization. If you do not succeed in presenting a compelling value proposition, then all the data you have assembled in your business report will be of marginal value.

The basic premise of REJ was presented in Section I, “Introduction to REJ.” Let’s revisit it by again defining the business value of IT as a business performance improvement, aligned with your organization’s CSFs that make optimal use of its resources with acceptable risks.



The REJ banner is an easy to remember graphic that describes the six step REJ process and presents the concept of value as defined in the previous sentence.

There are different levels and needs for communication depending on which phase of the initiative you are in. The four phases are awareness, consideration, approval, and implementation. During each phase you need a concise way to explain the initiative. This statement is the value proposition.

The value proposition must be a unique, well-supported (by data analysis), logical, and a convincing projection of possible business value creation that justifies a business decision to invest resources. REJ proposes a technique to build a well supported value proposition. Since it is based on four questions that start with W, it is called the **4W Approach** for value propositions.

There are 4 key questions that a value proposition must address:

1. **What** change with **What** technology are we proposing?
2. **Where** are the aligned benefits we envision?
3. How Much for **Who** (stakeholder)?
4. **When** will we receive the benefits?

The anatomy of a value proposition looks like this:

*[The Opportunity to change Process X with Technologies XX] will [increase number of Y in operations] enabling [\$xx saving in the X department] in [x months].*

By using the REJ banner (Figure 3.30), you can visually associate the information collected in the REJ project with what is needed for the value propositions.

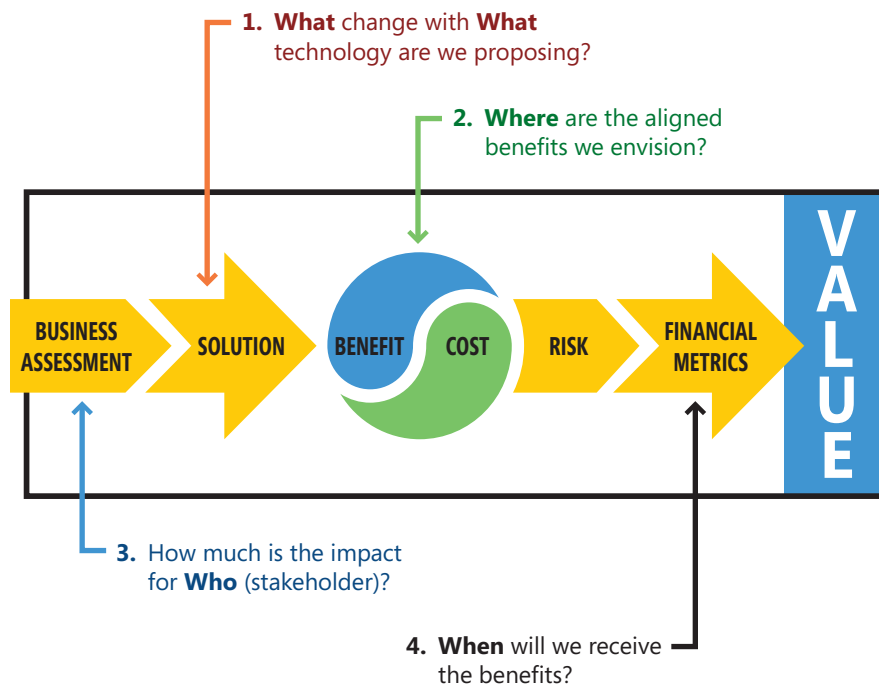


Figure 3.30: Four Ws of REJ



**Output:** Value proposition of the IT initiative to executive management and stakeholders.



Test your value proposition with as many people as you can. Do not proceed to the next activity until the value proposition satisfies at least the following criteria with the people you have shared it with:

- Do they understand what this project is all about?
- Are the benefits clear?
- Is it clear which group is going to enjoy the benefits?
- Does it generate interest to know more about the initiative?

#### Example:

[Providing corporate sales people with a Windows XP secure mobile PC] will [shorten X company's time between order and delivery by 20%] enabling [corporate sales team to generate \$1.2 Million in additional revenue] over [the next 3 years].

## Task 2: CREATE THE ACTIONABLE WRITTEN REPORT

Whereas the value proposition needs to generate the interest to know more about your initiative, the written report contains the details that support the value proposition and address any possible objection. In addition to the value proposition, the report must contain all the details to enable the decision maker to make the decision. Without the written report, the value proposition is not actionable.

