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Timothy J. Kloppenborg, *Editor*

Leveraging Business Analysis for Project Success

Vicki James

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Dedicated to….

My sister, Hannah Tilley. I took my sister, a recent college graduate, up the Space Needle on a recent visit. The process to get down the Needle was a bit arduous, with long lines to wait for an elevator. Hannah declared to me that the flow of traffic would be better if people signed up for times ahead of time and just showed up at the appropriate time. We discussed the merits and challenges with this approach, but at the end of the conversation, I told her, "That is business analysis. You are a business analyst at heart."

This book is dedicated to Hannah and all other business analysts. May you find the skills, education, training, and support you need to bring great value to your organizations.

Abstract

Only 39 percent of projects today are successful. Nearly half of the projects that fail, fail because of "poor requirements management" (PMI 2014). *Leveraging Business Analysis for Project Success* explores the role of the business analyst in setting a project up for success. It informs and educates project managers, sponsors, and organization leaders on what is necessary for project success. It goes beyond requirements management in exploring how the business analyst can contribute to increased profitability through project selection, scope definition, and post-implementation evaluation. The reader will learn about the history of business analysis, professional organizations and resources to support the profession, and what to expect from the business analyst at each phase of the project life cycle as presented in a case study throughout the text. Project leaders will be better able to support the business analysis needs of the project by understanding the skills, expertise, tasks, resources, and time needed to do business analysis right and maximize the return on investment for each project.

Keywords

Business analysis, Business analyst, Return on investment, Project, Requirements

Contents

List of Figures

Foreword

I once set the following question before a group of project managers and business analysts: "Project Sponsor, Project Manager, Business Analyst—you can only have two of them—now choose…"

Needless to say, the discussion (verging on argument) that ensued was pretty exciting.

As a project manager, speaker, author, but primarily as a project manager, I clearly advocate the need for a good professional project manager. As a coauthor of *Strategies for Project Sponsorship*, I am also clearly calling for the project world to take the investment in project sponsors seriously, and, therefore definitely, a skilled project sponsor is needed. But here I fail my own test. I can't stop at just two out of three; in this case, "two out of three ain't bad" doesn't make the grade; "three out of three" is the right answer.

I presented in Canada at a joint project management and business analysts' conference, and the conversations were one and the same—project success, consistent realization of business benefits, and reduced risk. I must admit that I was concerned that, despite my own personal experience in this field, the two groups would polarize at such an event—perhaps even sitting in two siloed communities on either side of the room. I was delighted to find that this was not the case at all.

In *Real Project Management* (Kogan Page), I describe the early part of any project as the "journey of expectation management", as all of the project representatives come to learn about each other and understand what the project aims to deliver and what the realistic outcomes are likely to be, and so on. The critical message is that nobody understands everything at the start of the project, and when there are external third parties involved, even less so. Suppliers of products and resources have to learn about the business of the customer, and the customer has to learn about the supplier's product capability. During this period, the project sponsor doesn't operate at this level of detail, and, if we are honest, the project manager has a lot to do as they work to create a team, gain control and authority, and inspire everyone with a common purpose and vision.

Strike one for a business analyst at this point in time, as they can provide the depth of engagement and knowledge to get the project off to a better start and greater likelihood of success.

So we have got the project off to a great start, and so now we can sit back and relax; success is assured, of course. No, of course not, we all know that projects are never that simple, and the one thing you can expect during this period of change driven by the project is that there will be a change within the project as all parties aim to align the project to the business and deliver true value. Strike two to the project that includes the convergence of both project management and business analysis skills for comprehensive change management.

Strike three comes with regard to that critical activity, overwhelmingly critical activity, of communication on a project. Don't tell me that any project manager couldn't do with some help in this area. The business analyst is responsible for stakeholders of the solution, leaving the project manager to focus on the stakeholders of the project; this is a real result.

Vicki James takes the reader on an important journey in *Leveraging Business Analysis for Project Success* to really appreciate the value that the business analyst brings to your future project success.

Peter Taylor (The Lazy Project Manager)

Peter Taylor is the author of two best-selling books on Productive Laziness—"The Lazy Winner" and "The Lazy Project Manager."

In the last four years, he has focused on writing and lecturing, with over 200 presentations around the world in over 25 countries, and has been described as "perhaps the most entertaining and inspiring speaker in the project management world today."

His mission is to teach as many people as possible that it is achievable to "work smarter and not harder" and to still gain success in the battle of the work/life balance.

More information can be found at www.thelazyprojectmanager.com—and through his free podcasts in iTunes.

Preface

Lean, Agile, and Scrum are all buzzwords that have caught the attention of executives. These words become like candy to executives as organizations look for ways to do projects cheaper, faster, and that bring value to the business. At the core of any of these is a common competency that can help make businesses more profitable by the projects they do. That competency is *Business Analysis.*

Kitty Hass, author and consultant, recently spoke to IIBA Seattle Chapter on value-based business analysis: "Higher BA maturity levels are directly correlated to more effective business alignment of projects, higher quality business solutions, increased customer value, increased creativity and innovation, and an increase in the business benefits that result from implementation of new business solutions."[1]

Each of the examples above has the shared goal of being frameworks to reduce time-to-market for products in order to begin realizing benefits sooner . . . to realize a return on investment as soon as possible. You have to be able to define and quantify the benefits before you plan how to achieve them, and this is just one way business analysis can help organizations.

This book is for project managers, project management office managers, program managers, and C-level executives. The reader will gain a full understanding of how business analysis can help define and achieve greater success through all phases of the project, portfolio, and product life cycles. We will explore the responsibilities of each of these roles to contributing to successful projects that result in value to the business, and recommend a project leadership structure that optimizes the skills

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[1]Kathleen (Kitty) Hass is the principal consultant at Kathleen Hass and Associates, and board member of International Institute of Business Analysis. From presentation notes; personal presentation to IIBA Seattle Chapter on September 23, 2014; based on her book *Breakthrough Business Analysis: Implementing and Sustaining a Value Based Practice* (2014). Tysons Corner, VA: Management Concepts Press.

and expertise of each. This short publication will not go into great detail of how to do business analysis; rather, the intent is to arm the reader with the facts they need to develop and support increasing business analysis competency within their organizations and projects.

This book is organized into three parts.

Part 1—Business Analysis Defined will describe business analysis and give a history of how the profession has evolved. We will explore the organizations and publications that have contributed to the profession and serve as resources to business analysts today.

Part 2—What Your Business Analyst Should Be Doing for You walks the reader through the stages of business analysis, identifying the business need, analyzing work throughout the project life cycle, and finally evaluating project results. The chapters in this part provide information on the typical activities and value that business analysts add through the entire process. A case study is provided by following the work of a fictional BA (Liz). Finally, questions are provided at the end of each chapter. These questions are designed to prompt the reader to apply the concepts of the chapter to his or her own projects to determine where changes can be made to increase business analysis effectiveness and drive greater project value.

Part 2 also provides some information on the tasks, tools, and techniques that support great business analysis. The examples provided are meant to provide a demonstration of how business analysis can work, and is not intended to be a comprehensive, all-inclusive how-to-guide. There are more than 100 tools and techniques available to support business analysis used in the industry today. Some explanation of only the top tools and techniques will be provided throughout the chapters to provide context and support the concepts described. Appendix C—Business Analysis Tools and Techniques provides more information on 17

of the most useful tools and techniques your business analyst should be skilled in.

Part 3—Organizational Strategies for Business Analysis provides a discussion on things that the organization can do to better support business analysis and increase profitability through the return on investment on projects.

Acknowledgments

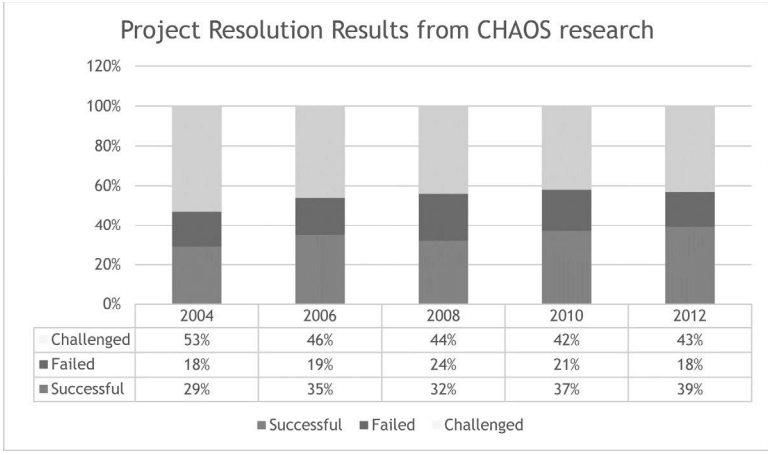
I would like to first thank Peter Taylor. He not only provided the foreword to this book, but he also took a chance on me when we coauthored (along with Ron Rosenhead) *Strategies for Project Sponsorship*. It was his encouragement (and referral) that led to this first solo book endeavor. I hope I can bring just a fraction of his wit and humor into the manuscript for a more enjoyable read.

Thank-you to Karl Weigers, author and Principal Consultant of Process Impact, for his assistance and mentorship over the past 13 years. My first interaction with Karl was when I had e-mailed him through his website asking for advice on how to get a sponsor to prioritize project requirements. It became apparent after about 30 minutes that he did not have a magic bullet and that I had taken all the appropriate steps. I'll never forget his words, "I cannot help you with unreasonable people." This was an "ah ha" moment that helped me to understand when to let go and simply adjust to the circumstance. Karl later published *Pearls from Sand: How small encounters lead to powerful lessons,* a collection of stories from his own encounters. Karl has provided me with one of my biggest "pearls," and continues to be a great friend and mentor.

The truth is, this was not a solo project. I could not have done it without the support and candor of my friends who took the time to review and provide honest feedback on an early draft. Thank you Bob Prentiss, Jeff Furman, and Tim Kloppenborg.

Introduction—Challenges Today

Projects throughout the world are challenged. Think of your own projects. What percentage were completed on time, on budget, and with the anticipated scope? What percentage never made it to the finish line to land in the big project junk pile in the sky? Organizations such as Gartner and the Standish Group provide statistics each year that tell the same story. The fact is only 39 percent of projects today are completed successfully.



	2004	2006	2008	2010	2012
Challenged	53%	46%	44%	42%	43%
Failed	18%	19%	24%	21%	18%
Successful	29%	35%	32%	37%	39%

Figure 1 Project Resolution Results from CHAOS Research Years 2004 to 2012. The Standish Group

The statistics on project success have not significantly changed in the past 10 years, and neither has the cited reasons for the challenges that the projects face.

The most cited reasons for challenged and failed projects are:

1) Lack of clear requirements
2) Lack of executive support

This book addresses both of these reasons for challenged projects. It starts with the premise that lack of executive support contributes to the lack of clear requirements. That's right. It starts with the executives, not the unfortunate project line staff trying to do too much with not enough time and the wrong set of skills. Figure 2 provides a visual of how the reasons relate to result in the project challenges we see today.

Figure 2 Correlation Between Executive Support, Poor Requirements, and Challenged Projects

Strategies for Project Sponsorship (Management Concepts 2013)[i] provides ideas and information to project managers and business analysts to help get the needed executive support in general for this project. This book focuses on making the business case for strong business analysis and outlining the executive and organizational support needed to mature organizations' business analysis practice to improve project success rates.

Big Changes in 2014

Business analysis gained a new proponent in 2014 that will change how organizations view business analysis in the future. Well, to say a "new proponent" may be a bit strong as they have always had an interest in business analysis. The organization I am talking about is the Project Management Institute (PMI).[2]

In recent years, we have seen PMI taking a greater interest in business analysis with the latest editions of the *Guide to the Project Management Body of Knowledge (PMBOK® Guide)*. The fourth edition, published in 2008, included "Collect Requirements" as a task for the first time

[2]Project Management Institute (PMI). www.pmi.org.

(see below for my thoughts on collecting requirements). You can see how the role of business analysis has evolved for the PMI in their discussion of the "business case". The fourth edition states, "The requesting organization or customer, in the case of external projects, may write the business case."[3] Fast forward to 2013 and the release of the fifth edition, "… such analysis is usually completed by a business analyst using various stakeholder inputs"[4]. This is a great step in the right direction.

"Collect Requirements?"

I have a hard time with this as a project task. The IIBA's *BABOK® Guide* refers to this activity as "elicit requirements". I think of project requirements like Easter eggs at an Easter Egg Hunt. We can collect those that are right in front of our face. But to get all of the Easter eggs, we need to do some analysis. We need to do a little digging, interview stakeholders (dad), and explore until the last Easter egg is found. Because if we don't find the last Easter egg, we may have a big stinky mess on our hands down the road.

This is how we should treat our requirements to avoid a big stinky mess in our projects.

In 2012 the PMI introduced a new community of practice, Requirements Management Community of Practice. Here, PMI members could share information and find education information on managing requirements. What came next should not be a big surprise.

In March 2014 the PMI announced a new credential program, Project Management Institute Professional in Business Analysis (PMI-PBA℠). While the credential name indicates that it is a general business analysis credential, the information provided and examination content refer to a proficiency in requirements management within the project and program context. This is a more narrow view of business analysis than the Certified Business Analysis Professional™ (CBAP®) credential

[3] *PMBOK® Guide,* 4th Edition, page 75.
[4] *PMBOK® Guide,* 5th Edition, page 69.

offered by IIBA.[5] However, the scope of the examination extends beyond requirements management and the project.

The year 2014 was truly the year of business analysis for the PMI, with the publication of *PMI's Pulse of the Profession: Requirements Management—A Core Competency for Project and Program Success* [6] in August of that year and prerelease of *Business Analysis for Practitioners—A Practice Guide* in November.[7]

> *PMI's 2014 annual global Pulse of the Profession® study revealed that "inaccurate requirements gathering" remained a primary cause of project failure (37 percent) in 2014 (up from 32 percent in 2013). This fact, plus PMI's focus on this practice area, led us to research this cause of failure in-depth and publish our findings in this report. (Pulse of the Profession Executive Summary)*

PMI also states that this is the main reason for the creation of the PMI-PBA℠ credential.

The bottom line is that the PMI is on a mission to enhance the core competencies of those who elicit and manage requirements for projects and programs. This is the same mission that IIBA has had since 2003.

What I aim to add to the conversation is that projects need executive support to get skilled staff, training and skills development, time, and access to people and resources needed to elicit and manage quality

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[5]Credential offered by IIBA. Credential holders have demonstrated 7,500 hours of experience in business analysis activities in addition to 21 hours of education, and have passed a rigorous exam proving expert knowledge in the area of business analysis.

[6]Smith, A. (2014). "Requirements Management: A Core Competency for Project and Program Success." *PMI's Pulse of the* Profession, 20-20. Retrieved from http://www.pmi.org/~/media/PDF/Knowledge Center/PMI-Pulse-Requirements-Management-In-Depth-Report.ashx, (October 5, 2014).

[7]Project Management Institute. (2015). Business Analysis for Practitioners: A Practice Guide. Newtown Square, PA: Project Management Institute.

requirements that maximize the chance for project success and added business value. Reading this book is the first step to realizing these benefits, and for the mere price of this book.

Recent Trends

You can see in some of the more recent trends how organizations are working to try improving success rates of projects and bringing more value to the business with these projects. In reality, they are finding that none provide the magic bullet that leads to project success.

Agile

Agile methods, especially Scrum, became all the rage rolling into the mid-2000s. It promised to be a way to deliver projects without a heavy investment of documentation and requirements upfront. The problem isn't that Scrum is not a way to gain additional value from the projects an organization takes on. The problem is that it is misused. Tell anyone that you are doing an Agile project, and the first thing that comes to mind is that there is not any project documentation. Wrong! The *Manifesto for Agile Software Development*[ii] states: "**Working software** over comprehensive documentation". Agile is not a license to skip documenting the business need, but rather it provides processes to do this in a "just in time" manner, a manner that may not be acceptable to some organizations or project teams.

"Agile methods are not an excuse to hack at breakneck speed to make a quick buck. Instead, they are a disciplined new product development process that is optimized for efficiency, speed, and quality." [8]

Let's review the Agile Manifesto for Agile Software Development together.

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[8]Rico, D., Sayani, H., & Sone, S. (2009). Future of agile methods (Chapter 24). In Business Value of Agile Software Methods: Maximizing ROI with Just-in-Time Processes and Documentation, p. 175. Fort Lauderdale, FL: J. Ross Publishing.

Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:
Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan
That is, while there is value in the items on
the right, we value the items on the left more.
http://agilemanifesto.org/

Starting with the title, we can see this is a manifesto for "software development". The development of software is a small piece of the overall picture in implementing a solution that will be of value to the business. The values are prioritized within pairs, but the manifesto does not claim that "processes and tools", "comprehensive documentation", "contract negotiation", or "following a plan" do not provide value. Instead, the manifesto states, "There is [more] value to items on the left."

One of the major challenges with Scrum is that the values of "working software over documentation" and "responding to change over following a plan" both lead to the need for rework. However, taking the time to do the needed rework and refactoring often gets neglected, resulting in a solution that does not meet the business need or requirements. There are two major contributors to this neglect.

The first is a natural tendency not to redo something that was once considered complete. Engineers find this frustrating. I have heard in my own project teams that they would rather see the full picture and build it right in the first place.

The other factor is that the project team does not provide adequate time in the schedule, or sprint backlog, for rework. The need for rework needs to be factored into team velocity or by adding user stories for the rework to the product backlog. Explaining this need to sponsors and executive stakeholders is a challenge.

Another issue I have with Scrum is that it ignores the role of the project manager. In *Agile is Not a Project Management Framework,*[9] I fully detail the need, purpose, and role of the project manager in an Agile project. In short, there is still a need for a project manager and champion to orchestrate the project beyond the confines of the Scrum team.

One big strength of Scrum is the use of the product owner role. The product owner is the keeper of the Product Backlog (a prioritized list of features), and has ultimate authority over this priority within the development team. The product owner is often cited as "the single wringable neck" on the Scrum team. The product owner role is best suited to someone with strong business analysis skills. These skills will allow them to gain an understanding of the cost-benefit of features and the overall value they bring to the final solution. The product owner is also responsible for eliciting, documenting, and communicating the requirements for each of the user stories (features).

I am a fan of Scrum when the following conditions exist.

- Project management is a role outside of the Scrum team.
- The organization's management understands and accepts the product backlog process and prioritization, and
- The team is fully trained, understands, and accepts the processes.

Unfortunately, I personally have not yet had the opportunity to work on a Scrum project where all of these were true, and the result was that each of these projects was challenged.

Lean

In 2007 Toyota passed General Motors to become the world's largest motor vehicle producer. The success of Toyota is attributed to their use of Lean Manufacturing (LEAN) processes. "A manufacturing/production system best characterized as relentlessly eliminating waste from all of its

[9]http://project-pro.us/2012/04/14/agile_not_pm_framework/.

activities and operations. Lean strives to produce products."[10] This is also the year that the Lean Global Network was established promoting Lean principles, setting the stage for LEAN in the mainstream. LEAN has been adopted in the project world as a new methodology. This methodology focuses on removing non-value-added tasks from the project. This becomes an issue when the view of "non-value added task" does not take into account the full project, solution, and stakeholders to the project.

5 Lean Principles

Value: Identify what really matters to the customer
Value Stream: Ensuring every activity adds customer value
Flow: Eliminating discontinuities in the value stream
Pull: Production is initiated by demand
Perfection: Retaining integrity via Jidoka (autonomation) and Poka-Yoke (mistake-proofing)

These five principles of LEAN further articulate the need for strong business analysis in organizations. Business analysis evaluates scope and processes to ensure that each provides value to the customer—not to the lead architect, not to the CIO, but to the customer.

We Do Analysis

Most organizations do the analysis, as discussed within this text. The need is recognized to some extent. The challenge lies in recognizing the value of a business analysis *professional*. I often hear, "I am the project manager on my project and I do the business analysis work. Is this okay?" *If you can effectively perform the tasks of the project manager and the business analysis to provide the team with what it needs for a successful project in a 40-hour workweek, then yes, this is okay.*

The project manager will often possess some of the specific skills required for business analysis and may have some capacity for the work. It

[10]Definition from the *Lean Manufacturing Facilitator's Glossary*—http://tpslean.com/glossary/leanproductiondef.htm.

is rare to find a project manager who can answer yes to this question unless they, like me, are also trained in business analysis and the project is small enough to allow capacity for both.

I have worked on projects that were small and simple enough to play both roles, so it can work. However, I did find that there was an added challenge in this situation. I found my decisions leaned toward whatever discipline I had last been actively engaged in. In other words, if I had just been looking at the schedule and cost of the project, I leaned toward project recommendations that supported cost and schedule over business value. If I had last been working with stakeholders in eliciting requirements and understanding what they felt solution success would look like, I'd lean toward recommendations that provided more value to the solution without as much regard to project schedule and budget. A professional skilled in both business analysis and project management may fill both roles, and the only caution is that you continuously keep the overall solution and project in mind in your decisions and recommendations. Take the time and be willing to ask yourself the hard questions to make sure the overall project and solution it brings will provide the right value for the right cost.

This book will provide specific examples of how a business analysis professional can help your business see greater benefits from the projects selected and implemented. You may find that there are those in your organization that perform these tasks. An employee does not need to have the title of Business Analyst to be a business analysis professional. This book will help you recognize the roles and individuals, and provide information about how to mature and expand the use of the role for better results.

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[i]James, V., Rosenhead, R., and Taylor, P. (2013). *Strategies for Project Sponsorship*. Virginia, VA, Management Concepts Press.

[ii]Manifesto for Agile Software Development—http://agilemanifesto.org/.

PART 1

Business Analysis Explained

CHAPTER 1

Business Analysis Defined

As the past Seattle Chapter President of International Institute of Business Analysis (IIBA), I often get questions about how someone can learn more about becoming a business analyst. Often, those asking have been doing business analysis work for some time; only they have not yet realized it.

I will start with the definition of business analysis. The quick response would be "to analyze business". IIBA defines this as:

> "Business analysis is the practice of enabling change in an enterprise by defining needs and recommending solutions that deliver value to stakeholders. Business analysis enables an enterprise to articulate needs and the rationale for change, and to design and describe solutions that can deliver value." *(Business Analysis Body of Knowledge [BABOK®] Guide, Version 3.0)*

The following two lists offer some more perspective to "tasks and techniques" by listing tools used and items developed and delivered by business analysts. There is not a one-for-one correlation between the lists; rather, it is intended to provide a general overview of the activities and deliverables of the business analyst.

Activities	Work Produced
• Brainstorming	• Business case/statement of work
• Document analysis	• Business analysis plan
• Focus groups	• Communication to stakeholders
• Interface analysis	• Data dictionary or glossary
• Requirements analysis	• Data flow diagrams

(Continued)

Activities	Work Produced
• Organization modeling	• Metrics & key performance indicators
• Process modeling	• Scenarios/use cases
• Prototyping	• Sequence diagrams
• Survey	• User stories
• Prioritize	• Requirements package

When we compare our current project team roles with the activities and work produced, you may find that many roles analyze business and deliver business analyst results. Some common project roles that do business analysis include data analyst, project manager, technical writer, and developer. If the two foregoing lists sound like what you do, then you do "business analysis".

What is a business analyst?

Common business analysis job titles:

- Business process analyst
- IT business analyst
- Requirements engineer
- Business systems analyst
- Systems analyst
- Program manager
- Product manager
- Data analyst

In 2014 the Project Management Institute (PMI) also published a definition of business analysis:

> PMI defines business analysis as the application of knowledge, skills, tools and techniques to determine problems and identify business needs; to identify and recommend viable solutions for meeting those needs; to elicit, document, and manage stakeholder requirements in order to meet business and project objectives; and to facilitate the project team with the successful implementation of the product, service or end result of the project or program.

They have identified tasks within the domains of Needs Assessment, Planning, Analysis, Traceability and Monitoring, and Evaluation.

So What Is a Business Analysis Professional?

The project manager, developer, and data analyst may use some tools and deliver some of the same results as the business analyst as it relates to their specific role. A business analysis professional works with all the business analysis tools and techniques to deliver work that supports defining, managing, and evaluating the solution or resulting product ("to recommend solutions that enable the organization to achieve its goals"). The project manager, data analyst, technical writer, or developer rely on the work of the business analyst to provide clarity on the solution and allow project work to focus on steps needed to most efficiently deliver the desired result. The business analyst is responsible for defining what will bring value to the business, ensuring the requirements are fully vetted and understood, and that the solution meets these expectations. This allows the project manager to focus on the project process, progress, team, risks, and all those other aspects that make project management a full-time job.

What Does a Business Analyst Do?

Thank you Microsoft Word for making my job of writing that much easier. A quick pick of the word "analyze" resulted in these synonyms. Each of these words conveys an activity that takes time. Business analysts do not take things at face value. The toolkit of the business analyst is to aid them in analyzing the business and to document findings and conclusions. Using the results of our synonym search for "analyze", we can further explore what business analysis really is. This is not a sequential list of actions; rather, any of these can happen at any time within the project.

Synonyms for "Analyze"

- *Examine*
- *Study*
- *Investigate*
- *Scrutinize*
- *Evaluate*

- *Consider*
- *Question*
- *Explore*

Examine

- What is the problem?
- What are the opportunities to the business?
- What is the impact of the current situation?
- What will happen if the problem is not addressed?

Often projects are initiated to solve a business problem, but will the project solve the right problem? Perhaps the project will result in simply a Band-Aid that will alleviate some of the pain but doesn't get at the root of the problem. Addressing a symptom, rather than the root, will result in a partial and perhaps temporary fix. Business analysis will help identify the root cause so that the project can bring the greatest results to the organization.

Study

- What are the current processes?
- What are the rules that drive the processes?

Projects result in change. In order to understand the impact of the change, we have to understand how things are today. The business analyst will help document the current process and any business rule that affects the project. This means that the solution being implemented can support the processes, make the processes more efficient and cost effective, and ensure the result of the project will not break the overall process and need.

Investigate

- What do similar organizations do?
- What new tools and technologies are available?

Often, when we have a problem to solve or an opportunity to pursue, we gravitate to what we know. This isn't enough to stay ahead of the game in our competitive world in this time of great innovation and advancement. Business analysis means investigating the opportunities. This includes proactively finding out what the competition or other comparable organizations do and researching emerging technologies and solutions.

Scrutinize

- Do requests represent business needs or stakeholder desires?
- Are the current processes necessary as is?
- Do the processes add value to the business?

Business analysts will hear many requests and requirements. Each person who makes the request is stating an apparent need. The truth is that not every requirement is a true need. The business analyst must scrutinize each one of these to ensure that it is truly needed to meet the objectives of the project. The business analyst will help identify whether there is any benefit to the project of inclusion or whether there is any detriment to the project and business if not included.

Evaluate

- What is the potential financial benefit to the organization?
- What will changes mean to the end user?

Every idea or recommendation needs to be evaluated to determine the potential impact on the system, the users, and the organization. There will be impacts; the goal here is to gain as much information as possible so that we can better predict what those impacts will be.

Consider

- Are there new approaches available?
- Have we considered all angles?
- Has anything been missed?

Business analysts do not jump to, or accept recommendations, without considering all aspects of the idea. They will consider the idea from many different perspectives to make sure that it is an all-around great recommendation. Often this consideration will lead to refinement of the recommendation to give it even more strength, but the consideration may also lead to understanding that the idea or recommendation is not as sound as originally believed.

Question

- What are the risks?
- Who are we missing?
- What can go wrong?
- What does it look like it if goes right?

The first rule of business analysis is to question. If we are not questioning, we are not analyzing. A common, easy-to-remember tool for a business analysis is "5-Why's", where for every idea we ask "why" up to five times or as long as it takes to get to the underlying reason or need. You will find an example of how this helped me bring value to a project I was managing in Chapter 2. The bottom line is that we cannot understand until we first question and strive to find answers.

Explore

Each of us does analysis on a daily basis in both our personal and professional lives. The power of business analysis is looking at every decision that affects the solution with the analysis mindset. The result is a solution that will bring the greatest benefit possible to the business.

Think about this in-depth analysis of the word "analyze". Do your business analysts "analyze" the business or are they simply taking orders? Are there others in your organization that do business analysis? Do those that analyze have access to and knowledge of business analysis best practices? *Part 2—What your business analyst should be doing for you* will go into great detail on how to conduct analysis before, throughout, and after each project in order to bring the greatest value.

CHAPTER 2

The History of Business Analysis

Power Users and Technicians

I first joined the ranks of business analysts in 1999. I was a power user of the software solutions that were being developed. An opening came up for a "product manager" role on the team, and I jumped on the opportunity to join the project team. I was hired, but not for my ability to do business analysis or even lead product development. I was hired because I knew the business and could envision how technology could make the job of state budget development easier. Simply put, I was a great power user. I didn't know what use cases, data models, wire frames, *insert tool here …* were. I didn't know how to analyze alternatives to my thoughts, elicit ideas from those who may have better ideas than myself, or how to effectively communicate with technicians and customers. Some of these came to me naturally, some I learned through experience and osmosis, and some I learned later when formal training opportunities arose.

Was this a problem? Yes. I will share two examples of where my lack of understanding of business analysis cost the projects I worked on time and money.

The Pareto Example

We had one customer that was larger and more complex than all the rest. Being "special", they had more interesting requirements for features than most of our user base. Being the problem solver that I am, I listened carefully to the representative's feature request and was determined to figure out how to meet the need. The answer came to me at 2:00 a.m. I would spend the next couple of days refining the concept and developing a prototype that I could present to the customer and the project team. The result would be a change to the project to accommodate the special requirements

that added substantial scope and risk without corresponding time and money. We did get the feature into a second release, and that customer was happy.

The Problem

A few years later, I went to a presentation where the presenter discussed a pie chart that depicted how much of software features are used and at what frequency. I now use this pie chart often in my own presentations on bringing value to the business with the project we do.

This perfectly highlights the problem with the solution I had identified. The complex feature that I had conceptualized to solve a requirement of a single customer fell into the 27 percent Hardly Ever used in the first couple of years for use. In fact, it was never used once that organization's representative left.

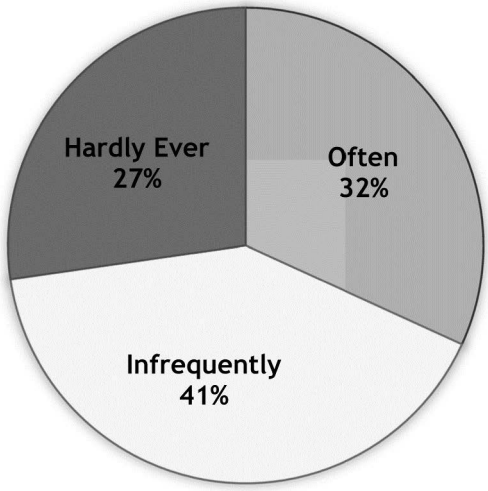

Figure 3 Percentage of Features and Functions Used Source: Modernization in Place, Standish Group, 2015[11]

[11]Source: 2015, *Modernization in Place,* Standish Group.

Business Analysis or Design

By the third project with this program team, I had the brilliant idea that we could streamline the time needed to design the system by doing it myself! Now, being a power user means that my definition of design is what we now call user experience (UX) design, limited to designing the user interface. I proceeded to write a 150-page "design document" for our next solution. I developed "mock screens" (aka wireframes) using Access forms and built out every screen of the solution, documenting every data field and its attributes. It was the ultimate requirements document! I just knew the developers would love me and my document and we'd knock out the solution in half the time expected. I was wrong.

Design document review was a nightmare. Everybody hated it and tore it apart. In hindsight, I have to say rightfully so. Who was I to develop the UX design for an entire system, and not a small one, in a vacuum? I didn't even elicit requirements from users. Why? I knew what the system needed to do.

The Problem

The problem was that I presumed that my way was the best way, the only right way. I had no concept of what it would take to implement my design. My worse offense was not valuing the experience and input of the customer and team members. My design was not the only way. My design was not the best way. Many of my "requirements" didn't make sense to implement given the technology tools, infrastructure, and standards the developers used. The time spent reviewing and updating my "design document" would have been much better spent in eliciting, documenting, communicating, and managing functional requirements.

I saw others that came into the organization from the user community make the same mistakes. So repeat after me: "A power user is not a business analyst." In reality, they are probably just a know-it-all. I was.

Common Business Analysis Mistakes

Which of the following common business analysis mistakes have you experienced from your business analyst, or even done yourself?

1. Hand over a 200-page requirements document for stakeholder approval.

2. Accept additional scope to the project without determining the cost-benefit and getting sponsor approval.
3. Document design preferences as business requirements.
4. Miss a stakeholder group and, consequently, a big requirement.
5. Assume design and test will meet requirements as intended without reviewing technical team documentation.
6. Create an unorganized laundry list of "requirements".

Don't let these bad experiences happen in your project. Use trained, experienced business analysts that understand how to talk to the business users about what is truly needed and will bring value from the project, can translate this for the technologist, and have the influencing skills to help guide project decisions.

Business Analysis Gone Right!

5 Why's

Years later I was managing a project and became engaged in a discussion between the project's business analyst and customer. The customer asked for a data field. This field had already been ruled out as of out of scope. This was the same special and complex customer I mentioned in the first story. The business analyst (BA) responded "okay" and started writing this down as a new requirement. You should have seen the look on the lead developer's face!!! Now more experienced and wiser, I stepped in.

Me: Why do you need this field?
Customer: Because it is how we know how to distribute workload
Me: What is the basis of distributing workload?
Customer: Division within the organization
Me: So, you don't need this field per se, you need a way to distribute workload based on division?
Customer: Yes
Me: And that can be done with combination of the other fields we have determined are in scope?
Customer: Yes

I now saved the project team from revisiting old decisions and redesigning the database and user interface by digging a bit further to understand the real need. That is what a trained, experienced business analyst brings to the table.

IIBA and Professional Recognition

More than 10 years ago, a group of business analysis professionals in Toronto, Canada, recognized the need for and value of a professional organization dedicated to the profession of Business Analysis. IIBA[12] was formed in 2003 and officially became a professional organization in 2004. The vision of IIBA is "to be the leading worldwide professional association for business analysts" with the mission to "develop and maintain standards for the practice of business analysis and for the certification of its practitioners." This means that those who do business analysis now have published best practices with the Guide to the Business Analysis Body of Knowledge (*BABOK® Guide, Version 3.0*) for reference, and certification[13] is available to demonstrate expertise. The Body of Knowledge and certification are comparable to those of other professional organizations, and, in fact, modeled very closely to the Project Management Institute (PMI),[14] their counterpart for the profession of project management. While IIBA is in its infancy, the growth has been astronomical, providing an indication of the need and acceptance. As of February 2015, IIBA now has more than 28,000 members in 109 countries on the six continents.

We find, when diving into the *BABOK® Guide, Version 3.0,* that IIBA has provided a broad definition of "business analysis". The *BABOK® Guide* provides best practices in six "knowledge areas": Business Analysis Planning and Monitoring, Elicitation, Requirements Life Cycle Management, Strategy Analysis, Requirements Analysis and Design Definition,

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[12]International Institute of Business Analysis (IIBA) founded in 2003. www.iiba.org.

[13]Certified Business Analysis Profession™ (CBAP©) and Certification of Competency in Business Analysis™ (CCBA®).

[14]Project Management Institute (PMI)® founded in 1969. www.pmi.org.

and Solution Evaluation. The *BABOK® Guide v. 3* serves as the foundation for the best practices with tasks, tools, and techniques by knowledge area. It serves as the foundation for the business analysis best practices described through the remainder of this book.

State of Business Analysis Today

While IIBA has achieved growth both geographically and throughout the business analysis community, there is still a large gap of knowledge across the project industry. When I presented at the PMI North American Global Congress 2013 in New Orleans, Louisiana, I asked a group of about 50 project managers, "Who has heard of IIBA?" Only a handful of the participants raised their hands. This shows how far IIBA has to go to be widely recognized. Both professions are in the business of projects. The project industry would best be served if the organizations worked in concert with each other to provide the best overall professional guidance to our shared constituents.

When I took the Presidency of the Seattle IIBA Chapter in 2012, I did so with a vision and goal to be able to walk into any gathering of professionals and introduce myself as the President of the Seattle IIBA Chapter, and more people would know what IIBA is than not. I am still working on that!

One major challenge to the profession of business analysis is a lack of acceptance of the profession. While it is true that many roles include business analysis activities, having a dedicated business analysis professional will provide a greater chance of a project that adds value to the organization. Instead, too often, the organization burdens the project manager or business representative with this analysis work. The person tasked with this work may or may not be skilled in business analysis. They will not have capacity and focus to provide the role justice. This is discussed in greater detail in the Introduction.