You need to build the final report following the rules and best practices of your organization. The following text presents a best practice for building a report that has worked in several organizations that didn't have a standard template.

Before using the final detailed report you need to test it to make sure you satisfy the following objectives:

- Is the decision point clear?
- Is all the information needed for a decision presented clearly and concisely?
- Is all the information to support the credibility of your initiative provided?

Review Section II, "Planning REJ Engagements," for the baseline information necessary to create the detailed report.

The economic justification report consists of eight core parts, including an appendix. If you are creating a written document, limit the page count to 3 to 7 pages with supporting documentation in the appendix to back up all of the statements made in the main body of the report.

The eight parts of the report are:

- Part 1: Executive Summary.
- Part 2: Gap Analysis.
- Part 3: Proposed Solution.
- Part 4: Benefits Analysis.
- Part 5: Cash Flow Projections.
- Part 6: Risk Assessment.
- Part 7: Financial Ratios and Decision Making Point.
- Part 8: Appendices.

When you are making your presentation, you need to factor in time for the “decision point.” This critical make-or-break moment is presented after the details of each report section.

### **Part 1: Executive Summary**

Assuming your executive will give only one minute of attention, what is the best you use of that one minute? Is it:

1. Asking him or her to make a decision because they have all the information they need?
2. Highlighting the most urgent problems that your initiative addresses?
3. Assessing how your initiative can help the organization succeed?
4. Showing how you can be of help to his or her success?
5. Building your credibility to prove that he or she should spend another 60 minutes listening?

The answer is it depends on the situation. REJ suggests that you lead with a value proposition that is well-supported by either data or stakeholder’s quotes. What you choose will depend on the personality style of the decision maker.

Then, if you have generated enough interest the decision maker will usually let you keep talking. Remember, you are in a selling mode when you make this pitch, so you need to ask for a decision; don’t do it until the decision maker has all the necessary data, however. Usually, if the decision maker is interested, he or she will ask for more information. If the decision maker is not asking any questions, you know you have not interested them enough to recognize the value of your initiative. Alternately, they may recognize the value but they also see overriding risks, or they recognize the value but cannot make a budget allocation at that time.

An essential part of the entire report is what REJ refers to as “predictable accuracy.” You want to explain how the analysis has been built and where all the presented information comes from. This helps also to understand the logic of what the decision maker is about to analyze and understand what comes first. In this case we recommend that you present a summary of the REJ methodology.

## Part 2: Gap Analysis

You are asking to fund a change in your organization. Therefore, you need to make sure that the decision maker agrees with the motivation for change. You should present a gap analysis highlighting the CSFs, gaps in the KPIs, and what prevents them from performing at the desired level. You may want to include a high-level fishbone chart and gap analysis. You may find that using a version of the REJ Business Assessment Roadmap personalized to the decision maker is helpful.

## Part 3: Proposed Solution

Once the decision maker agrees on the correctness of the gap, you can present your list of opportunities for addressing the gap in current-state and desired-state KPI values. Use information from the Opportunity Analysis Table. Link the most beneficial features of the initiative to the most important KPI and CSFs. If a feature affects more than one CSF, make sure that both are recorded. Summarize the proposed solution and define how it enables the opportunities and strategies to be achieved. If your decision maker(s) questions the feasibility of your initiative, you will need to explain the solution very crisply and reference the architect you have involved in preparing the work. Keep the conversation in business terms. Avoid the typical mistake of being drawn into technical explanations based on features and benefits; focus on business results.

## Part 4: Benefits Analysis

Present the benefit created by the top two to three opportunities and allow them to discuss the benefits. It is better to engage them on “how big are the possible benefits” rather than on how expensive the initiative is. For the rest of the benefits analysis summarize the types of benefits that your organization can expect by presenting the 2X4 Benefits Matrix.

Be sure to define all direct quantitative and qualitative benefits even if they don't contribute to the formal cash flow. Identify that the benefits summary is based on the benefit solutions analysis. Include any graphics that present quantitative and/or qualitative benefits. If you are presenting option benefits, consider adding a section that explains what they are, how they are achieved, and why they are possible. Make clear that option benefits will be explained in greater detail in the cash flow section.