PMI is now directly addressing the need for professional business analysis, and this will help raise awareness of the role of the business analyst in successful project completion with solutions that bring value to the business. There is much conversation and controversy in the business analysis

world about PMI having taken this step to enter the business analysis space in direct competition with IIBA. While I do believe that IIBA provides superior guidance on business analysis, especially as it relates to organization or strategic analysis, the voice and the reach of the PMI cannot be ignored. Overall, PMI's entry into business analysis will be good for the profession.

Why did they do it? From all accounts, the PMI had approached IIBA to partner it; however, IIBA did not feel that their goals were in alignment and so declined the opportunity. The result is now two bodies supporting business analysis and providing professional certification. They say a little competition is healthy. Let's hope so. At the very least, it demonstrates the importance of mature, skilled business analysis in our projects across all industries.

A listing of organizations and certifications in business analysis has been provided.

Business Analysis Organizations & Certifications

International Institute of Business Analysis (est. 2004)

- Certified Business Analysis Professional™ (CBAP®)
- Certification of Competency in Business Analysis™ (CCBA®)

Project Management Institute (est. 1969)

- PMI Professional in Business Analysis (PMI-PBA℠)

British Computing Society (est. 1957)

- BCS International Diploma in Business Analysis
- Expert BA Award

Vision for Tomorrow

As organizations and industries mature their use of the business analyst profession, we will have projects that have a skilled business analyst on the project leadership team alongside the project manager, project sponsors, and customer (or business owner).

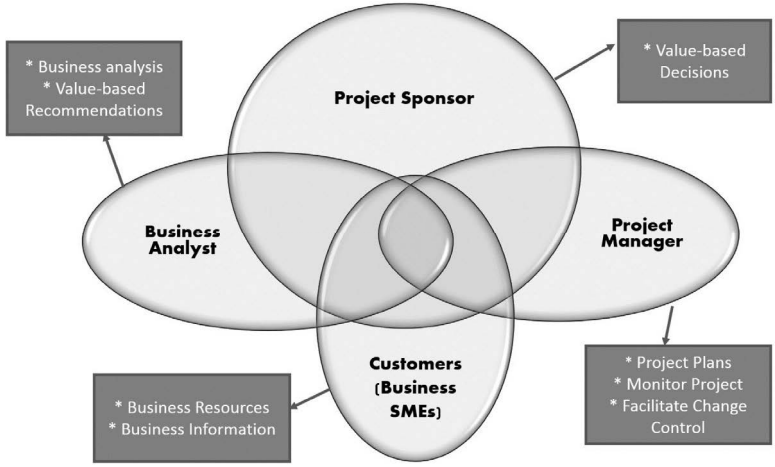

Figure 4 The Project Power Team[15]

Figure 4 shows the makeup of the ideal project leadership team (or Project Power Team) that will have the greatest input to deliver projects that bring value to the business, the true definition of project success. A project that delivers designated scope within the approved schedule and budget does not guarantee success in and of itself. These roles work together to ensure that the project delivers value to the organization. (More on this in Chapter 13—Standardizing roles and processes.)

Projects will be judged on the value the implementation brought to the organization in the long run rather than the investment cost and schedule. It will become common place to analyze solutions that are not technology driven as alternatives to our go-to "throw-*IT*-at-it" mentality.

Organizations will invest in business analysis with recruitment, training, and support in organizations such as IIBA and PMI, and they will see a better return on investment of their projects as a result. This will be covered in greater detail in Chapter 13—Standardizing roles and processes.

Sounds like a good world to me. Are you in?

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[15]Originally published in James, V., Rosenhead, R., and Taylor, P. (2013). *Strategies for Project Sponsorship*. Virginia, VA: Management Concepts Press.

CHAPTER 3

The Many Hats of the Business Analyst (Typical Roles)

Business analysis falls under many different roles and job titles. This leads to one of the major challenges in recognizing business analysis as a profession. The great diversity in titles makes it hard to see that there is a cohort of professionals with a related purpose.

Jobs requiring a Certified Public Accountant (CPA) credential are clearly accounting and finance related. Jobs requiring a PMP all have "project" in the job title. Things are a bit muddier when it comes to jobs that require a CBAP, a person certified in business analysis. This helps to demonstrate how the diverse "job titles" for those that do business analysis hinder an understanding of who should be included in the overall professional category of "business analysis".

Accounting (CPA)	Project Management (PMP)	Business Analysis (CBAP)
Accounting Manager	Project Manager	Senior Business Analyst
Finance Manager	Director of Project Management	Business Analyst
Finance Director	Senior Project Manager	Business Systems Analyst
Tax Analyst	Lead Technical Project Manager	Project Manager/Business Analyst
Senior Finance Manager	Director, Project Management	Business Process Analyst

(Continued)

Accounting (CPA)	Project Management (PMP)	Business Analysis (CBAP)
Senior Staff Accountant	Senior Project Manager	Senior IT Engineer
VP of Finance		Director of Project Implementation
Accounting Professional		

Figure 5 Job Titles Requiring Certification

Another barrier to understanding the complete role of the business analysts is the perception of the title "analyst". I recently had coffee with a friend. He was surprised when I said that business analysts and project managers should be equal on projects. In his world of finance, an "analyst" was a step toward the role of "manager" (i.e., fiscal technician → financial analyst → financial manager → and finance director). It is counterintuitive that a business "analyst" is a management or executive advisory position.

We can take this analysis a bit further, but reviewing our previous list of project deliverables that considered business analysis and seeing typical project roles that may be producing these deliverables.

Business Analysis Deliverable	Related Project Role
Business case/statement of work	Project Manager/Project Sponsor
Business analysis plan	Project Manager
Communication to stakeholders	Product Manager/Project Manager
Data dictionary or glossary	Database Analyst
Data Flow diagrams	Database Analyst/Software Engineer
Metrics & Key Performance Indicators	Project Manager
Scenarios/Use cases	Product Manager
Sequence diagrams	Product Manager

User stories	Product Owner
Requirements package	Requirements Analyst

Figure 6 Deliverables and Activities of Business Analysis

With so many different people doing business analysis activities, it's easy to see why recognizing business analysis as a dedicated profession is challenged. Regardless of who does the activity, understanding best practices in these business analysis activities will give projects a better chance of success regardless of whether the project has a dedicated business analyst, a similar role with a different job title, or the activities are spread across the project.

If you analyze business, congratulations, you are a business analyst!

PART 2

What Your Business Analyst Should Be Doing for You

CHAPTER 4

The Setup

One of the challenges in business analysis today is a misconception (especially in Information Technology) that a business analyst is a requirements analyst. While it is a business analysis activity to elicit, analyze, prioritize, and communicate requirements, they are responsible for so much more. Take the requirements out of projects, and there is still plenty for the business analyst to do.

If you were to compare tasks from the *BABOK® Guide* with tasks from the *PMBOK® Guide*, you would find some apparent redundancies between business analysis and project management. Instead, think of the outputs of the activities from the *BABOK® Guide* as inputs to the overall project management plan. In fact, the business analyst has much to do before there is a project and project plan, and much to do long after the project has closed in order to bring the most value to the organization for the project.

This section will explore what a business analyst does before, throughout, and after the project life cycle to bring value to the organization, as shown in Figure 7. It is not intended as a "how-to" guide for business analysis, but rather as an explanation of business analysis activities and how they enable organizations to get more value for the project dollar. It will demonstrate how business analysis can and should be an integral part of the organization's overall business strategy. The discussion will be enhanced by following a case study of business analysis in action.

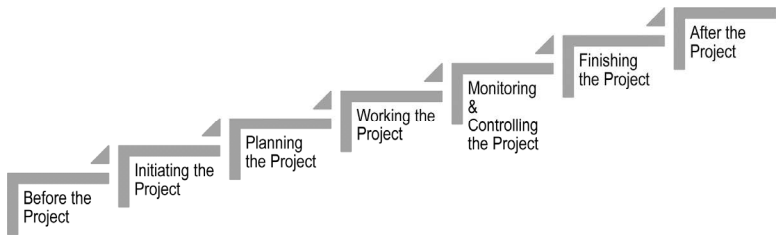

Figure 7 Phases of Business Analysis

The case study used is of a fictional requirements management tool implementation. I chose this as the case study in part to raise awareness of the advantages the requirements management tools can bring to an organization. Just as a cobbler may neglect to put shoes on his own children, business analysts often neglect to recommend solutions that will make their jobs easier. A requirements management tool is just one example of how we can make the job of business analysis easier. But I'll save that full discussion for another book. Perhaps you'll glean insights throughout the case study and begin preparing your business case for your own requirements management tool.

At the conclusion of each chapter in this section, you will be presented with a number of related questions. Think to a current or recently implemented project in answering the questions. This will be important so that the questions are applied to the same project throughout the section. Answer the questions for this project to help determine how the best practices described would enable the project to be more successful and bring more value to your business.

CHAPTER 5

Before the Project

Business analysis begins with analyzing the organization's need and options to aid in selecting and funding projects that will bring the greatest value to the business.

Determine Need

Your business analyst works with the business owner to fully understand the opportunity or problem and provide an objective analysis to define the business need. Often, business owners will identify a solution without first understanding the need. I bet you can come up with at least three examples in your own experience. These are sometimes referred to as "shiny objects". The result is money invested in tools or solutions that may not do anything to improve or bring value to the business. That is a common result when the need is not identified first. Shiny objects are a waste of money.

The business analyst will work with the business owner to understand what problem needs to be solved, or what opportunity should be leveraged. This will drive all future project decisions. We can look at feature requests and ask, "does it contribute to solving the problem, or aid in pursing the opportunity?"

I had worked with one Chief Information Officer (CIO) who had seen a demonstration of an enterprise portfolio management system. She was so impressed with the system that she said in a large staff meeting, "It does everything except slice bread". The trouble with these investments is that they are usually very large and are not initiated to address a specific goal. Being an enterprise system means that there are a multitude of capabilities and functions available for use, and also that they are very expensive. In order to make this investment beneficial, you must first determine what business problem you are attempting to solve, or the specific opportunity

you hope to leverage, as the project objective. Once the project objective has been established, identify the features and functions, configuration requirements, organizational process changes needed, and user readiness requirements that support that objective. You'll often see where outside consultants specializing in integration are hired in order to get to the organization ready; plan, configure, and implement the enterprise solution. The cost of the system combined with the cost of a hired consultant may exceed the overall value of the solution.

I recently had dinner with a friend who is now in this organization. I had mentioned the "slicing bread" quote in our conversation, and she knew exactly what I was talking about. Although she was not yet in the organization at the time, the legend of the statement lives. I asked where the solution is today. As it turns out, the solution is no longer used, the data it houses is now stale and unused, yet the organization has not yet pulled the plug. I am unsure of the licensing and operational costs associated with keeping the current solution, but it certainly exceeds the value the solution provides. That is one expensive shiny object.

Let's look at how this scenario might play out in one of your projects. The following is a section of the case study that we will be reviewing through this chapter to better understand the context of the chapter points.

> Weaver Systems provides medical management information systems to health care organizations. *MyTx* is their signature product that allows medical providers and patients to share information through a secure web solution. Ideas of system enhancements come fast and furious from medical providers and patients alike. Core system enhancements and subsystems are released several times a year.
>
> The business analysts at Weaver Systems have a difficult time keeping up with the changing requirements and associated workload, and as a result, project requirements suffer. Liz, the business analyst assigned to this specific issue, has investigated the issue and come to understand that the business analysts spend a significant amount of the project time duplicating requirement information from one document to another in order to satisfy the different audiences for requirements. Time to create information

on the requirements can take five times longer than eliciting the requirements themselves. This means less time for requirements analysis, which resulted in more missed and wrong requirements in recent projects. They have also seen a rise in confusion among project stakeholders as to which document/requirement is correct and current.

Weaver Systems needs a better way to record, manage, communicate, and update requirements so that requirements can be captured once and then managed and communicated efficiently.

Evaluate Options

Now that the need is understood, the business analyst can begin to work on understanding what capabilities the organization already has. For example, if your organization is looking at project portfolio solutions but already has Microsoft Project Server, then no additional tool investment may be needed. Or perhaps SAP is a commonly used solution in your organization. The business analyst may determine that adding **additional** functionality would be a lower cost alternative and that transition and training time would be minimal in expanding technology already available within the organization. This speaks to the approach that the organization will use to address the opportunity or problem being addressed.

Analysis is needed to understand the best approach for implementing a solution. The business analyst will prepare analysis for several different options to provide full information and a recommendation to decision makers. The costs associated with the various options include looking at the development, implementation, training, and maintenance costs of one or more solutions to understand the long-term impacts. This is your first big opportunity to save money and increase the value to the organization. Let's see how this plays out in our case study.

After getting agreement from the business analysts and the management team on the problem, Liz set out to understand what some options might be to alleviate the problem.

Option 1 Tom, the development manager, has offered to get some of his finest developers up to work on developing a new system to manage requirements. He estimates that it will take 6 months and $250,000 to complete the project.

Option 2 Liz remembers a demonstration she had seen of a very sophisticated requirements management tool at a recent IIBA chapter meeting. It was very fancy, and some of the demonstrated functionality went way beyond solving the stated problem, but could come in handy in the future.

Option 3 Liz found a requirements management tool on line that didn't look as sophisticated as the demo she had previously seen. Based on the product website, it would address the problem identified.

Option 4 Liz's boss, Megan, doesn't feel any technology solution is needed. Instead, Megan feels the processes and organization expectation need to change so that requirements documents can be developed once, and shared the same across all stakeholder groups.

Liz spent some additional time analyzing each of the options to develop the following analysis:

	Cost	Technical Risk	Organizational Risk	Other Considerations
Option 1—Develop in house	Est $250,000	Low	Low	Takes developers away from core business, not experts in Requirements Management Tools (RMT)
Option 2—RMT Tool 1	Cost not published, still waiting to hear back from vendor	Unknown	Low	Assumed to be expensive, not all functionality available needed

Option 3—RMT Tool 2	$799 per license, times 10 BAs plus training and maintenance, est $20,000	Low	Low	BAs would need training to take full advantage of system flexibility
Option 4—Process change	No system cost	None	High	Would stakeholder accept one size fits all requirements reports? Will this really free up BA time?

Figure 8 Example of Options Analysis

Make Business Case

Once the problem and several options have been identified, the business analyst can now start making the case for the most feasible and attractive solution. The business case is a request for resources and time to complete the project. The business analyst will work with the business to complete the business case on behalf of the business. The business case should represent the solution that the business wants to invest in.

A business case will contain many or all of the following elements.

- Business Need/Rationale
- Recommendation
  - Solution Deliverables
  - Feasibility Analysis
  - Alternatives Considered
  - Risk Assessment
  - Cost-Benefit Analysis
- Implementation Approach
- Evaluation Measures (how will we measure the effectiveness of the solution)

These business case sections scream of "analysis" needed to put together a comprehensive business case that will provide enough information to make a good investment decision, a fact that Project Management Institute (PMI) agrees with, as evidenced in the *PMBOK® Guide v. 5*: "Typically, the business need and the cost-benefit analysis are contained in the business case to justify and establish boundaries for the project, and such analysis is usually completed by the business analyst using various stakeholder inputs."

Who creates the business case in your organization? This is one area where it may not be a person with the title of "business analyst", but rather another role doing the business analysis activities. The only caution here is that this individual knows, understands, and applies best practices in developing the business case. Without the analysis, especially as it relates to comparing different options, you may have a request for funding, but not a business case. "CEO Jones wants to spend $250,000 in the XYZ tool because it's cool" is not a business case. Let's take a look at a better example.

Business Need: Weaver Systems needs a better way to record, management, communicate, and update requirements so that requirements can be captured once and then managed and communicated efficiently.

Recommendation: Implement the second requirements management tool (Option 3).

Solution Deliverables:

- Off-the-shelf requirements management tool installed/implemented
- Customizable data entry screen
- Customizable reports
- Solution training for BAs

Alternatives Considered: See Figure 8

Cost-Benefit Analysis						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Expenses						
Licensing	$7,990					$7.990
Training	$3,000					$3,000
Maint Fees	$500	$500	$500	$500	$500	$2,500
Total Exp	$11,490	$500	$500	$500	$500	$13,490
Benefits						
Project Value	$0	$10,000	$20,000	$20,000	$20,000	$70,000
Cost-Benefit	<$11,490>	$9,500	$15,000	$15,000	$15,000	**$54,500**

Figure 9 Example of Cost-Benefit Analysis

Assumptions: It is assumed that value realized from projects will be gained from having more time to do quality analysis. This time to do analysis will allow us to implement solutions that impact the organization bottom line with real returns as evidenced by less rework resulting from missed or poor requirements.

Evaluation Measures: The percentage of defects found that can be attributed to poor requirements will be reduced by 50 percent each year.

Business analysts will spend no more than 20 percent of their time preparing requirements documents within 18 months after implementation.

Your Assessment

For the selected project …

1. What was the business problem or opportunity that the project was initiated to address?

2. Is the project on track to address this problem or leverage the opportunity?

3. What were the options considered to address the problem?\

4. What will you do different for the next project?

CHAPTER 6

Initiating the Project

Refine Scope

I think we have all been there—you know, assigned to a project where no one was really sure what was being built or how big it was. These projects tend to grow overtime and are often delayed as a result. This is an issue in understanding the project scope.

The business analyst will help you identify and articulate the solution scope needed for a successful project. Too often, in a hurry for answers, project assumptions exclude needed items and include items that will not bring value to the business. Is providing training to end users required for the solution to meet the sponsor's expectations? Will an interface be required for the solution to speak to another solution? Are there industry requirements that dictate solution features? The product scope is different from the project scope. In product scope we only care about what the solution looks like, what we put into the hands of the customer. In project scope we include deliverables that are required for the project but are not a tangible piece of the product such as project management or transition to operations. In Figure 10, the work breakdown structure (WBS) designates the product scope within the project scope.

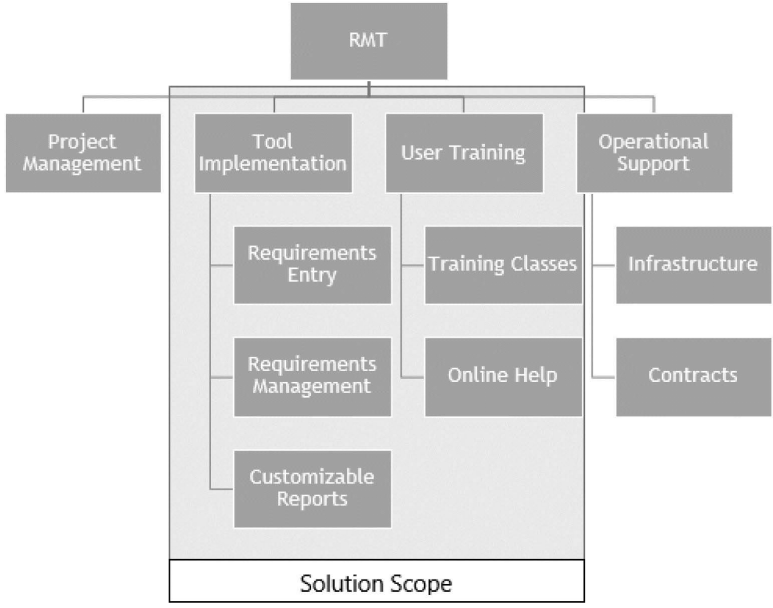

Figure 10 Example of Work Breakdown Structure

The business analyst has tools available to them to determine the product scope. Figure 11 is an example of the use case diagram. Use case diagrams approach scope based on who and what will be interacting with the system, versus not. In the following example we can see how the business analyst is questioning whether the scope should include the ability of a project stakeholder to run a report. This is just one example of the type of assumption or requirement that could easily be missed without thorough analysis of the scope. Let's see how scope is handled in our case study.

Liz's business case for the Requirements Management Tool (RMT) project was selected for investment by Weaver Systems with Matthew Simmons, the Director of Systems Development, joining on as the project sponsor. Mary Kennedy was assigned as project manager, and Liz remained as lead business analyst on the project.

The first order of business for Liz was to help shape the scope of the project. She worked with Matthew and Mary to get an

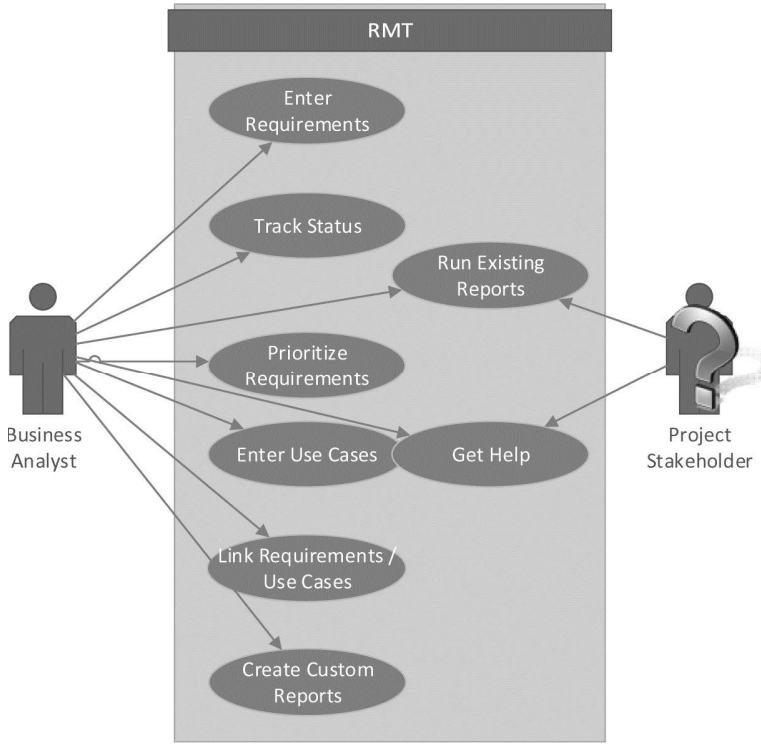

Figure 11 Example of Use Case Diagram

idea of the vision for the solution and start documenting what would be possible given the schedule and budget provided for the project. She talked to some key stakeholder to find out what they envisioned for the solution and to start capturing some high-level requirements. One idea came from Tom, the Development Manager, he wanted the ability to run his own reports on requirements from the system. Liz could see where this may help in alleviating the business problem with a new means to communicate requirements, but she wasn't entirely sure it should be included in the solution scope given the time and budget constraints. Liz prepared the use case diagram shown here to present to Matthew and Mary to help in the discussion about what should and should not be in scope for the project.

Mary was concerned that the scope was more than could be accomplished given the project constraints. Matthew asked for

more information on how it would impact the project to include a report user interface for other project stakeholders. Liz pointed out that this would likely mean several things:

- Developing additional canned (static) reports that would be meaningful to project stakeholders
- Additional training needs for those users
- Potentially a separate user interface for the report users to run reports
- Additional online help to support the report users

Liz further offered her opinion that this might make sense as a future enhancement after the system is implemented and the organization could better gauge how reports would be received and used by project stakeholders.

Matthew agreed that it would make more sense to see how the system and reports were used before building functionality for users outside of the business analysis team.

Determine Project Approach

The next task for the project manager and business analyst is to decide on the approach that[16] will be used for the project. Agile was described in detail in the Introduction of this book. You may have gotten the impression that I do not believe Agile has a role in projects. I do believe that some projects are better suited to Agile or LEAN methods rather than the traditional waterfall approach. The *BABOK® Guide* provides some guidance on choosing an approach that the business analyst can confer with the project manager on to help determine the approach that will provide the greater advantage to the project at hand. The business analyst and project manager together can determine the best approach for the project at hand.

[16]Royce, W. (1970). Managing the development of large software systems. *Proceedings of IEEE WESCON* 26 (August): 1–9. Available online at http://agileconsortium.pbworks.com/w/file/fetch/52184636/waterfall.pdf.

Agile

Generally, projects that have negotiable scope may be better suited to Agile methods, where the team is focused on one small high-priority piece of the project at a time. This allows the critical components of the solution to be developed and deployed early although some features may be missing. The "Plan" evolves over time through the product backlog and the team's velocity to complete work. Here, the business analyst will be scoping the project through the product backlog and refining requirements within each time-boxed sprint.

IIBA refers to this as "change-driven", whereas PMI refers to it as "adaptive".

Waterfall

Waterfall is a project approach where each phase of the project is fully completed before moving on to the next. This was first described in 1970 by Dr. Winston W. Royce in *Managing the Development of Large Software Systems.* What this means for business analysis is that all requirements are elicited, analyzed, communicated, and approved before any development begins. Design and coding will happen later in the project, but will be based on completed requirements that will not be at risk for major changes. While Dr. Royce advocates for frequent review and feedback loops within his paper, the application of waterfall in practice generally does not allow for this.

Traditional Waterfall

In projects where the deliverable is not negotiable, extensive planning and evaluation is required to determine the project's needs: time, budget, staff skill, and needed resources. A full understanding of the project scope and specific requirements are needed to develop a realistic plan. The business analyst will be communicating scope and requirements to the development team at the level they need to accurately plan and estimate prior to any work being done in the solution itself.

IIBA refers to this as "plan-driven", whereas PMI refers to it as "predictive".

A business analyst who is participating in the project approach selection should have a thorough understanding of and experience with each. A business analyst working on the project activities in either approach needs to have a thorough understanding of and experience in these types of projects. All of the solution downstream work is dependent on the business analyst's deliverables. They need to be included in the approach discussions in order to help inform which approach will work given their education and experience. A brief history of waterfall is provided earlier. Do you know what approach Liz and Mary will take in the case study? Let's take a look.

> Liz and Mary spent some time discussing the RMT project to determine the best approach for the project. They noted the following:
>
> - This was an off-the-shelf system purchase, not a development project
> - System configuration and user education are needed for successful implementation
> - Requirements would be needed to configure, implement, and train users on the new system
> - The initial users of the solution are internal, business analysis, staff only
>
> Moving to a RMT for requirements would be a big change for the organization. Liz and Mary agreed that the initial release should be as polished as possible for favorable first impressions of what the system could do to facilitate greater acceptance by business analysts and other project stakeholders alike.
>
> They decided that the waterfall approach made sense for two reasons. First, it would allow Liz to get requirements for the solution upfront so that the system could be configured and the user education components could be fully in place upon implementation. Being able to tell folks exactly what they will get

in advance is one way to manage organizational change. Secondly, much of the work needed to implement the solution within the organization would be more back end and infrastructure items that couldn't be implemented piecemeal. Since Agile looks for "potentially releasable products" early, this would not be feasible. Liz and Mary decided that the initial release should use the waterfall approach, future enhancement projects may be better suited to an Agile approach if funded down the road.

Your Assessment

For the selected project …

1. What was the scope of the project as you understood it?

2. Is this project on track for delivering the selected scope? If not, are there more or fewer features than originally anticipated?

3. What approach was used in delivering the project?

4. Did the project team utilize the approach selected in the best way?

CHAPTER 7

Planning the Project

The business analyst should be playing a big role in the planning the project, at least from the perspective of the business analysis activities and organizational readiness. The business analyst is focused on making sure that the plans allow for a solution to be accepted and used by the end users so that the solution can bring value to the organization. The project manager is more focused on the activities of the project team to support development and implementation of the solution. Some of the planning activities will roll up into the project management plan, whereas others will represent a joint effort with the project manager. The business analyst is an active participant in planning, not a recipient of someone else plans. This will set the project up for a greater chance of success.

Conduct Stakeholder Analysis

Here is one activity that is seemingly the same for project managers and business analysts. While not specifically called out in either "body of knowledge", the intent is that the business analyst is responsible for stakeholders of the solution, while the project manager is responsible for stakeholders of the project. Stakeholders of the solution are also stakeholders of the project, but the communication and risk mitigation strategies will be focused on the use of the solution. The project should have only one stakeholder analysis document, but will include both project and solution stakeholders. Don't worry. There is plenty of stakeholder communication to go around for both.

There are many questions we need to answer with our stakeholder analysis.

- Who are stakeholders?
- What is their stake in the project (what do they care about)?

- What type of influence and impact can they have on the project?
- What do they expect from the project and/or the project team?
- What risks do they present to the project?
- What risks do they perceive for the project?
- What is the best way to keep them apprised of project status and information given their stake, interests, and communication preferences?
- What other groups or individuals do they know that have a stake or interest in the project?

I initially developed this list when I was responding to a Request for Proposal (RFP). The RFP requested information on how the project would be managed throughout the various aspects. About the fifth time I referred to stakeholder analysis I knew I was on to something. I published one of my first blog articles[17] as a result of this epiphany.

Answering the above questions about the project stakeholders will help the project succeed in many ways. However, the most obvious advantage to a thorough stakeholder analysis is to reduce the risk of missed requirements. Think back to a project where requirements were missed. Why were the requirements missed? Was it because a stakeholder was missed or not adequately engaged? This is huge on projects! A thorough stakeholder analysis will also help the project in identifying risks, assumptions, and constraints on the project that may not be obvious. The key to great projects, aside from a top-notch business analyst, is a thorough stakeholder analysis. Let us take a look at our stakeholder analysis for the Requirements Management Tool project.

> Liz and Mary each spent some time identifying project stakeholders by brainstorming with project team members and talking with stakeholders that have already been identified. They took this information to have a lengthy discussion about stake-

[17]See also *Do You Have the Key to Success for Your Project* on my blog at—http://project-pro.us/2011/07/29/do-you-have-the-key-to-success-for-your-projects/.

holders including understanding their stake in the project, communication preferences, and such. The stakeholder register shown on the following pages represents what they know about stakeholders today. They have agreed to review the register every two weeks to determine if there are new stakeholders to be considered or if anything has changed with the stakeholders and needed changes in strategy for engaging the stakeholder.

Plan Business Analysis

The work of the business analyst affects the work of all project team members. Designers, developers, and testers are dependent on what the business analyst delivers, when they deliver it, and the quality of the work. Planning is needed to make sure all of the work supports a smooth transition from one role to the next. The business analysis plan will feed into the overall project plan and schedule for a cohesive understanding of what it will take to complete the project.

We often see in projects where the business analysis planning is limited to "getting requirements done in one month". This is an arbitrary constraint that will ultimately put requirements and the project at risk. Don't do it! Instead, give the business analyst time and resources to plan the business analysis activities they need in order to get good, complete, quality requirements. The level of effort and leeway for business analysts to plan their activities should equal that of the developers or testers in project estimation. Without these, the project will fail! The time given to a business analyst to complete their activities should be based on the real need, and not an arbitrary deadline. Got it? Good!

Use senior business analysts familiar with business analysis frameworks,[18] education, and experience to develop a plan specific to the project for the best results. It is important to understand the difference between a framework and a methodology. The story on page 46 provides an example of when one organization attempted to create a stringent methodology for business analysis within the organization.

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[18] *BABOK® Guide v. 3* and the PMI-PBA℠ Examination Content Outline provide two such frameworks.

Stakeholder	Stake in the Project	Potential Impact on Project	What Does the Project Expect the Stakeholder to Provide?	Stakeholder Risks	Stakeholder Management Strategy	Managed by
Matthew, Sponsor	Executive Sponsor approving scope, resources, and schedule for project	High	Resources adequate to complete project, guidance on priority, and resolution of any issues the team cannot resolve	• Funding constraints and other IT needs may result in resource impacts	• Input to charter development • Monthly one-on-one status meetings • Monthly progress reports • Immediate heads up notification of emerging issues that may affect scope, resources, or budget • One-on-one discussion for change control for scope, schedule, or budget	Project Manager
Business Analysts, End Users	Day-to-day work impacted by solution implemented	High	Requirements process today, ideas for improvement, stakeholder requirements for a RMT tool	Resistance to change, lack of availability to participate.	• Vendor demo of system capabilities • Ensure all requirements are elicited from group (Liz to remain neutral) • Involve in UAT	Business Analyst

Project Team Members	Performs the work required to execute the project	High	Participate in project planning Attend daily stand-up meetings Weekly review of status report Monthly review of progress report Up-to-date notice of risk, barriers, or adjustments needed	Emergencies remove team members from the project	• Draft weekly status reports • Draft monthly progress reports • Notification of changes impacting project • Draft planning	Project Manager
Stakeholders in future projects	Recipients of requirements from system	Low	Stakeholder requirements for a RMT tool, information on what a useful requirements report looks like	Lack of input on requirement report expectations, resistance to change	• Survey based on requirements documents provided today • Invite to report mockup discussion event	Business Analyst
Systems Operations	Will support solution after implementation	Medium	Requirements for system transition, funding for ongoing licensing and maintenance	Not enough capacity, not enough understanding of system	• Hold a transition requirements workshop (BA) • Monthly meetings with unit manager for information sharing	Project Manager

Figure 12 Example of Stakeholder Analysis

The BA Cookbook

I once worked in an organization that had identified a need for better business analysis practices. They took a slightly different approach to address the issue.

First, they assigned a special project to a very capable senior staff person. This person was not a business analyst, but was well versed with research and discovering best practices. She proceeded to develop what she called a "cookbook" of how to perform business analysis within the organization complete with templates. It was a very stringent methodology designed to take any person through the business analysis steps regardless of experience. The "cookbook" did not stand the test of time. There were several factors that kept it from being a sustainable solution.

1. Each project is unique, and a one-size-fits-all approach will never meet every need.
2. Business analysts were given the final processes to follow without having been adequately consulted in developing the processes.
3. The "cook book" was used in lieu of training and developing competent business analysts.

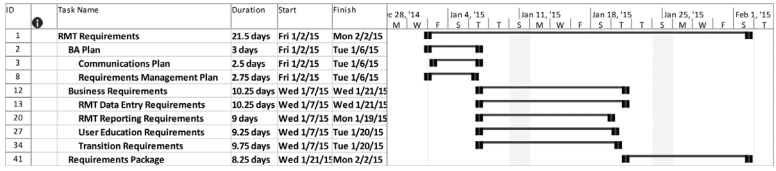
Support junior business analysts with the right support, mentorship, education, and opportunities to develop into your next generation of senior analysts.

The best way to come up with a plan is to first identify what must be delivered. The business analyst should develop a work breakdown structure of the items they must deliver to the project manager, the project team, and to the end users of the solution. From there they can begin to evaluate what activities they must do in order to create those deliverables. They can further spend time looking at whether there are any constraints or other needs in order to completely develop those items. Other things to consider when developing the business analysis plan are the sequence of the activities and the level of skill needed to

complete each. One result of the plan may be an indication of additional business analysis resources and/or time needed. While it is prudent to look for ways to reduce the effort needed, avoid arbitrary constraints that will limit the ability to get great requirements for your project.

Liz knew there was a lot of work to be done in order to get a complete set of requirements to support the new RMT tool. She wanted to make sure that she didn't miss anything, so she opted to use the *BABOK® Guide v.3* tasks (see Appendix E–*BABOK® Guide v. 3* Knowledge Area/Tasks) as a guide to planning her effort. She created a checklist based on these tasks to help her in identifying and estimating the tasks she needs to complete to support the project. The stakeholder analysis contained information on some of the activities she should need to plan for in order to manage stakeholder engagement and ensure their requirements were considered.

Mary was able to use the information Liz provided to plug into the project schedule. This provided a big advantage in her resource planning. She was able to negotiate for developer and tester resources with much more certainty on when requirements would be available and would be needed.



ID	Task Name	Duration	Start	Finish
1	RMT Requirements	21.5 days	Fri 1/2/15	Mon 2/2/15
2	BA Plan	3 days	Fri 1/2/15	Tue 1/6/15
3	Communications Plan	2.5 days	Fri 1/2/15	Tue 1/6/15
8	Requirements Management Plan	2.75 days	Fri 1/2/15	Tue 1/6/15
12	Business Requirements	10.25 days	Wed 1/7/15	Wed 1/21/15
13	RMT Data Entry Requirements	10.25 days	Wed 1/7/15	Wed 1/21/15
20	RMT Reporting Requirements	9 days	Wed 1/7/15	Mon 1/19/15
27	User Education Requirements	9.25 days	Wed 1/7/15	Tue 1/20/15
34	Transition Requirements	9.75 days	Wed 1/7/15	Tue 1/20/15
41	Requirements Package	8.25 days	Wed 1/21/15	Mon 2/2/15

Figure 13 Example of Business Analysis Schedule

The business analysis plan with schedule is a great tool to track the work required for business analysis and its progress, but also serves as information to project stakeholders, especially the core team members, on what to expect and when.

Another benefit of the business analysis plan is that it provides business justification as to the time and resources needed to complete the business analysis activities and provide great solution requirements to the project team. Oftentimes, business analysts are given that constraint to "just get the requirements done in the next two weeks", and this is not

realistic. In order to have great requirements for your projects you need to ensure that proper planning takes place and that the time and resources needed are given. This idea speaks directly to the PMI and the PMI-PBA℠ credentials and reason for it. If 65 percent of projects are challenged or failed because of poor requirements, let's spend more time planning how we're going to elicit, analyze, communicate, and manage those requirements.