## Part 5: Cash Flow Projections

At this point you need to show that everything has a cost and that this cost varies depending on how soon and how big you want to aim for the benefits. This section includes two or three scenarios with quantitative calculations of all the benefits and costs over the economic life of the initiative. Summarize the types of costs that your organization can expect to incur when deploying the solution. Identify all one-time and recurring costs. Objections to cost are usually the first step in purchase decisions, so be sure to have a persuasive response that explains why the benefits outweigh the costs.

Present the benefits and costs very logically as line items. Map the economic value of the benefits to the actual projected business results so that the decision maker can clearly see the relationship. Identify all costs and compare them to the current environment, so that they understand the incremental cost and can clearly see the relationship between additional costs and new benefits.

If you are presenting option benefits you need to explain what incremental costs are involved. Add a section that explains what the additional costs are, why they are needed, and what benefits they enable.

## Part 6: Risk Assessment

Disclose those risks that could have a serious impact on the value of the initiative and that you have decided were not worth an investment for mitigation. Estimate the percentage likelihood of a risk occurring. Include a plan for mitigating each risk. You can use the data from Step 5, “Risk Assessment.” Being up-front about risks demonstrates your understanding of stakeholder concerns regarding the project and will help to neutralize stakeholder and/or decision maker objections. Don’t be shy about presenting risks; this adds credibility if it is well done.

## Part 7: Financials Ratios and Decision Making Point

The entire REJ was done to optimize the project from a value opportunity point of view. This section presents how the project has been optimized to produce value to the organization from a different point of view. Engage the executive to make the decision based on the financial ratios. You will probably need to present more than one option for implementation; make sure you present both the pros and the cons of each deployment option.

If you have included option benefits, now is the time to explain how they differ from normal benefits.



**When you make your presentation, whether in-person or with the written report, you must close with the decision making point.** This decision point is the most important objective of your presentation and report. Present the decision point as structured and as clearly as you can. Summarize all the pros and cons for each scenario so that the decision maker is thinking, “what is the best way to implement the initiative?” rather than, “do I want to go ahead with this?” In sales methodology this is called the “presumptive close.” Structure your presentation and the words you use with the assumption that the decision maker wants to make a yes decision; you just keep giving him or her the rational reasons to do so by providing the information that is useful to assess value. Make sure that you have space in the written report for annotating the call to action; you can’t drop the ball when the decision is made, you need to keep the ball rolling and follow-through with the actions that have been discussed as a result of the decision.

## Part 8: Appendices

Appendices include all the information needed to handle objections about how the work was done. Include details about the methodology you have used, sources of information, disclosure about assumptions, and the way in which calculations were done. As a general rule you don’t show this information in the presentation; it is better to have several printed copies ready to handout.

**Example:** Contact the Microsoft Business Value team for examples.



### Inputs

- ☐ Communication Plan.
- ☐ Kickoff deliverable agreement.
- ☐ Business Assessment Roadmap.
- ☐ Opportunity Table.
- ☐ Benefits Matrix.
- ☐ Cash flow analysis.
- ☐ Financial metrics.



**Outputs:** Economic Justification report.

## Best Practice: Indicators of a Successful Written Report and Value Proposition

Use the following criteria to determine whether the written report, value proposition, process, data, and deliverables that you have created can survive a self-audit or independent third-party audit:

- ☐ Is the scope well defined? Are all benefits and costs strictly within the project scope?
- ☐ Are the key stakeholders, CSFs, and KPIs clearly identified?
- ☐ Are the technology enablers and benefits linked to stakeholder CSFs and KPIs?
- ☐ Are the benefits and cost estimates developed by the individuals (e.g., business process owners) who have sufficient power to affect the events that must occur in order to realize these benefits?
- ☐ Are the costs reasonable and the benefits achievable?
- ☐ Is there is a clear distinction between direct and option benefits?
- ☐ Are risks mapped to specific benefits and costs? Are the risk level (low, medium, and high) and subsequent financial impact of the risks included in the analysis?
- ☐ In the financial statement, are benefits realized only after the implementation of the solution?
- ☐ Are the financial calculations accurate? Do you use generally accepted accounting formulas?