Plan Communication

The business analysis and project plans contain plans for communicating with project stakeholders. The stakeholder analysis done earlier will also play a huge role in this planning effort. The goal of the communications plan is to determine who needs what information, when, and how. It may seem simple at first until you consider the information that there is to communicate and the multitude of ways there are to communicate.

The plan serves two functions. The first is a way to work with project stakeholders to confirm that their communication needs will be met. A documented plan can be reviewed and adjusted as needed to support his or her needs. The second is it provides a structure to follow for communicating, a structure that the stakeholders have agreed to and will be expecting. This way nobody is surprised and nobody is disappointed.

To Be Communicated	Ways to Communicate
• Scope • Requirements • Use cases • Models • Wireframes • Issues • Decisions • Status • Plans • Product backlog	**In person** • Group meeting • One-on-one meeting • Phone • Virtual **Push Communications (provided to recipient)** • E-mail • Distributed report • Formal letter **Pull Communications (recipient finds)** • Public website • Team collaboration website • Shared drive

Figure 14 Communication Considerations

Liz wanted to make sure that she understood the communication needs of the requirements of stakeholders and would have a document that would tell her to whom, when, and how she should be communicating. She referred to the Stakeholder Analysis in order to start documenting some of the communication needs. There were several people that she decided to talk with to get a better understanding of their communication preferences and needs. She feels she now has all that she needs for a solid communications plan that will keep stakeholders engaged and informed, which will in turn reduce the risk of missing requirements.

Mary liked the format of Liz's communications plan and decided to add her own communication needs to the matrix for the overall project communication plan. An example of communication plan is given below.

What	Audience	Frequency/When	Medium	Responsible
Project kickoff/overview	Execs, SMEs, Project Team	Once/Jan 3	In person meeting	PM/BA
Requirements plan	Sponsor, SMEs, Project Team	Once/Jan 10	In person meeting/virtual available	BA
Requirements elicited	SMEs	Once per group	E-mail	BA
Requirements status updates	Sponsors, PM	Weekly/Friday	E-mail	BA
Project leadership meeting~~-~~ progress, issues, concerns	Sponsor	Monthly/First Monday	In person	PM/BA
Requirements package walkthrough	SMEs	Once per group	In person/virtual available	BA
Requirement peer review	Project team	Once/Jan 25	In person	BA

Figure 15 Example of Communication Plan

Plan Requirements Management Process

There is a lot to consider when it comes to planning on how to elicit and manage requirements. Think of the following:

- Whom do you need to talk to?
- What do you need to research or review?
- Do you need focus groups?
- How do the requirements need to be categorized?
- How will the requirements be prioritized?
- Who needs to approve the requirements?
- How should the requirements be presented for approval?
- What does the development team need to use the requirements?
- Where, what tool will be used, to store the requirements?
- Will you use a Requirements Management System?
- What supporting documentation is needed for the requirements?

This is just an outline of considerations when planning for the elicitation, analysis, and communication of your project requirements. If you don't answer these questions and thoroughly plan the requirements management, what you will end up with is a 200-page list of requirements without organization or coherency. Remember those business analysis pitfalls we discussed earlier. Many pitfalls can be avoided by sufficient planning. The stakeholder analysis and business analysis communication plan will provide insights into what will work best for your stakeholders on your project.

Consider two scenarios.

Scenario One

Your business analyst has elicited, analyzed, and presented a requirements package for approval. A response to the requirements package is due at the end of the week. A delay in response will have a negative impact on the project timeline. You find a few minutes and start to look at the document. There is a list of requirements with some information whose purpose you are unsure of. You call a meeting with your business analyst. After discussing the challenges with the package, you both decide that she

will create a new package that provides a simpler view of the requirements grouped and ordered by system requirement. She estimates it will take her a week to prepare the new package, and you still need a week to review the results for approval. This creates a two-week delay in the project schedule and prevents staff from moving forward on the solution.

Scenario Two

You have just had a meeting with your business analyst to discuss the plans for eliciting, analyzing, and presenting solution requirements. She comes prepared with a list of items she plans on recording with each requirement along with a communication matrix by stakeholder type, and samples of what each will receive. As you review the samples, you notice that there is not a way to understand where each requirement came from, a stakeholder group, or documented policies, or processes. You also notice that there seems to be a lot of stuff in the report she is planning to present to you for approval. As the discussion progresses, she makes a note to add a new "source" field to her collection and hide several fields from the package she presents to you. It also comes up that you will best understand the requirements if they are grouped by user groups for the new solution. She schedules a "requirements review" meeting with you and several key stakeholders as a follow-up to this meeting as you had requested.

You receive a final draft copy of the requirements package two days prior to the schedule requirements review, and are thrilled to see how the final package came together. It comes time for the review meeting, and you note that half of the reviewers have printed copies and have been taking notes. The business analyst hands out hard copies to the others. The group walks through the printed document. The business analyst is recording notes and changes in the Requirements Management Tool with the screen displayed so the team can confirm the changes. The group prioritizes the requirements as they go, using the MoSCoW[19] method that the BA has described in the plan and at the start of the meeting. The day following a meeting, you receive a new copy of the package, ready for approval.

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[19]MoSCoW is a business analysis tool for prioritizing. Each requirement gets a rating of **M**ust, **S**hould, **C**ould, or **W**on't be included in the solution.

The requirements management plan provides a means to organize how requirements will be gathered and shared with stakeholders. It provides a way to give stakeholders a preview of what to expect, and get their feedback to make any needed adjustments. As the questions at the start of the section indicate, we are taking many things into account such as who can modify requirement, where requirements will be stored, what technology or tools people use to record to update and manage our requirements, what type of requirements reports stakeholders can expect, and more. This little bit of planning upfront can save you a lot of headache on the backside. Think for a moment about what takes the majority of your time. Is it following up on and completing the activities that you have planned for your projects? Or is it, instead, responding to fire drills, those things that were not planned that need your immediate attention? The reason they are fire drills is that there were no plans put in place upfront. Someone doesn't know how to find a requirement, someone doesn't know how to read the requirements report produced, someone is looking for information that you have not yet provided, and someone does not have access to the requirements repository. To avoid fire drills, we do more planning at the beginning, and then we can spend our time in the project doing the activities as the plan indicates. This is the basis of the *Lazy Project Manager* by Peter Taylor. Check this book out if you ever need to be convinced of the benefits of planning.

Your Assessment

For the selected project …

1. Were all of the necessary stakeholders identified early in the planning? If not, why?

2. Did the project suffer any setbacks due to a missed or inadequately engaged stakeholder?

3. Was the project given the time needed that the business analyst indicated was needed for completing the business analysis. If not, why?

4. Did project communications regarding the solution and requirements meet the needs of the project stakeholders including the project team?

5. Would you manage requirements differently on your next project? How?

CHAPTER 8

Working the Project

Requirement Defined

I want to take a moment to provide a bit more definition and discussion about what a requirement is before we proceed. The *BABOK® Guide v. 3* defines requirement as:

> *A requirement is a usable representation of a need. Requirements focus on understanding what kind of value could be delivered if a requirement is fulfilled. The nature of the representation may be a document (or set of documents), but can vary widely depending on the circumstances.*

Note that the "need" is not where the requirement ends. The definition goes on to focus on understanding the value. Often, a stakeholder will cite a requirement that once you dig deeper, you find doesn't truly solve the business need. Recall the discussion of the 5 Why's in Chapter 2—The History of Business Analysis. There we talked about the customer that thought they needed a field in order to distribute workload. Through prodding and analysis we discovered the "requirement" could be met with the current data structure. Not convinced yet? Let me give you another scenario.

I was project manager on a software development project to create a travel and expense reimbursement system. This solution was to replace a paper-based voucher submittal and review process. The paper travel voucher required that travelers sign to certify "all information on the voucher was complete and correct and appropriate to the organization's travel reimbursement process." The scope of the solution did not include the ability of fiscal staff to "correct" in the travel voucher what appeared to have errors.

They could reject the entire voucher, sending it back to the traveler for correction, but not make adjustments. This meant that this would delay reimbursement for many travelers and that approvers and financial staff would have to handle vouchers multiple times—a huge inefficiency. The barrier was the certification language. The thought was that fiscal cannot make changes to the voucher without the traveler recertifying results.

In this case, I put on my business analyst hat and asked the question "what does the certification language *need* to say?" I made a proposal that we adjust the language to say that the dates, purpose, and items listed were correct. This allowed for technical corrections to the voucher when allowable reimbursement amounts were in error. I drafted some proposed language and sent it to the appropriate stakeholders including the organization's attorney and accounting director. The certification was modified and adopted. Now the change to the system was a change in text without any changes in functionality, a much cheaper and easier resolution.

Requirements based on process or system constraints should be evaluated to determine if there is a continued requirement for the constraint or if there may be an opportunity to remove or loosen the constraint. I call this out because it is rarely that I see those in the business analysis role doing this level of prodding. The thought is that if someone says it is required, especially someone up the chain of command, then it is a requirement. Using seasoned, trained business analysis professionals will help identify opportunities to save money and time in the implementation of your solutions. This is one area where using outside business analyst consultants may have a greater effect.

The third point of the *BABOK® Guide v. 3* definition is the "usable representation" of the requirement. It relates to the idea that a requirement is not a requirement until it is documented. An undocumented requirement is simply a wish.

Elicit Requirements

This is one area where the *BABOK® Guide* and *PMBOK®* seemingly do not agree. The *PMBOK® Guide* task in relation to requirements is "Collect Requirements", whereas the *BABOK® Guide* states that the business analyst needs to "Elicit Requirements". I point out this discrepancy only

to show the apparent difference of philosophy between business analysis and project management, at least historically.

This goes back to the earlier sidebar on requirements as Easter eggs. It is not good enough to just collect requirements, as there's a strong need for analysis of those requirements in order to make sure that we get them right.

It is interesting that the PMI has gone beyond collecting requirements with their PMI-PBA℠ certification. The examination content outline points to 35 percent of the activities taking place in requirements analysis. This is a huge step for the PMI and is much more reflective of true business analysis work.

The reality is that we need to elicit requirements before we can analyze them. Eliciting requirements takes a lot of effort in talking with stakeholders with interviews and group meetings, but also reviewing processes, policies, and documentation to see what requirements we can find. We need to rely upon stakeholder analysis to make sure that we capture the requirements of all of the stakeholders that have an influence on our project's success. We need to have a complete picture of the solution and the people and systems that it impacts.

> Liz wanted to be sure that she got a full set of requirements that covered a variety of perspectives. She recognized that she would have to take a variety of approaches to get the broad coverage needed. First, she wanted to hold a focus group with the other business analysts in the company so that they could discuss what they need from a requirements management tool. She also identified a couple of business analysts that she wanted to observe working so that she could try to capture some of the nuances of their job that wouldn't be apparent in the focus group session. She also wanted to interview some of the project stakeholders to get an understanding of what they need in order to review and approve requirements. Finally, she decided that she should take a look through the organization's business analysis standards and processes to see what additional requirements she could find.

After completing all these activities, she had what she felt was a good starting point to develop a full requirement for the project.

Traceability Matrix

The Traceability Matrix is the heart and soul of the business analysis work. Both IIBA and PMI recognize this as the means of documenting and tracking requirements. In fact, when PMI did pilot testing for the PMI-PBA exam, feedback from the pilot indicated that there was a high instance of traceability questions. The instance of questions appeared to exceed the PMI-PBA Examination Content Outline's published 15 percent for the Traceability and Monitoring domain. This is likely due to the fact that traceability happens across each of the five domains. The idea of the Traceability Matrix is that it provides easy reference to how each requirement traces back to the original project objectives. A requirement that does not link back to a project objective is a requirement that will not add value and should be deemed out of scope. That is the "traceability" part.

The matrix is also used to capture additional information about requirements that make it easier to track and communicate each requirement as well as the overall status of requirements for the project. Considerations in designing a Traceability Matrix include:

- What information does the project team and stakeholders need to know about each requirement?
- What categories of requirements will be needed to filter, sort, and communicate requirements in a meaningful way?
- Who should have access to the master Traceability Matrix?

Traceability Matrixes may take on many different forms, from Word tables, to Excel spreadsheets, to relational databases. Our case study project for a Requirements Management Tool represents the most sophisticated version of a Traceability Matrix. These tools are developed as relational databases specifically designed to capture, further analyze, document, and communicate solution requirements. They are often very configurable to

allow the greatest flexibility in capturing requirement information and also in how requirements and related information are communicated. But you're probably getting a good idea of how these tools work from the case study, so let's move on. We will view the Traceability Matrix as a table so that you can get a holistic picture of how it works. The columns of our Traceability Matrix include:

- Unique ID
- Requirement Statement
- Type of Requirement
- Status
- Priority
- Planned Project Phase
- Project Objectives Related To
- Business Owner
- Author/BA
- Design References
- Test References
- Comments
- Test Notes

Keep in mind that there is not one and only one way to build the Traceability Matrix. This is just an example to help show how it can be put together.

Take a look at this example of a completed Traceability Matrix on the following page. Wait! You don't need to see all the columns that we previously identified? That is okay. The idea is that we can pick and choose what information to provide to whom. The example hides many of the columns mentioned. For example, a business stakeholder will not have much interest in the design or test references, yet this is still important information to the business analyst and the core project team.

So we won't go into all of the details of this Traceability Matrix, but hopefully, it gives you a basic understanding of how to capture, trace, and record requirements. One thing worth pointing out in this example is how easy it would be to filter the list to only show stakeholder requirements. This is something you would likely want to do for your project sponsors

and executive-level stakeholders. A well-designed Requirements Traceability Matrix will make the job of communicating requirements so much easier.

ID	Requirements	Type	Status	Priority	Objectives
1	The BA must be able to customize the information collected for requirements.	Stakeholder	Approved	Must	PO#1
1.1	The system shall allow for renaming of requirement attributes.	Functional	Approved	Must	PO#1
1.2	The system shall allow new requirement fields to be identified.	Functional	Approved	Should	PO#1
1.3	The system shall allow for lookup of allowable fields for a requirements attribute.	Functional	Approved	Should	PO#1
2	The BA must be able to provide different reports for different audiences.	Stakeholder	Approved	Must	PO#1
2.1	The system shall include a base set of standard reports.	Functional	Approved	Must	PO#1
2.2	The system shall allow a business analyst to filter reports based on various requirement attributes.	Functional	Approved	Must	PO#1
2.3	The system shall provide an option to download data to an Excel file so the BA can customize.	Functional	Proposed	Should	PO#1
2.4	The system shall allow for customization of reports to include filtering and displayed fields.	Functional	Approved	Should	PO#1

PO#1 - Project Objective #1—"record, manage, communicate, and update requirements so that requirements can be captured once and then managed and communicated efficiently."

Figure 16 Example of Traceability Matrix

Analyze Requirements

Analyzing the requirements means taking the requirements that were given to us by our stakeholders and turning them into requirements that will support bringing value to the project and provide the project team with what they need to develop that solution. There are many different aspects to analyzing the requirements, from ensuring that they are good quality requirements, which are written well, so that we have a full understanding of what the requirement means and what additional requirements result from it. Let us take a quick look at how both IIBA and the PMI define analyzing requirements.

IIBA—*BABOK® Guide v. 3*	PMI—PMI-PBA℠ Examination Content Outline
• Specify and Model Requirements • Verify Requirements • Validate Requirements • Define Requirements Architecture • Define Design Options • Analyze Potential Value and Recommend Solution • Prioritize Requirements (*in Requirements Life Cycle Management*)	• Decompose/Elaborate Requirements (analysis tools) • Allocate Requirements • Prioritize Requirements • Write Requirements Specifications (modeling) • Validate Requirements • Specify Acceptance Criteria

Figure 17 Comparing Analysis Tasks—BABOK® Guide and PMI-PBA

There are quite a list of things to do before we can call our requirements complete. To call them complete at this point would be a gross error resulting in requirements that no one understands, as they do not make sense in the context of the project, and no one has any idea of how to satisfy. Also, here we are back to the 200-page list of requirements. We clearly need to do analysis after we have elicited requirements from our stakeholders, but before we can turn them over to our development team. In looking at the PMI-PBA℠ exam, 35 percent of the exam is based on analysis tasks. This means that in looking at the overall business analysis activities, PMI has determined that 35 percent of the time should be spent eliciting and analyzing requirements before they are

passed on to the project team. This is just one reason why providing an arbitrary deadline, "one month to complete requirements", does not work. You will get requirements as stated by the stakeholders, but they will not be analyzed to ensure they are complete and correct and that they are suitable for use by the development team.

Let's take a few moments to look at how we get from requirements that are stated by stakeholders to requirements that are suitable for use by our development team.

Analysis Step	Outcome	Result
Stated Requirement	Document stakeholder statement of requirement	I need robust reporting
Elaboration	Several requirements that support the initial stated requirements	• Ability to filter on reporting elements • Ability to export report to Excel as flat data set • Ability to export report to Excel in the report format • Ability to add and remove data elements from report
Organize	Requirement is captured within the Traceability Matrix in a way that the business analyst can easily find and report out on related requirement	Requirements are flagged as "Reporting" requirements for "Phase 1"
Specify/Model	Uncover nuances of the requirement that seem obvious to the end user, but provide details needed for the technical team	A data dictionary, use cases, and report prototype specify data elements for filtering, data elements for add/removal from reports, and data elements included in export

Define Assumptions/Constraints	Identify assumptions as each carries the risk of not being true. Specify constraints that limit options for requirements	Identify need to verify that report export only need to work for Excel Constraints on reporting engines or tools available documented
Verify Requirements	Ensure that the requirements meet quality characteristics (complete, correct, concise …)	A complete set of requirements that meet the quality characteristics of requirements
Validate Requirements	Validate that the requirements add value to the project/solution as defined in the business case	No unrelated requirements "creep" into the solution

Figure 18 The Progression of Requirements (from stated to validated)

Now, as a result of this analysis, you have requirements that are …

- Confirmed to add value to the solution as defined in the business case
- Sufficiently detailed that the project team can fulfill the requirements as intended without ambiguity or confusion

Characteristics of Requirements Quality

- Atomic
- Complete
- Consistent
- Concise
- Feasible
- Unambiguous
- Testable
- Prioritized
- Understandable

Source: *BABOK® Guide v. 3*

Having good quality requirements upfront saves time and money in enabling the project team to develop the right solution the first time, without delays due to confusion. A list of quality characteristics has been provided in previous page. Consider the following two examples:

1. The system must be easy to use.
2. The system must provide one-click access to information for each data entry field on the definition of the field and allowable values.

The first one sounds like a good requirement. The person that said it had a clear vision of what they meant, but the developers and testers downstream may interpret it to mean any number of things. Verifying the requirement is necessary to ensure that the requirement is understood well enough to be satisfied by the technical team.

I would like to add here that when I say "requirements upfront" I do not mean that requirements should always be completed for an entire project at the beginning. What I do mean is that prior to the developer designing and coding, the requirements are crystal clear and complete. For an Agile project, this means requirements analysis happens at the start of the iteration for that user story. Refer to the "project approach" discussion in Chapter 5 to determine where "upfront" fits.

> Liz' preferred method to analyze requirements is to develop use cases. She finds this to be a great way to document the expected interaction between the user and the system and other systems. Often, in detailing these interactions she gets to a deeper level of requirements that will better support the project team down the road. Also, use cases are great to serve as a starting point for future testing. In addition to the use cases, she wanted to create a data dictionary to support all of the data fields that would be needed and to provide some information on the attributes and rules regarding that data. This would be something she could work with the database administrator on in order to verify that the solution was configured to meet the stated needs. Finally, she identified a few critical screens that she wanted to create prototypes for. By creating prototypes and comparing these to the

use cases, she could walk the future user of the system through how the system would look and feel prior to development. This would allow her to capture additional requirements to support how they would use the system. This is also a great way to get buy-in and acceptance of the project early on.

Liz knew that another critical piece of the analysis was to make sure that the requirements were quality requirements. She wanted to make sure that the development team could use the requirements without questions, ambiguities, or risk of system defects. She developed a quality checklist for the development team to use in reviewing the draft requirements. She further set up a peer review meeting where they could walk through the requirements and identify questions and uncertainty of the requirements. She knows that doing this in a peer review setting with most of the project team would help identify most of the unanswered questions so that she could address them before requirements were finalized.

Communicate Requirements

Requirements have undergone many changes since we first elicited them from the stakeholders. And that is okay. If stakeholders could state a requirement and have it clear, correct, complete, and usable by the project team, they wouldn't need a business analyst. But we know that they very much do need our help.

Now we have two points of communication that we need to focus on for these changes. The first is to ensure that the stakeholders understand the requirements, all of the requirements, as they stand now after analysis and through verification. The trick here is how to communicate requirements. Remember our 200-page document? Yeah, that won't work. The document will likely end up in the round file. Even worse, stakeholders may sign off on the requirements without reading them, which will surely mean issues down the road when those requirements turn out to be incomplete or wrong. Stakeholders must understand and approve requirements as written before the requirements are handed off to the development team to act upon. If not, there is a risk of defects and rework in order to bring value to the project and the business. We have to look back to the requirements

management plan, our stakeholder analysis, and communication plan in order to understand which requirements need to be communicated for approval and to whom. It may vary from project to project. For instance, one strategy may be that stakeholders approve only the stakeholder requirements and that functional requirements supporting the stakeholder requirement are considered to be a subset. On other projects we may be looking for more control over the requirements and require stakeholders to approve functional requirements related to the stakeholder requirements. Either approach is fine and will be outlined in the requirements management or communication plans.

The other aspect that we need to keep in mind is communicating the requirements to the development team so that they can act upon them. To do this, we need to think about how to organize and present requirements so that they can review and respond to the overall picture. For the best results we will want to include project team members as we elicit, analyze, and document the requirements so that they can play a role in verifying requirements throughout the requirements life cycle.

… for Subject Matter Experts	… for Project Team
Project Background Project Goals/Objectives Expected Outcomes Solution Scope By feature/function • Business requirements • Stakeholder requirements • Transition requirements • Issues/Risks Appendix • Functional requirements • Use cases • Applicable models Prepare report and provide to SMEs in advance Prepare presentation with projector to walk through report sections Scribe to help note questions and follow up needed Conclude with requirements approval plan	Project Background Project Goals/Objectives Expected Outcomes Solution Scope Nonfunctional requirements Transition requirements (solution oriented only) By feature/function • Stakeholder requirement • Functional requirements • Use cases • Applicable models Schedule a series of walkthroughs: (1) Background, nonfunctional, transition (2) For each major functional area including only team members working on that area

Figure 19 Requirements Package and Communication Plan Comparisons.

This will ensure that they do not just get slammed with a long list of requirements that they now need to understand in the context of the solution. We need to communicate the requirements from the perspective of handing them off so that the solution can be developed.

In looking at these two separate needs for communicating requirements, we can see where we will need to take very different approaches in what we present. Our communication plan and stakeholder analysis will go a long way in helping us understand what we need to do to communicate. Personal communication preferences along with how the information will be used will be a significant factor in the way we communicate requirements to project stakeholders.

> Liz has completed the analysis phase of the requirements and is ready to begin communicating these to the stakeholders and to get approval and sign off. She recalls having considered many factors in communicating requirements and developing a communication plan. She looks back to the plan, verifies that the plan still makes sense, and then begins to put together her communications for stakeholders. She notes that there are two separate communication activities noted: one is to walk through the requirements with subject matter experts, and the other is to do a peer review of requirements with the project team. She prepares two outlines for the plan of how she is going to communicate the requirements for each of the audiences.

Baseline Requirements

Now that requirements have been communicated, we need to get sign-off and approval so that we can baseline them. Baseline is a fancy project word for "approve". Once the requirements have been baselined, a change request is required to make any further changes. This helps prevent scope creep on the project, and also helps to ensure that only requirements that have been deemed to add value (as documented in our Traceability Matrix) will be included in the final product. It is not that requirements cannot be changed, but rather that we're going to do a thorough analysis of each requested change to ensure that it adds value to the project. We

will discuss change control in more detail in the next chapter. We need two things in order to baseline the requirements. One, we need explicit approval of the stakeholders authorized to approve the requirements, and two, we need a means to document the final approved set of requirements. Documenting the final approved set of requirements can be managed with the Requirements Traceability Matrix.

Your Assessment

For the selected project …

1. Were there frequent changes to requirements after they were initially considered approved? If yes, why?

2. Of the defects found in the solution throughout test and implementation, what percentage of these could be attributed to poor or missing requirements?

3. Could delays in design, development, and testing of requirements have been avoided with better analyzed, more complete, and better quality requirements?

4. What was the overall impact of missed or poorly written requirements to on the project schedule and budget?

CHAPTER 9

Monitoring and Controlling the Project

Tracking Requirements

You may think now that the requirements are approved and baselined and that the work of the business analyst is done. Sorry! In reality, there is still much to do. The business analyst needs to support the project team in a number of ways. The first is to ensure that the requirements presented to the development team are "suitable for use". This means that the developers, testers, and any other readers of the requirements will have enough information to implement the requirements. This will often require more analysis and modeling of the requirements to provide needed detail and clarity. Business analysts and project teams are often challenged at this point. The result of analysis and modeling may mean new requirements are written, but is it a new requirement or needed detail to support an existing requirement? The Traceability Matrix will help identify new versus elaborated requirements by noting the relationship between requirements. If the requirement is an additional detail to a higher level requirement, it is an elaboration. If it does not directly relate to the higher level requirement, then you have scope creep. It looks like Liz and team have such a case.

> There is an approved requirement that "the system will provide sorting of lists displayed to the user". Dave, the lead developer, asked Liz to provide more information on what data needs to be supported and what the preferences are for sorting. Liz reviews her notes from the requirements gathering sessions, and sees where the users specifically called requirement ID, status, owner, and date modified as items they would want to sort on. Liz

provides this information to Dave and also states that sort default is in ascending order. The ability to sort in descending order is also required for date modified field. Liz further updates the Requirements Traceability Matrix with these changes and additions, and traces them to the original requirement.

As you can see from this example, sometimes an elaborated requirement really becomes more of a technical design. Generally, we want to leave the design to the designers and developers of the system, but often these people would like more direction from their business analyst to make sure that their design supports what the users will need and expect. How these items are addressed will vary from project to project and from team to team. What is important is that the roles and responsibilities are clearly defined early in the project and followed so that no toes get stepped on. At the minimum, the business analyst will need to review the design to ensure that it actually will meet the requirements as intended and stated.

Another responsibility of the business analyst at this point is to ensure that the requirements are being adequately addressed in the design, development, and test of the solution. This means reviewing design documents, the solution, and test results to verify that each requirement has been adequately addressed. This is tracked in the Requirements Traceability Matrix. The Traceability Matrix includes columns for each of these references, as outlined in the Traceability Matrix. The business analyst will update the Traceability Matrix to indicate where the requirements have been addressed. This helps ensure that each requirement is met throughout solution development, test, and implementation.

Change Control

Projects experience change. Projects take time and things change over time. Months or even years may have passed since we first started the project. We need to be able to accommodate changes in our projects in order to stay relevant. The project plan and the approved requirements are not the final say, or at least they should not be if we want to ensure that our project is meaningful to the business. Instead, we need to control how changes happen so that we can adapt without exposing the project to unforeseen

risks. I often use the phrase "plan to re-plan". It is easier to adjust a plan and understand the impact of a change than it is to predict a shot in the dark.

Business analysts and project managers are continually asked to add scope to projects. Understanding the project cost benefit and assumptions can help in determining those changes that should be considered or not. To do this, we need to trace our features and requirements back to the project goals and objectives. Trace the project goals and objectives to the organization goals and objects. Each change request presented should be evaluated to ensure it continues to support the goals and objectives of the organization and of the project. Going back to the business case is the best way to ensure alignment with the overall goals. If the change request does not directly contribute to these goals as outlined in the business case, then it does not belong in our project.

When we accept changes that are not in direct support of the goals of our project, we end up with "scope creep". The changes will require more time and money to implement, yet not contribute to the project meeting its expected outcomes. This is a major contributing factor to our 65 percent challenge and failure rate on projects. Think back to your last project that was late or over budget. Was consistent change control a strong practice in that project? Did all the features delivered contribute to achieving the expected outcomes? A good idea does not necessarily mean a good idea for *this* project. Initiatives that do not support the business case of your project need to find or develop a business case of their own. This will ensure the investment decision for that initiative is held up to the same standard as the investment decision for your project.

Todd C. Williams, in his book,[20] shares the story of one project audit he performed:

> … I asked for the change request log. The project manager replied that there was no formal list because this was an informal process established by him and the customer's project manager.

[20]Williams, T. (2011). *Rescue the Problem Project a Complete Guide to Identifying, Preventing, and Recovering from Project Failure*. New York, NY: American Management Association.

> He assured me that the change orders' net result would have no financial impact, since he was trading scope out for anything added … . After generating the change request log, I found a strong bias in the customer's favor constituting a significant amount of scope creep. In addition, it showed multiple outstanding change requests that would take significant amount of time to evaluate, adding even more work to an already overburdened team (page 51).

The first rule of change control is to analyze each change to ensure the value to the solution outweighs the cost to the project. The second is to track all change requests and the overall impacts of each approved request to fully understand the impact of change requests on your project.

Each project should have a change control plan in place to ensure processes are used throughout the project consistently. The plan should include the following:

- The process through which change requests get submitted, including a standard request form
- The process through which change requests are logged and tracked
- The person responsible for analyzing the business impacts on the solution and solution requirements
- The process through which project impacts will be determined and measured
- Indication of how the recommendation by the project team will be developed
- The timing and process through which change requests and the recommendation get presented for decision
- The person responsible for the final decision: project sponsor or change control board
- The process through which requirements will be updated and re-baselined
- The process through which project plans will be updated and re-baselined

Just as with the project plan, in change control, the business analyst is responsible for understanding the impact on the solution and requirements, and how these impacts align with the business case for the project. The project manager is responsible for understanding the impacts on the schedule, budget, resources, and risks. Together, they can make the best informed recommendation on the change request to ensure value added to the project.

> Matthew approached Liz and Mary with a request to make a mobile application for the Requirements Management System. Liz agrees that this would be a nifty feature, but has her doubts as to whether there is value in the change. She begins the Change Request form, while Mary goes to talk to the development team about the additional time and money that would be needed to see this through. Liz probes Matthew for more information as part of her impact analysis. The value of this project was assumed to be centered on more time for business analysts to do analysis. Matthew indicates that he assumes a mobile application would further speed up the work of business analysis. Liz runs this idea by a few of her business analyst subject matter experts, and they agree that while cool, the likelihood of them using the system through their mobile devices is very low. Liz includes this in her change request analysis. Mary provides the development estimates, and the completed Change Request is reviewed with Matthew. Upon seeing the costs and the assumed lack of benefit, he agrees that this feature should not be developed, and the Change Request gets filed as "rejected" for this project, but they all agree it may be a worthwhile investment in the future as a system enhancement project. Matthew files the Change Request away to possibly be the basis of a future business case.

Changing Business

When Kathleen (Kitty) Hass spoke at IIBA Seattle Chapter, she highlighted that we need to continually go back to the business case to make sure that the project overall will still bring value to the organization and

that the change decisions made continue to support the business case. Have the assumptions stated within the business case changed? Have there been changes in the organization and industry that negate or enhance the value we can achieve?

In rare cases, we may find that the business case no longer makes sense. The organization cannot achieve the value originally expected due to changes in the environment, industry, or technology. This is where it is important to recognize the concept of "sunk cost". Sunk costs cannot be recovered. In looking whether to continue a project or not, the evaluation need be on the additional cost to complete the project compared with the value to be achieved. To use an old cliché, "don't throw good money after bad."

In *Strategies for Project Sponsorship,* we provide the following example:

> Your organization has chartered a project for a new customer relationship management (CRM) system to be developed in-house. The project team spent three months planning the project, while the business analysis group elicited requirements. At that point, you had spent $50,000.
>
> Eventually, the business analysts came back with the prioritized requirements, and the project team expended significant effort in estimating the work needed to meet the requirements. The refined estimates indicate that the project will take 50 percent longer and cost 50 percent more than provided in the early order of magnitude estimates. In the meantime, you hear of a competing organization that has implemented a cloud-based software as a service CRM solution with great success.

In this example there is $50,000 in sunk cost. In determining the best course of action, we no longer care about that $50,000. Our evaluation will be based on what additional investment it will take to implement compared with the overall benefit to be achieved. In this case the business analyst will complete an analysis of the cost-benefit of completing the current home-grown development project or stopping development in favor of buying off-the-shelf software looking only at future spending. You won't be doing your organization any favors by continuing the current project if it is more cost

		Current Plan	Cloud Solution
Spent to date	$50,000		
Cost to implement		$50,000	$25,000
5-Year maint and licensing		$5,000	$12,500
Total cost		$55,000	$37,500

Figure 20 Example of Cost-Benefit of Options

effective to change direction. The point of our projects is to maximize profitability to our organizations, and here we have a chance to do just that.

It is more cost effective to cancel the development project and move to implementing the cloud solution. Forget the original $50,000. It's gone! You cannot get it back!!

We also need to continually go back and look at the value of the projects that we were working on today. What was once going to bring the business value may have changed due to circumstances. For instance, new technology may make our project obsolete before we even get it out the door. In this case we need to do the valuation on whether to continue the project, adjust the project, or cancel the project in favor of a new investment. If we can no longer prove that it is of value to the organization, then we need to seriously consider canceling the project in favor of company profitability. It is far better to have spent $50,000 on something that we now determine not to be of value later and let the funds go than to spend $500,000 to finish it, wasting ten times the money.

Your Assessment

For the selected project …

1. Could a list of requirements be easily produced to accommodate a variety of needs?

2. Was the original business case referenced in making recommendations regarding requirements and scope change requests?

3. Did new requirements get evaluated against the original business case to determine the value to the solution against the cost of the project?

4. Were new requirements formally signed off by the project sponsor or change control board? If not, what was the overall impact on the project schedule and budget?

CHAPTER 10

Finishing the Project

Assess Organization Readiness

Have you ever been handed a new solution without any idea or knowledge of the solution and why it was being implemented? I'm talking about you as an end user of the solution and not the business analyst. Chances are you didn't use it. You definitely didn't use it as effectively as you could have. The business analyst has a role in making sure that the organization and the users are ready for the solution and will use it effectively, before the solution is implemented. This is something that should be happening throughout the project as part of defining the transition requirements to support the project. An assessment of the organizational readiness needs to be conducted prior to rollout of the solution in order to get the benefit expected from the project. This is an opportunity to understand the additional steps that are needed to sell the solution across the organization or to prepare the users for its use.

I once worked on a project to implement a new time keeping system to record staff time to projects. The value in the solution was going to be in getting good metrics on how staff spent their time and on which projects, in order to understand the cost of projects compared with maintenance activities. I had identified that it was going to be a hard sell to convince staff to record their time at the level of detail needed to realize the benefit expected. I had begun to arrange for the project sponsor to visit each of the different working groups so that she could promote her vision for the solution and how it would make our lives easier in the long run. She did not feel this was a necessary step. I attempted to explain that in order to get data into the system needed in order to get the reports out of the system that she wanted, it would take additional convincing on her part. Her response was that since she was the CIO, that was all of the convincing they needed. After the project was implemented, only about 50 percent of staff were actually recording their time in

the new solution, and a very small percentage of the reporting was at the granular level of data needed to get useful information from the system. We spent a lot of time after the time system rollout trying to get staff to put their time in the system at the level requested. We were faced with strong resistance and the data coming out of the system was of little use. A little effort, and selling of the solution and benefits to the organization and the staff will go a long way toward allowing this solution to bring expected value to the organization.

This is just one example of why we need to understand how ready the organization is for the solution and, more importantly, what else the project needs to do to make the solution viable and valuable. It may mean in some cases that the business analyst recommends delaying implementation in order to satisfy some additional transition requirements needed in order for the solution to achieve the value expected.

In many cases a lack of organizational readiness may not be a barrier to implementing the solution. In this case the business analyst will have to identify what needs to happen for that implementation to ultimately be successful. This may include doing informational sessions with users, producing additional user documentation, or identifying blocks to the solution use that will serve as a basis for a future enhancement. What will it take for the implementation of the Requirements Management Tool solution?

> It was getting closer to the time that the new requirements management tool would be released. Liz wanted to do a final touch base with business analysts in the organization to make sure that they would be ready, willing, and able to use the system. She dropped in on a couple of business analysts to strike up a conversation and ask how they felt about the upcoming solution. She could tell that they were optimistic about the value that the system would bring, but also apprehensive that it was going to be difficult to learn to use in order to get the most out of the system. She determined that she would get a better understanding of how easy the system would be to use as part of user acceptance tests that

were soon to come. She decided that she needed to put a little more effort into preparing for the user acceptance tests in providing direction for the users. She wanted to use the user acceptance tests to determine the users' readiness for the system, but also to understand what additional needs the users had from the project in order to be successful in their use of the system. She wanted to get a feel for how much additional training or user documentation it would take for the business analysts to be effective in using the tool.