**Inputs:** Written business report.



**Output:** PowerPoint presentation.

### Task 3: BUILD THE POWERPOINT PRESENTATION

Use the content from the written business report to prepare a PowerPoint presentation of no more than 7 to 10 slides. Use the same heading categories as the written report but be more concise; be prepared to back up your presentation with the data in your written report. You can prepare a set of handouts as an alternative to a formal PowerPoint presentation.

**Example:** Contact the Microsoft Business Value team for a PowerPoint template.

## Activity 3: PRESENT FINDINGS



Once the economic justification report is complete, you will need to plan an effective way to communicate it to your business sponsor and decision makers. When possible, try to have your executive sponsor present the proposal to the decision makers (CTO, CFO, etc.) Very often an interactive presentation is more effective than submitting a written document. If you need to submit the document make sure you have had a chance to discuss it with some of the people on the investment committee so that somebody can explain anything that could come up.

If you get the chance to have an interactive meeting to present your case, plan to be as concise as possible. Make sure you leave the decision makers with the impression that you have addressed their concerns rather than leaving with the, “we need more time to review this proposal.” The closer you have aligned your solution with the senior managers’ CSFs, the greater your chances of getting your project funded.

In the prior activity you created a written report and a PowerPoint presentation; now is the time to present the PowerPoint and use the written report as backup documentation that logically explains the entire economic justification process. If you prefer, or if your audience requires, you can use a whiteboard for your presentation. If you use a whiteboard or flip-chart it is a good idea to have handouts of the executive summary.

There are two distinct elements to presenting your findings:

- **Present the Economic Justification** to the decision maker(s) or executive committee for review.
- **Obtain an investment decision** that result in a go/no-go decision.

Presenting a value proposition is like defending a case in court.



Typical questions your team should know how to address:

- What happens if we don’t make the investment for another year?
- Those are soft productivity benefits, aren’t they? Where are hard benefits?
- How did you come up with that benefit?
- Who is the source of those estimates?
- What are the risks?
- What happens if only 50% of benefits are realized?
- What happens if it costs 20% more than you estimated?

It is a good idea to do a dry run of your presentation with somebody who is used to presenting to those executives before you present to your stakeholders and executive managers. In this way you can drill holes in your own value proposition before you present and adjust the value proposition presentation as necessary.



There is a lot riding on your presentation to executive management, and there are many risks. Consider the following:

- Your team is not properly prepared to make the value proposition.
- Information technology has low credibility with senior managers.
- The value proposition is compelling, but capital is not available for implementation.
- Competing uses of capital are more urgent at this time.



**Output:** Presentation to decision makers and/or executive committee.

**Decision:** Go/no-go decision on the initiative.



# Appendix A: SAMPLE REJ PROJECT SCHEDULE

This template helps you organize the REJ activities as a project, to secure resources for the evaluation, and to create expectations. It also provides a check-list of activities and tasks in the recommended order. How to execute the activities is provided in the *Step-by-Step Guide*.

You can also obtain a version of this schedule in Microsoft Excel format by going to <http://www.microsoft.com/value> or <https://partner.microsoft.com/value>. The data included in grey are just average that help you understand the proportions of the amount of work necessary to complete each activity and task.

Planned Dates	REJ Project Components and Participants	Activities and Detailed Tasks	Duration Hours	Cumulative Duration Hours	Duration Days	Notes:
	<b>Planning</b>					
	<b>Minimum Required Participants:</b> Initiative visionary, possible business sponsor, subject matter experts such as consultants, partners, or suppliers					
		<ul style="list-style-type: none"> <li>Define initial vision and scope for the REJ project</li> <li>Define who could fund the initiative and the possible limits of funding</li> <li>Assess PR opportunities that can potentially impact costs since technology suppliers and partners might allocate resources at special pricing</li> <li>Assemble REJ core team with partners</li> </ul>				
	<b>Pre-Kickoff Meeting</b>					
	<b>Minimum Required Participants:</b> REJ project core team					
		<b>Task 1: Assess How Final Decision Will Be Made</b> <ul style="list-style-type: none"> <li>Discuss goals and set expectations about REJ knowledge transfer with every member of core team</li> <li>Propose vision for the project of the business enhancement initiative</li> <li>Agree on limits of scope</li> <li>Assess how the final financial decision will be made</li> <li>Agree on possible PR use of results with pricing implications</li> </ul> <b>Task 2: Build Communication Table</b> <ul style="list-style-type: none"> <li>Create Hypothesis Table</li> <li>Identify REJ project enablers</li> <li>Identify people in the REJ peer review process</li> <li>Discuss existing procurement processes</li> <li>Discuss political trust and respect map</li> <li>Identify executive participants to be present at kickoff</li> </ul>				