Liz shared her thoughts regarding user acceptance tests with Mary and Matthew as a heads up that there may be additional work on her part in order for the use of the system to bring the benefit expected. She told them that she would know more after user acceptance tests and would keep them informed. She further let them know that there would be no reason to delay release of the system, just there may be more work to get users to use the system as effectively.

Validate the Solution

The solution to be implemented requires validation to ensure that the solution indeed meets the requirements and can achieve the business results expected. There are two important aspects of this validation.

The first is identifying the gaps in the requirements to the completed solution. Often, these gaps will present themselves as defects in the solution. The business analyst, in this case, will need to determine whether the defects are a true block to implementing the solution or whether there are workarounds available that may work in the short term. The first step is to review the defects found and then determine the criticality to solution implementation. The business analyst should look at the likelihood that a defect will be encountered by a user and also the impact it will have on them completing their work. A text field that has fewer characters available than desired may not be a factor. It may be an inconvenience, but it should not delay the implementation of the solution.

On the other hand, lack of system availability may be a true block to implementing the solution. Healthcare.gov[21] was one example of a solution that was not ready for implementation. This is an example where a desire to meet a release date overrode the need to provide value to its users. This project ultimately was an embarrassment to the U.S. Government, and they have spent months trying to correct for it.

I recently had a conversation with a student who was concerned that releasing the solution with bugs was always going to make the organization look bad. In reality, there will never be a solution implemented that is entirely free of defects. There needs to be a careful evaluation of the defects that are known in the actual impact to the users. For known defects it becomes important that the business analyst and the project team are candid about the facts known and how they are going to be addressed.

The other important validation that needs to happen is to understand the benefit that the solution will provide in regard to the expected outcomes to the organization. This often happens by conducting user acceptance testing. The business analyst is the lead in coordinating this testing effort; however, they are not the "user". This includes identifying members of the user community who will test the system, the level of formality that will be used in order to conduct the test, and the scenarios or scripts used for testing. User acceptance testing provides a way to get real user feedback on the solution prior to its implementation.

Ultimately, it will be up to the business analyst to inform the project manager, the project sponsor, and the project team that the system is ready for use and that it will bring value to the organization. If the system is not ready for implementation, then the business analyst will need to identify what the barriers are and recommend solutions to those barriers. Users often will not remember if the system was implemented on time or not; however, they will remember if it was a poor quality system once they touched it.

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[21]When healthcare.gov was implemented, thousands of users were not able to use the system because of system outages and overloads. It was several months later before the U.S. Federal government resolved these issues. See http://www.theverge.com/2013/10/20/4859316/healthcare-gov-woes for more information.

Liz had been working closely with the testing team, and felt she had a good understanding of the defects of the system. She knew which of the items were determined to be addressed by the project team before the system was released. But there were also a handful of defects that would not be addressed. These were a few that she felt would be unlikely to be experienced or noticed by users, and that if they did experience the default, they would not stop users from doing their work. None of the known defects would be a big deal. She did want to be candid about the defects she knew of, so she created the list and used this in communicating with the users of the system as well as Matthew, the project sponsor.

She had arranged users to do user acceptance testing on the system prior to its implementation. To prepare for the user acceptance test, she created some user documentation that would help the folks navigate through the system. The user documentation along with the defect list would be covered with the user acceptance testers in their session. She started the session by providing a high-level overview of the system scope and what tasks they would be able to complete using the system. She then had them focus on the defect list and walk through each defect in order to help set the stage for how likely it would be that they would run across the defect and what the impact would be on their work if they did. She asked questions along the way in order to validate her assumption on the likelihood and impact of each defect. In one case, she upgraded a defect to critical based on feedback from the acceptance test team. She would talk to Mary and the project team about addressing this issue prior to rolling out the system.

She provided each of the testers the script for their user acceptance test. This script provided a high-level walkthrough on the tasks she wanted them to complete along with general guidance on how to complete them. She also provided them with the user documentation that had been created for the system,

and suggested that they refer to this as needed as a means to also test the usefulness of the documentation. Liz and several team members were on hand for the user acceptance tests so that they could observe how the users there had been using the system, answer any questions the user acceptance testers had, and also record observations for the project team.

To conclude the session, Liz led a discussion from the users on their impressions of the readiness of the system. The overall consensus was that the system was ready to be installed, but a little more work would be needed to prepare users through education. The recommendation was to create a series of brown bag lunches to cover system features as this would go a long way toward helping them use the system effectively.

Liz was thrilled to report to Matthew and Mary that they could roll out the system on the released planned dates. She also mentioned that she would need to spend some time with users with the brown bag lunches to help them transition to using this new product.

Get Solution Sign-off

Ready, Set, Go!

The business analyst will use the information found through validating the solution to make a recommendation to the project sponsor on whether the solution is ready to implement. They should be prepared to present their findings on the facts and barriers of organizational readiness along with any recommendations they have in order to make implementation and the project successful. These items may be treated as change requests that would be subject to formal change control. The decision on whether to implement the project or not is ultimately up to the project sponsor based on the facts and findings of the business analyst and the project manager. It is in the best interest of the project and the organization to be a squeaky wheel and make sure the sponsor understands the risks involved if you do not feel the organization is ready.

No one ever got fired for arguing in favor of something that was in the best interest of the organization—at least not fired by reasonable people.

> Liz, Mary, and Matthew met to discuss the system go-live date. They talked about the findings from Liz and the project team about the user acceptance and the need for additional training. They discussed the outstanding defects and agreed that there would be in maintenance and enhancement release within the next year so that these could be addressed. The recommended additional training would not impact the rollout of the solution. Mary and Liz recommended, and Matthew accepted, that the solution was ready for release.

Your Assessment

For the selected project …

1. Was there an effort to determine the readiness of the organization, staff, and users for the new solution?

2. Was adequate testing conducted against the solution to understand system performance and defects prior to rollout?

3. What factors were considered to determine the final rollout date of the solution?

4. Were there any barriers to end users in using the system once deployed? If yes, how were these addressed?

CHAPTER 11

After the Project

Remember that the project is an investment for the organization. Do you invest money and then put your head in the sand when it comes to your own finances? Well maybe you do, but you know it's not a good idea. We should not let our organizations do the same when it comes to the project investments either. Business analysis also means evaluating the project investments to determine whether the investment is achieving the expected results.

Short-Term Assessment

The first is a short-term evaluation on whether or not the project is realizing the results expected. This is an opportunity to identify any additional needs in order to help the solution achieve the desired results. This is an opportunity to review the implemented solution to determine whether users are using it as expected, the benefit is being realized, and it is on track to achieve the results as identified in the business case. If these factors turn out not to be true, then this is an opportunity to start identifying corrective action. It may require additional investments on the part of the organization, which requires doing the cost-benefit of those investments. For example, if we spent two weeks and $10,000 on training, will the solution bring more value to the organization? If this evaluation does not happen, then we are sure to suffer and not realize the full potential of the solution.

A residual benefit of this activity is giving the project team a sense of satisfaction in the work that they delivered.

> Liz checked in with the business analyst about six months after the system had been released. All in all, the business analysts were thrilled with the solution. They confirmed that the time it took them to get their business analysis work done was drastically cut

and also that the time it took them to produce the requirements report was only a fraction of what it used to be. It was still too early to tell what impact this had on the success of projects overall. But all indications were that this was a good investment for the company.

Long-Term Assessment

We are not yet done analyzing the results of the solution and the impact on the organization. The organization should track the actual benefits of the project throughout that period of the original cost-benefit analysis. As each project is an investment, we should treat each with the same scrutiny as we would any other financial investment. Do you stop tracking your stocks six months after purchasing them? We should not stop tracking our project return-on-investment either. This will be discussed further in Chapter 12—Understanding the projects track record.

The challenge in both of the post project evaluations is providing resources and time to do the work. Who should be responsible for ensuring that this work gets done? There is no longer a project or a project manager to initiate and oversee this work. The business analyst has likely moved on to other projects. There are likely candidates to do the work, but they need to be given the time to do it. This will detract from whatever project they are working on. Instead, we may have to rely on a role in the organization that is not dedicated to doing project business analysis. This responsibility may reside within a project management office, the CIO's Office, or some other units of oversight.

Matthew was impressed with the results Liz got from the requirements management tool project. He wanted to see business analysis take on a whole new level within the organization, and he promoted Liz to Administrator of Business Analysis for the organization. One of the responsibilities that Liz had in this new role was to track past projects to determine whether they

were achieving a return-on-investment as projected. She was nervous as it came time to check on her requirements management tool project. She determined what information she would need to gather in order to analyze that met the requests as needed. As the information came in and she put it together, she found the following.

The instances of defects found in projects have drastically been reduced. In tracking the source of the defects found, we could see a trend that requirements play less of a role. The defects that were found were caused by coding errors and defects in hardware. It was also found that business analysts spent very little of their time preparing requirements documents as a system was able to generate these with ease. Instead, their time was spent analyzing requirements and creating models to support those requirements for the development team. The time needed to get to requirements sign-off had greatly declined as well. The reduction in defects was attributed to the additional time the business analyst had to analyze requirements and provide the development team with requirements that could easily be implemented without a lot of additional discussion and questions.

Liz found two other interesting points. The first is that their project success rate had been growing at a steady rate of 2 percent per year since the implementation of the requirements management tool. She also found that each project implemented after implementation had a greater return-on-investment than those projects that came before. By all accounts, the results have far exceeded the projected return-on-investment after five years of $50,000. With the increase in project success and decreasing project overruns Liz estimates that the organization is saved more than $0.5 million.

Your Assessment

For the selected project …

1. Was there an effort within the first six months of rollout to determine whether there were any barriers to the solution achieving expected outcomes?

2. Were any steps taken to enhance the likelihood of expected outcomes being realized?

3. How will you know, over the long-term, the cost-benefit of the system in relation to the original projections?

PART 3

Organizational Strategies for Business Analysis

CHAPTER 12

Understanding the Project Track Record

What is your organization's project track record? How do you measure your project track record? If you measure this by the percentage of projects that were completed on time and within budget, you are missing a huge piece of the picture. Think back, or look back, to why we do projects. We take on projects so that we can add value to our business. So in viewing your project track record you have to ask, "Did the project realize the value that was expected?" Given that context, I'll ask again, what is your organization's project track record? There is a good chance that you really don't know. Most organizations do not consistently track the value returned on the projects their organization has invested in. Some organizations may do this for the high-cost, high-profile projects, but this approach ignores the cumulative value of the many small investments made over time.

Project portfolio management needs to move beyond selecting and monitoring the projects of the organization and extend to understanding the value that has been achieved, or not. If we focus more on the value to be realized, and less on the out-of-pocket expenses, we will be more profitable in the long term. Understanding this track record goes well beyond the scope of the role of the typical project business analysts, and looks to the need for more strategic, business-oriented business analysis.

We spent a considerable amount of time in Chapter 4 talking about how to make sure we select the projects that are going to bring the most value to our organizations. Now we need to take it a step further and track these results by project. We need to go back and check the record on the projects we have implemented.

There are a few check points here to consider. First, early after implementation, does it appear your assumptions will hold true? If not, why, and what is the difference? Are there enhancements that should be made that will be cost-beneficial and help the solution achieve its goals? It may not even be a needed system enhancement. A solution will not bring the anticipated value if no one is using it. Instead, we may be able to close the gap by "selling" the solution within the organization or to our customers. This may require some money in terms of training, meetings, or other, but if it is going to mean improving the value of the solution in excess of the costs … do it! It's far worse to let an investment flounder than to give it a little boost that will help it move from a bad or flat investment into a profitable one.

A project that was completed on time, on budget, and with the required scope and that does not get used is not a success in terms of the value to the business.

Understanding the success of our projects in terms of the value they bring to the organization will help us get better at making investment decisions that increase our profitability. It's about capturing metrics on our current investments to support our future investment decisions.

- Do projects that provide solutions to customers provide more value than projects that provide solutions internally?
- Is there a common factor in the most successful of projects (sponsors, business analyst, project manager, technology, business supported)?
- Do you see a strong correlation between projects with a strong business case and change control processes and benefits achieved? Will this provide you with the data needed to support further portfolio investment and change control processes?
- Do you get more value from Agile projects than from waterfall projects?

Project	Year Implemented	Expected Outcomes	2013 Results	2014 Results	2015 Results
Requirements Management Tool	2015	The percentage of defects found that can be attributed to poor requirements will be reduced by 50 percent each year. Business analysts will spend no more than 20 percent of their time preparing requirements documents within 18 months after implementation.	N/A	N/A	**On Track** Improvements realized in time spent creating documentation
Travel Expenses Reimbursement	2012	No more paper vouchers/approval needed Travel reimbursement processed within 24 hours	**On track**	**Outcomes Achieved**	**Outcomes Exceeded** Travel expense processing is largely automated with only final audit review and occasional investigations
Time Tracking System	2013	Accurate data on time spent to aid in planning	**Deficient** Not enough granularity in data	**Deficient** Not enough granularity in data	**Deficient** Retire solution

Figure 21 Example of Project Track Record

The example provided illustrates qualitative analysis of each project's track record. Consider using quantifiable metrics data for planned and actual results for even better information to support future decision making.

CHAPTER 13

The Project Power Team

Now that we have thoroughly explored what a business analyst can do to support your project and bring value to the business, let's take a moment to review roles associated with great projects. To do this, we will go back to Figure 4 that was presented in Chapter 2—Vision for Tomorrow.

The business analyst cannot be all alone in bringing value to the project. It is a team effort involving many players.

Project Customers (Business SMEs)

We will start with the Project Customer (or Business SME) of the project. This is the person or people that represent the business that will use the solution that is developed. They are the ones that have the inside knowledge to the processes, barriers, and needs of the business to be successful. As such, they need to be a contributing player to the overall

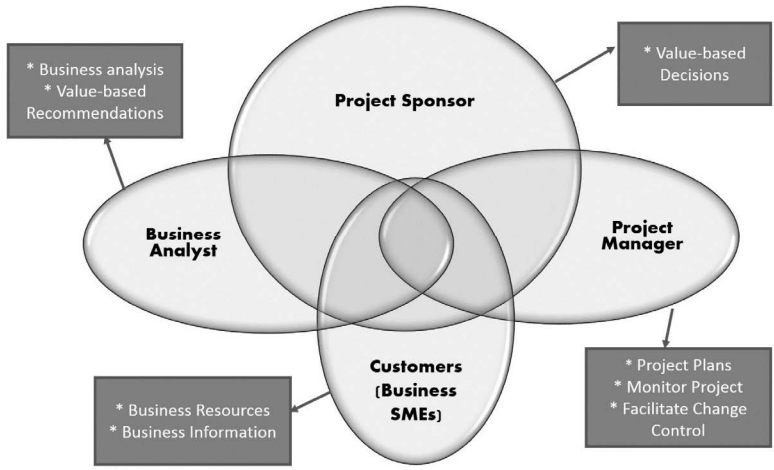

Figure 22 The Project Power Team

project as a member of the project team. They are the ones that need to supply the resources for the business analyst and the rest of the team so they can get the information that they need to recommend strategies that will bring the greatest value to the project. It is important that they are active participants throughout the project, and especially during requirements gathering. What we find on many challenged projects is that these valuable players are often missing from critical discussions and activities. The customer must dedicate time to meet with the business analyst and other project team members to elicit requirements, understand the assumptions and constraints, and provide feedback on the direction that the project is taking. If the customer does not care enough about the project to provide the time and resources needed for the project team, the project will be sure to suffer.

Project Manager

The project manager is responsible for coordinating all the team efforts in order to ensure that efficient processes, best practices, and coordination across the project can take place in the most efficient way possible. This is the role that is responsible for trying to balance needed scope with the budget and schedule available for the project, which is not an easy task. The project manager serves as a leader to the project team in helping to motivate staff, provide structure and direction for the processes of the project, and making sure that all the pieces fit together for a successful project. With business analysis activities being just one piece of the overall picture, the project manager has the responsibility to ensure that the business analyst's pieces fit in with the rest of the project. This means sorting the plans of the business analyst into the overall project plan and ensuring that it all works together.

With the project manager having such a strong interest in the budget and schedule of the project, it becomes critical that they have a firm handle on changes to the project by ensuring that change control processes established for the project are followed. It is the responsibility of the project manager to ensure that the business impact is analyzed by the business analyst and that the effort and risk to the project are called out by the project team and providing information to the business analyst and

sponsor to support a recommendation that the project can support and will bring value.

I was once presenting this topic at a local PMI meeting where project managers in the audience took exception to the idea that business analysis was not a function of the project manager. The concern was that if the business analyst did all the analysis and recommendations regarding value to the project, then the project manager was relegated to being a schedule coordinator. This cannot be further from the truth. Separating the analysis of value to the business from analysis of impacts on the project timeline and schedule ensures that a balanced decision can be made.

I worked with a project manager early in my career, where it felt like our meetings were often mini-boxing matches. We would debate the merits of product features that would enhance the value of the solution and the impact on the schedule and cost of the project. This provided a venue to thoroughly explore the impacts of both sides and present these findings to the sponsor for the best possible decision on the project.

Figure 23 PM and BA Sparring

Project Sponsor

The project sponsor is the owner of the project, the one accountable for the investment and who will answer to the CEO or Board of Directors if the project does not bring value. They are the ultimate decision maker in the project scope, schedule, and budget. The project sponsor should rely on the expertise of (a) the business analyst and understanding of the value of the decisions to be made, (b) the project manager in understanding the impact to the overall project, and (c) the project customer in ensuring that they are ready for a new solution and that the solution will meet their expectations.

Team Dynamics

So circling back to the business analyst, we see that their responsibility is to make value-based recommendations in support of the project. This includes understanding what the project sponsor finds valuable, what the project customers expect, and what the project manager determines can be accomplished within the constraints of the project.

These four roles together create the perfect project oversight team. The project manager and project sponsor meeting in isolation will not bring the same value as that resulting from including the perspectives of the business analyst and subject matter expert. Some project managers and project sponsors may be surprised or even reluctant to hear that they should include, at a minimum, the business analyst and also a subject matter expert in their project oversight meetings. But having all of these roles at the project table will ensure that all perspectives of the project are taken into account and presented to the project sponsor in order to get the best decisions possible.

Flavors of Business Analysts

I also want to spend some time discussing the different types of business analysts we have in our organizations. Usually, a business analyst is thought of as a "project requirements gatherer". While it is true that a lot more understanding of analysis necessary for great requirements is needed, business analysis in and of itself goes well beyond project requirements.