Planned Dates	REJ Project Components and Participants	Activities and Detailed Tasks	Duration Hours	Cumulative Duration Hours	Duration Days	Notes:
		<p><b>Task 3: Identify Desired Structure of Final Deliverable</b></p> <p>Agree on final deliverables (including page count)</p> <p>Identify financial data</p> <p>Identify qualitative data</p> <p>Determine how the REJ will be validated (i.e., will you require a third party?)</p> <p><b>Task 4: Plan REJ Project Activities</b></p> <p>Schedule kickoff meeting</p> <p>Write and send invitations to kickoff meeting</p> <p>Determine project start and end dates</p> <p><b>Task 5: Identify Needed Resources</b></p> <p>Program manager, key stakeholders, financial analyst, processes SMEs, information architect, auditing authority; how about partners and/or suppliers?</p> <p><b>Task 6: Plan An Effective REJ Kickoff Meeting</b></p> <p>Prepare kickoff meeting presentation</p> <p>Review the project vision</p> <p>Review the scope of work and scope of solution</p> <p>Prepare statement of work and agree on pricing with every party involved</p> <p>Follow up with people invited to the kickoff and who didn't respond</p>				
	<p><b>Kickoff Meeting</b></p> <p><b>Minimum Required Participants:</b> Initiative visionary, business stakeholders, subject matter experts</p>					
		<p><b>Build Shared Goals</b></p> <p>Agree on vision</p> <p>Agree on scope</p> <p>Sell the value of the REJ study</p> <p>Agree on desired structure of final deliverables</p> <p><b>Project plan</b></p> <p>Explain roles and responsibilities</p> <p>Obtain resource commitments</p> <p>Set schedule</p> <p>Secure time in the agenda of team players</p> <p>Finalize the project plan</p>				
	<p><b>Step 1: Assess Business Requirements</b></p> <p><b>Minimum Required Participants:</b> REJ program manager (initiative visionary) and potential business stakeholders</p>					
		<p><b>Activity 1: Identify Stakeholders</b></p> <p>Gather necessary input data such as Fiscal Year Plan, 3-year plan, budget lifecycle, etc.</p> <p>Finalize Hypothesis Table</p> <p>Prepare to verify alignment using the Business Assessment Roadmap</p> <p>Select key stakeholders</p> <p><b>Output:</b> Finalized Hypothesis Table</p> <p><b>Output:</b> Stakeholders filled-in in Business Assessment Roadmap</p>				

Planned Dates	REJ Project Components and Participants	Activities and Detailed Tasks	Duration Hours	Cumulative Duration Hours	Duration Days	Notes:
		<p><b>Activity 2: Identify Stakeholder Critical Success Factors (CSFs)</b></p> <p><b>Output:</b> CSF column in Business Assessment Roadmap filled in</p> <p><b>Activity 3: Identify Key Performance Indicators (KPIs) for each CSF</b></p> <p>Identify KPIs for each CSF Collect information on way to measure KPIs Conduct KPI Gap Analysis from current and desired state of KPIs Verify alignment between KPIs and CSFs</p> <p><b>Output:</b> KPI column and current and desired KPI columns in Business Assessment Roadmap filled in</p> <p><b>Activity 4: Identify Business Strategies</b></p> <p>Interview stakeholders to identify stakeholder strategies in achieving CSFs</p> <p><b>Output:</b> Business strategies filled in Business Assessment Roadmap</p> <p><b>Activity 5: Identify Business Activities and Processes</b></p> <p>Identify activities that your stakeholders are already driving Identify underperforming processes that require change to meet stakeholder KPIs gap Identify a subject matter expert (SME) for each business process and activity</p> <p><b>Output:</b> Business activity column of Business Assessment Roadmap filled in</p> <p><b>Activity 6: Assess Risks</b></p> <p>List risks associated with work done in this step Evaluate with stakeholders the probability and note possible mitigation opportunities Sign-off on accuracy of Business Assessment Roadmap by at least two stakeholders</p> <p><b>Output:</b> Risk Assessment table completed <b>Output :</b> Business Assessment Roadmap approved</p>				
	<p><b>Step 2: Map Solution</b></p> <p><b>Minimum Required Participants:</b> REJ program manager, subject matter experts, solution architect</p>					
		<p><b>Activity 1: Prioritize Activities and Processes</b></p> <p>Rank activities and processes by the level of impact on CSFs</p> <p><b>Output:</b> Start filling in Opportunity Table with ranking index, CSFs and Business Activities</p>				

Planned Dates	REJ Project Components and Participants	Activities and Detailed Tasks	Duration Hours	Cumulative Duration Hours	Duration Days	Notes:
		<p><b>Activity 2: Identify Opportunities for Improvement</b></p> <p>Identify factors that create obstacles in reaching CSFs</p> <p>Identify high-level improvements (required functionality of the solution)</p> <p>Identify improvements with detailed process analysis (Use, Fishbone analysis, process diagrams, etc.)</p> <p>Identify improvements due to IT maturity or gaps in TCO best practices (This helps align features to functionality)</p> <p>Use Cranfield Benefit Dependency Network Framework (This helps to validate features against CSFs and KPIs)</p> <p><b>Activity 3: Identify Technology Enablers</b></p> <p>Identify technology enablers that enable improvements in business activity or process</p> <p><b>Output:</b> Fill in Technology Enabler column of Opportunity Table.</p> <p><b>Activity 4: Assess Risks</b></p> <p><b>Output:</b> Risk Assessment table filled in</p>				
	<p><b>Step 3: Estimate Benefits</b></p> <p><b>Minimum Required Participants:</b> REJ program manager, subject matter experts and stakeholders</p>					
		<p><b>Activity 1: Analyze and Maximize Benefits</b></p> <p>Analyze benefits for each CSF</p> <p>Maximize the benefits for each CSF</p> <p><b>Output:</b> 2X4 Benefits Matrix filled in with qualitative benefits</p> <p><b>Activity 2: Quantify Benefits</b></p> <p>Use one of the 5 quantification tools defined in the guide</p> <p>Use professional calculators</p> <p>For each quantified benefit make sure there is a stakeholder that endorses it (ideally, get a quote)</p> <p><b>Output:</b> 2X4 Benefits Matrix filled in with quantitative benefits</p> <p><b>Activity 3: Assess Risks</b></p> <p><b>Output:</b> Risk Assessment table filled in</p>				
	<p><b>Step 4: Estimate Costs</b></p> <p><b>Minimum Required Participants:</b> REJ team, business sponsor, stakeholders, IT suppliers and/or partners</p>					
		<p><b>Activity 1: Identify Costs</b></p> <p>Identify Total Cost of Acquisitions costs (including direct and indirect costs)</p> <p>Identify Ongoing direct and indirect costs</p> <p><b>Activity 2: Quantify Costs</b></p> <p>Quantify Total Cost of Acquisitions costs (including direct and indirect costs)</p> <p>Quantify Ongoing direct and indirect costs</p> <p><b>Output:</b> List of all costs quantified</p> <p><b>Activity 3: Assess Cost-Related Risks</b></p> <p><b>Output:</b> Risk Assessment table filled in</p>				

Planned Dates	REJ Project Components and Participants	Activities and Detailed Tasks	Duration Hours	Cumulative Duration Hours	Duration Days	Notes:
	<b>Step 5: Assess Risks</b>					
	<b>Minimum Required Participants:</b> REJ program manager, financial analyst (controller), solution architects					
	<b>Activity 1: Identify Risks</b> List possible impact of risks Rank probability of risk occurring List mitigation opportunities for risks  <b>Activity 2: Make Risk Statements</b> Establish risk thresholds with stakeholders Isolate conditions in which risk could occur Explain what you have done to contain the risk Review solution to mitigate major risks of solution Estimate monetary impact of the risk Estimate monetary cost of mitigation <b>Output:</b> Overall Risk Table with Mitigation Costs <b>Output:</b> Risk Statements					
	<b>Step 6: Build Financial Metrics and A Strong Value Proposition</b>					
	<b>Minimum Required Participants:</b> REJ project manager, financial analyst (controller)					
	<b>Activity 1: Prepare Financial Metrics</b> Collect financial parameters of your organization Create initiative cash flow Calculate initiative financial indexes Calculate initiative financial ratios based on balance sheet data <b>Output:</b> Optimization of initiative according to chosen financial ratios <b>Output:</b> Value of financial ratios ready to be presented at decision making moment  <b>Activity 2: Prepare an Economic Justification With A Strong Value Proposition</b> Write the value proposition Write the detailed written report Write the presentation that will be delivered to decision makers Peer review of REJ for quality assurance Rehearse presentation <b>Output:</b> Value Proposition <b>Output:</b> Written report <b>Output:</b> PowerPoint Presentation  <b>Activity 3: Present Findings</b> Present the economic justification Obtain a positive investment decision State a clear call to action to follow-up					
	<b>REJ Completed</b>					
	<b>Total</b>					