Business analysis at the strategic or organizational level is often disguised, or folded into other organizational roles. You can find business analysts hiding anywhere you see roles within the organization that provides advice to the executive management. These are the staff that are often given special projects to produce a report and recommend a course of action to the organization. It really doesn't matter what somebody's title is. If they do business analysis, then they are a business analyst. What does matter is that those people who do business analysis understand what business analysis is and that there are best practices to support the work.

Business Analysis Best Practices

The point of this book is to help you leverage best practices in business analysis to bring the greatest value of your projects to your organization. In order to do this your business analysts need to know where to find, and how to utilize, the best practices available. For those dedicated to doing business analysis within the context of a specific project or program, they look to either IIBA's *A Guide to the Business Analysis Body of Knowledge® (BABOK® Guide)* or to PMI references for the PMI Professional in Business Analysis examination content.[22] PMI recently published *Business Analysis for Practitioners—A Practice Guide*[23] and further plans to develop and publish a Requirements Body of Knowledge in 2015.

IIBA and the PMI generally agree on business analysis best practices. The difference between the two resources is the packaging of those best practices. The *BABOK® Guide* has been evolving since 2006. This resource is grounded and mature in how it presents best practices in business analysis. The PMI is playing catch-up in the development of best practices resources. While currently there are not many specific dedicated reference sources for business analysis, the information that has been put together to support the PMI-PBA℠ credential aligns well with the *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*. Using these resources may aid in the collaboration and understanding of roles between the business analyst and the project manager.

For business analysts at the organizational and strategic level, the *BABOK® Guide* is the best source of best practices to support business analysis activities.

Regardless of the roles of business analyst to play in your organization, or those doing business analysis activities, I would highly recommend that organizations encourage these people to study business analysis to learn, understand, and apply best practices within your organization. Organizations should be looking for business analyst professionals who have proven their expertise through credentials. Getting a credential is so much more

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[22]Reference materials for PMI® Professional in Business Analysis (PMI-PBA℠) Examination—http://www.pmi.org/~/media/PDF/Certifications/PBA_Reference_list_v1.ashx.

[23]Project Management Institute. (2014). *Business Analysis for Practitioners: A Practice Guide.* Newtown Square, PA: Project Management Institute.

than just passing a test. Both IIBA and PMI require that individuals have a significant amount of experience and education before they can apply to take the test. Passing the test is an indication of understanding best practices and how they apply in the real world. Finally, holding a credential in business analysis requires continuing education. Both IIBA and PMI require 20 professional/continuing development units each year to maintain the credential. I highly encourage organizations to support their current business analysts in getting certified, and to look to certified individuals to fill future business analysis jobs.

CHAPTER 14

Business Analysis Communities

Organizations will benefit by having a business analysis community: This is a place where business analysts can learn, grow, and share best practices. There are two recognized terms for such communities, each having a different level of formality and purpose.

Communities of Practice

A Community of Practice is an informal network of business analysis peers. They are often self-organized and held together by a mutual desire to share expertise to help others and gain new knowledge themselves.

Center of Excellence

A Center of Excellence is a more formal body, often the initiative of an organization leader. The Center of Excellence may be resourced with either full- or part-time staff. The purpose of the Center of Excellence is to support, guide, share learnings, measure results, and provide project governance.

Getting Started

Setting up a business analysis community takes the same thought and effort as deciding to invest in a new technology solution. We can look at the history of Project Management Offices (PMO) to demonstrate why this needs to happen and give our business analysis community a better foundation for not only survival, but true benefit.

The average life of a PMO is two years. Historically, after about two years the PMO is disbanded or reorganized. PMOs have gotten a bad rap

as a waste of time and money for this reason. Having been involved in the development of a PMO, I can see how this would happen. The decision to set up a PMO looks a lot like the decision to invest in the latest and greatest shiny tool. We hear great things, we want great things, we buy … great things do not come. Instead, we need to first identify "why". Or more importantly, what problem are we trying to solve or what opportunity are we trying to leverage? This need be stated in terms of an expected outcome that is measurable. So applying this concept, instead of asking, "What do we want the business analysis community to do?" ask "What do we want the business analysis community to achieve?". Define requirements for what the business analysis community must do to support in order to realize the expected outcome.

A challenge is going to be finding expected outcomes to measure that are truly meaningful. For example, you may be tempted to say that an expected outcome is a library of templates to support business analysis work. This needs to be explored further by using analysis tools such as asking "why?"

- Why does the organization need a library of templates?
- To make it easier for business analysts to complete their work and make it easier for teams by having standards?
- Why do you want to make work easy and have standards?
- So that the business analysis activities can get done sooner, and the project team can get up to speed on the project more quickly by having information handed over in a standardized format.
- Why?
- So we get better project results!

From here we can identify a couple of meaningful measures to determine the effectiveness and value of the business analysis community.

- Percentage of the project time developing and handing off requirements deliverables to project teams
- Project team satisfaction in working together collaboratively, effectively
- Increase in the value brought to the organization through projects

When we measure and can prove that the expected outcomes are being realized, we are at much less risk of disbanding or reorganization.

The shelf life of the PMO would have been a lot longer had they been able to effectively tell the story of their value through these types of metrics. Business analysis communities have two advantages in order to avoid these perils. We have learned from the history of the PMO and, secondly, we are business analysts. Providing value to the organization is what we do. It is an easy leap to analyze the value of our community and sell it to the organization.

In *Breakthrough Business Analysis: Implementing and Sustaining a Value Based Practice*,[24] author Kathleeen (Kitty) Hass describes the need to treat setting up the business analysis community as a project. The project needs a business case, project sponsor, and steering committee. Follow best practices in business analysis to develop a business case, including expected outcomes and return on investment, and analyzing requirements for what activities will aid in achieving this result. You now also have a much clearer focus for the business analysis community and a measure by which to evaluate the effectiveness.

Kitty takes the concepts a bit further in suggesting that business analysts continuously review the business case and adjust it as needed. Make sure that what was important and relevant when the initiative began stays true to support the efforts of the business analysis community.

[24]Hass, K. (2014). Breakthrough Business Analysis: Implementing and Sustaining a Value Based Practice. Tysons Corner, VA: Management Concepts Press.

Afterword

Now that you have a better understanding of business analysis and how it can help your organization achieve greater profitability, it is time to start making changes within your projects and your organization.

Maturing your business analysis processes takes time, money, and patience, but will be worth it in the long run. Ideally, this would be approached as an organizational change project. Combining the project and business analysis practices used throughout this book to manage the change within your organization will help facilitate a quicker and easier transition to the new world. Ken Miller, founder of the Change and Innovation Agency, has developed a guide that complements the ideas presented here with specific strategies for an organizational change project such as this with *The Change Agent's Guide to Radical Improvement.*[25]

Even if the organization is not ready to take on a wholesale change project, you can begin to take steps for a grassroots change. Here are a few quick steps to get you started.

1. Make this book required reading for those who sponsor projects, manage projects, or do business analysis within your organization.
2. Build your team of professional business analysts by encouraging your current talent to study and get certified, and by making certification a requirement for future hires.
3. Require business analysts to create a comprehensive plan of their business analysis activities needed to get to great requirements for each project.
4. Honor the time and resources needed by your business analyst as indicated in the business analysis plan.
5. Include the business analyst in the project leadership team.
6. Monitor the results you get from these changes by tracking project metrics: scope, schedule, budget.

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[25]Miller, K., and Lawton, R. (2002). *The Change Agent's Guide to Radical Improvement*. Milwaukee, WI: ASQ Quality Press.

7. Track project success by evaluating whether the expected outcomes have been realized.
8. Keep track of your investments by continually evaluating the return-on-investment for each project.

Appendix A

References

Below is a list of references used throughout the book.

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Appendix B

Resources for Business Analysts

Below are organizations, websites, and additional books that provide additional information and resources to support business analysis in your organization.

Organizations

International Institute for Business Analysis (IIBA)
www.iiba.org
701 Rossland Road East, Suite 356
Whitby, ON L1N 9K3
Canada
Toll Number: 1 647-426-3735
Toll Free Number: 1-866-789-4422

Local chapter information—http://www.iiba.org/Chapters.aspx

Project Management Institute (PMI)

www.pmi.org
14 Campus Boulevard
Newtown Square, PA 19073-3299
USA
Toll number: 1 610-356-4600
Toll-free number: 1 855-746-4849

Local chapter information—http://www.pmi.org/membership/chapters-pmi-chapters.aspx
Requirements Management Practice Area—http://www.projectmanagement.com/Practices/Requirements-Management/

British Computer Society (BCS)
www.bcs.org
Swindon Office (BCS HQ)
BCS, First Floor, Block D, North Star House
North Star Avenue, Swindon
UK, SN2 1FA
UK: 01793 417424 or 0845 300 4417 (lo-call rate)
Overseas: +44 (0)1793 417424

Business analysis certification—http://certifications.bcs.org/category/15680

Websites

Business Analysis Times—http://www.batimes.com/
Online trade publication for business analysis.

Modern Analyst—http://www.modernanalyst.com/
Online trade publication for business analysis. Also a great resource for comics related to business analysis.

Mountain Goat Software, Mike Cohn—http://www.mountaingoatsoftware.com/
Specifically centering on Scrum and Agile. All articles and past presentations are open to the public to use for educational purposes.

Process Impact, Karl Weigers—http://processimpact.com/
A great resource for templates and articles on all things business analysis.

We Don't Make Widgets, Ken Miller—http://www.wedontmakewidgets.com/message.htm
Discusses the importance of organization operational change, especially as it relates to government operations. Internal operational changes for for-profit business can easily benefit from the viewpoints and strategies described.

Additional Recommended Books

Cadle, J., and Paul, D. (2010). *Business Analysis Techniques: 72 Essential Tools for Success*. London: British Computer Society.

Wiegers, K., and Beatty, J. (2013). *Software Requirements.* 3rd ed. Microsoft Press Redmond, WA.

Appendix C

Business Analysis Tools and Techniques

If you were to combine the tools and techniques listed in *BABOK® Guide v. 3*, the PMI-PBA Examination Content Outline, and the *Business Analysis for Practitioners: A Practice Guide*, you would find more than 100 tools and techniques referenced. I have distilled these lists into 17 core techniques that all business analysts should be experts in. There are many tools and methods for using any of these techniques. A seasoned business analyst will be able to adapt the technique in a way that will best serve the circumstance and project.

Number	Technique	Purpose
1	Benchmarking	Leverage potential opportunities by understanding how competitors and comparable business meet their goals.
2	Cost-Benefit Analysis	Analyze and quantify the expected value the organization can expect to achieve over time.
3	Data Dictionary/Glossary	Provide a common language for the business and project team, and identify the data elements needed for the solution.
4	Document Analysis	Utilize existing information to serve as a foundation and point of validation of solution requirements.
5	Facilitated Workshops	Use the power of groups to gather a large amount of information in a controlled environment.
6	Five Why's	Understand the underlying cause of an action, process, or requirement.
7	Interviewing	Elicit needed information from individuals to understand the needs and expectation of the project and solution.

Number	Technique	Purpose
8	Issue/Problem Tracking	Document, track, and record resolution for the issues and problems experienced in analyzing, developing, and implementing a solution.
9	Observation	Use the power of observation to identify gaps in documented processes.
10	Process Map	Detail a process to ensure understanding and identify opportunities for improvement.
11	Product Backlog	Communicate the prioritized features and functions of a solution to support planning and information sharing.
12	Prototyping	Use pictures to ensure understanding, identify needs, and set expectations.
13	Scope Modeling	Use pictures to articulate and clarify what is in scope and out of scope for the solution.
14	Survey/Questionnaire	Gather information from a large number of sources quickly and efficiently.
15	Use Cases	Fully express the expected interactions between the users of the solution and the solution itself to understand requirements.
16	User Stories	Express features and functions of the system as short narratives of user needs (stakeholder requirements).
17	Weighted Criteria Matrix	Improve decision making with criteria-based scoring of various options.

Appendix D

Business Analysis Competencies

IIBA recognizes that the best business analysts need to possess a wide range of fundamental skills. These are described in Chapter 9 of the *BABOK® Guide v. 3*, Underlying Competencies, and listed below for reference. Additional information on assessing the business analysis competency within your organization is provided below.

- Analytical Thinking and Problem Solving
    - Creative Thinking
    - Decision Making
    - Learning
    - Problem Solving
    - Systems Thinking
    - Visual Thinking
- Behavioral Characteristics
    - Ethics
    - Personal Organization
    - Trustworthiness
    - Organization and Time Management
- Business Knowledge
    - Business Acumen
    - Industry Knowledge
    - Organization Knowledge
    - Solution Knowledge
    - Methodology Knowledge
- Communication Skills
    - Verbal Communication
    - Nonverbal Communication
    - Written Communication
    - Listening

- Interaction Skills
    - Facilitation
    - Leadership and Influencing
    - Teamwork
    - Negotiation and Conflict Resolution
    - Teaching
- Tools and Technology
    - Office Productivity Tools and Technology
    - Business Analysis Tools and Technology
    - Communication Tools and Technology

IIBA has both a BA Competency Model and a BA Competency Assessment Tool. Find out where you or your business analysts fall on the competency spectrum. More at http://www.iiba.org/Careers/Business-Analysis-Competency-Model.aspx.

Appendix E

BABOK® Guide v. 3, Task by Knowledge Area

Presented here are the business analysis tasks identified in the *BABOK® Guide v. 3* by knowledge area. It is important to understand that these are not linear processes; rather, they are iterative and ongoing. Use this list as a checklist to make sure that all BA tasks have been considered in BA planning. This does not mean that every task will apply to every project. Consciously deciding not to perform a task is far better than forgetting and needing to make changes in order to accommodate it in the plan later.

The final column shows examples of activities the business analyst is planning based on one fictional project in order to demonstrate how this list can aid in business analysis planning. It serves as a checklist of sorts.

***BABOK® Guide* Chapter**	**Knowledge Area/Task**	***Sample* Activity for Proposed Project**
3	**Planning & Monitoring**	
3.1	Plan Business Analysis Approach	*Meet with PM to discuss, create BA Plan for stakeholder review*
3.2	Plan Stakeholder Engagement	*Series of interviews/surveys to identify and analyze*
3.3	Plan Business Analysis Governance	*Work with project leadership and stakeholders to define and recommend BA processes and governance for decision making. Get approval*
3.4	Plan Business Analysis Information Management	*Revisit plan for XYZ project, adjust as necessary*
3.5	Identify Business Analysis Performance Improvements	*Review status with PM monthly, reach out for feedback from stakeholders as needed*

BABOK® Guide Chapter	Knowledge Area/Task	*Sample* Activity for Proposed Project
4	**Elicitation and Collaboration**	
4.1	Plan for Elicitation	*Use Stakeholder Analysis and Scope Diagram to determine needs*
4.2	Conduct Elicitation	*Per 4.1*
4.3	Confirm Elicitation Results	*Per 4.1*
4.4	Communicate Business Analysis Information	*Included in 3.1, 3.2, and 4.1*
4.5	Management Stakeholder Collaboration	*Included in 3.2 and 4.1*
5	**Requirements Life Cycle Management**	
5.1	Trace Requirements	*Per 3.1 and 3.4*
5.2	Maintain Requirements	*Per 3.1 and 3.4*
5.3	Prioritize Requirements	*Use MoSCoW, capture in 5.1, see also 3.1*
5.4	Assess Requirements Changes	*Per 6.4*
5.5	Approve Requirements	*Per 3.1, 3.3, 4.5, and 4.4*
6	**Strategy Analysis**	
6.1	Analyze Current State	*Completed*
6.2	Define Future State	*Completed*
6.3	Assess Risks	*Initial complete, frequent review of risk register*
6.4	Define Change Strategy	*Create Change Control Plan with PM, see also 3.3*
7	**Requirements Analysis and Design Definition**	
7.1	Specify and Model Requirements	*Per 3.1*
7.2	Verify Requirements	*Per 3.1*

***BABOK®* *Guide* Chapter**	**Knowledge Area/Task**	***Sample* Activity for Proposed Project**
7.3	Validate Requirements	*Per 3.1*
7.4	Define Requirements Architecture	*Per 3.1*
7.5	Define Design Options	*Work with UX Design*
7.6	Analyze Potential Value and Recommend Solution	*Requirements review, walkthrough UX Design with business*
8	**Solution Evaluation**	
8.1	Measure Solution Performance	*Create postimplementation review plan*
8.2	Analyze Performance Measures	*Per 8.1*
8.3	Assess Solution Limitations	*Per 8.1*
8.4	Assess Enterprise Limitations	*Per 8.1*
8.5	Recommend Actions to Increase Solution Value	*Per 8.1*

Index

OTHER TITLES IN THE PORTFOLIO AND PROJECT MANAGEMENT COLLECTION

Timothy J. Kloppenborg, Editor

- *Strategic Leadership of Portfolio and Project Management* by Timothy J. Kloppenborg
- *Project Strategy and Strategic Portfolio Management: A Primer* by William H.A. Johnson and Diane Parente
- *The Power of Design-Build: A Guide to Effective Design-Build Project Delivery Using the SAFEDB-Methodology* by Sherif Hashem
- *Information Systems Project Management* by David Olson
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Leveraging Business Analysis for Project Success

Vicki James

Only 39 percent of projects today are successful. Nearly half of the projects that fail, fail because of "poor requirements management" (PMI 2014). *Leveraging Business Analysis for Project Success* explores the role of the business analyst in setting a project up for success. It informs and educates project managers, sponsors, and organization leaders on what is necessary for project success. This book goes beyond requirements management in exploring the how the business analyst can contribute to increased profitability through project selection, scope definition, and post-implementation evaluation.

The reader will learn about the history of business analysis, professional organizations and resources to support the profession, and what to expect from the business analyst at each phase of the project lifecycle as presented in a case study throughout the text. Project leaders will better be able to support the business analysis needs of the project by understanding the skills, expertise, tasks, resources, and time needed to do business analysis right and maximize the return on investment for each project.

Vicki James, PMP, CBAP, PMI-PBA, is the Principal of Professional Project Services in Seattle, Washington. She can often be found contracting at companies such as Microsoft or providing training services for project managers and business analysts alike. Certified in both project management and business analysis, she provides a broad view to support project governance and processes. Vicki spent 11 years in the public sector successfully delivering projects to support governmental operations. She served in both the business analysis and project management role in her time with the State of Washington Office of Financial Management. You can find Vicki on social media under her moniker of VickiPPS. Her website is www.project-pro.us. Vicki welcomes connections and notes, so please feel free to reach out.

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