# Appendix B: PEER REVIEW EVALUATION

This checklist is located in the Peer Review Checklist worksheet in the REJ workbook.

Peer Review Evaluation				
Q's 1-3 are pass/fail; Q's 4-13 are averaged to generate a quality score. Any zero result means a zero for the total score. <b>Instructions:</b> Mouse over cell A10				
Peer Reviewer:				
Peer Reviewer's alias:				
Date of Review:		Final Score: 0.00 (2 or higher meets quality review)		
Instructions: (mouse over this cell, or some individual questions also have notes)				
Review Question	Answers (Type an "X" in the correct box)			Score
1 Has the sponsor approved the financial metrics final IRR/ROI numbers? Comments:	No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>		1
2 Are there any errors in the workbook values or formulas? Comments:	1 or more Errors <input type="checkbox"/>	No Errors <input checked="" type="checkbox"/>		1
3 Were the benefit scenarios approved by stakeholders? Comments:	No <input type="checkbox"/>	Yes <input type="checkbox"/>		0
4 Did you receive customer validation of data contained in this workbook? Comments:	None <input type="checkbox"/>	Consultant <input type="checkbox"/>	Email <input checked="" type="checkbox"/> Phone/In Person <input type="checkbox"/>	2
5 Were sponsors/stakeholders interviewed? Comments:	None <input type="checkbox"/>	only 1 <input type="checkbox"/>	only 2 <input type="checkbox"/> 3+ <input type="checkbox"/>	0
6 Are all KPI specific & measurable? Comments:	None <input type="checkbox"/>	Some <input type="checkbox"/>	Most <input type="checkbox"/> All <input type="checkbox"/>	0
7 Does the solution map link each CSF to a specific dollar-value impact? Comments:	None <input type="checkbox"/>	Some <input type="checkbox"/>	Most <input type="checkbox"/> All <input type="checkbox"/>	0
8 Do benefits measure Business Value or TCO? Comments:	No measures <input type="checkbox"/>	TCO Only <input type="checkbox"/>	Mostly TCO <input type="checkbox"/> Mostly Value <input type="checkbox"/>	0
9 Were all benefits risk adjusted? Comments:	None <input type="checkbox"/>	Some <input type="checkbox"/>	Most <input type="checkbox"/> All <input type="checkbox"/>	0

(continued)

(continued)

<b>10</b> Were benefits measured more than once?	Many <input type="checkbox"/>	Some <input type="checkbox"/>	Few <input type="checkbox"/>	None <input type="checkbox"/>	0
Comments:					
<b>11</b> Have all (or enough) costs been measured?	None <input type="checkbox"/>	Few <input type="checkbox"/>	Some <input type="checkbox"/>	Many <input type="checkbox"/>	0
Comments:					
<b>12</b> Does the cash flow table include benefits and costs that are traceable back to a CSF or group of CSFs	None <input type="checkbox"/>	Few <input type="checkbox"/>	Some <input type="checkbox"/>	Many/All <input type="checkbox"/>	0
Comments:					
<b>13</b> Were any custom tables, formats or worksheets added or used <b>in place</b> of the standard template?	Many <input type="checkbox"/>	Some <input type="checkbox"/>	Few <input type="checkbox"/>	None <input type="checkbox"/>	0
Comments:					
<b>14</b> Additional overall comments from Reviewer?	Comments: <div></div>				
Total Score:					(2 or better meets quality review) <b>0.00</b>



# Appendix C: RESOURCES AND FOR MORE INFORMATION

## Books

McDowell, Robert, and William L. Simmon. *In Search for Business Value*. New York: Select Books Inc., 2004.

Murphy, Tony. *Achieving Business Value from Technology: A Practical Guide for Today's Executives*. Hoboken, NJ: John Wiley & Sons, Inc., 2002.

Weill, Peter, and Joanne W. Ross. *IT Governance: How Top Performers Manage IT Decision Rights for Superior Results*. Boston: HBS Press, 2004.

Weill, Peter, and Joanne W. Ross. *Leveraging the New Infrastructure: How Market Leaders Capitalize on Information Technology*. Boston: HBS Press, 1998.

Johnson, Spencer. *Who moved my Cheese?* New York: G.P. Putnam's Sons, 1998.

Kaplan, Robert S. "Must CIM Be Justified by Faith Alone?" *Harvard Business Review*, Vol. 64, no. 2 (1986). Boston: Harvard Business School Publishing.

Kaplan, Robert S., and David P. Norton. *The Balance Scorecard*. Boston: HBS Press, 1996.

Hitchner, James R. *Financial Valuation: Applications and Models*. Hoboken, NJ: John Wiley & Sons, Inc., 2003.

Droms, William G. *Finance and Accounting for Nonfinancial Managers*. Cambridge, MA: Perseus Publishing, 2003.

Federal CIO Council. *ROI and the Value Puzzle*. Washington, D.C.: Federal CIO Council, April 1999.

Club per le Tecnologie Dell'Informazione. *Il valore dell'Information Technology*. Torino, Italy: ISEDI, 2000.

Boulton, Richard, Steve M. Samek, and Barry D. Libert. *Cracking the Value Code: How Successful Businesses Are Creating Wealth in the New Economy*. New York: Harperbusiness, 2000.

## Resources

- Balanced Scorecard Institute—<http://www.balancedscorecard.org>
- CIO View—<http://www.cioview.com>
- Cranfield University and the Benefit Dependency Network tool—<http://www.cranfield.ac.uk>
- Finlistics—<http://www.finlistics.com>
- Forrester Research—<http://www.forrester.com>
- Gartner—<http://www.gartner.com>
- Glomark—<http://www.glomark.com>

- Goal QPC—<http://www.goalqpc.com> Memory Jogger
- Harvard Business Review on the Business Value of IT (Compilation)—<http://www.hbr.com>
- IDC—<http://www.idc.com>
- Lawrence Associates—<http://www.lawrence-associates.com>
- Mega—<http://www.mega.com>
- Meta—<http://www.metagroup.com>
- Microsoft Enterprise and Partner Group—<http://www.microsoft.com/value>
- Microsoft Consulting Services—<http://www.microsoft.com/services/microsoftservices/cons.mspix>
- Microsoft Partner REJ resources—<https://partner.microsoft.com/value>
- Microsoft REJ case studies—<http://www.microsoft.com/windowsserver2003/evaluation/casestudies/rejstudies.mspix>
- MIT Center for Information System Research—<http://mitsloan.mit.edu/faculty/c-systems.php>
- Navigant—<http://www.ncivia.com>
- Nucleus Research ROI Calculators—<http://www.msftroi.com>
- Solution Matrix—<http://www.solutionmatrix.com>
- Sphida—[www.spida.com](http://www.spida.com)
- Stratascope—<http://www.stratascope.com>
- U.S. Security and Exchange Commission—<http://www.sec.gov>
- Wipro—<http://www.wipro.com>
- Wizdom Systems—<http://www.wizdom.com>





*"The alignment of business strategy with information technology is the most important part of the entire analysis...Our intention is to utilize REJ as we go forward in technology decision-making."*

—Dr. Philip Kutzenko, Director of Technology, Cytex Industries, USA

*"REJ was a successful effort to work with the business units"*

—Bob Schwartz, CIO Panasonic, USA

*"The REJ framework is a well engineered process, it really helps an IT organization selecting priorities and act in right direction. My team really enjoyed using REJ and improved communication ability."*

—Giuseppe Biassoni, CIO RAI Radiotelevisione Italiana, Italy

*"You need measurement and communication to get buy-in at all levels. REJ has bridged the communication gap between IT and business executives."*

—Charnporn Jotikasthira, VP of IT Division, Siam Commercial Bank, Thailand