

# Collaborative and Creative **BUSINESS ANALYSIS**

**Mary Gorman**

*Vice President Quality and Delivery | EBG Consulting, Inc.*

## **Abstract**

Business analysis is the discipline of exploring problems or opportunities to craft better outcomes. The success of any business analysis effort hinges on effective stakeholder collaboration. To engage and equip stakeholders from diverse disciplines, good business analysis uses an artful mix of techniques to identify business needs, articulate them clearly and unambiguously, and then test that any proposed solutions deliver the desired outcomes.

Ongoing business analysis is a vital part of any healthy organization. Dave Bieg, Program Manager at the Project Management Institute, shares that business analysis “begins before project initiation, and extends beyond project closure, to ensure that expected benefits are realized. [Business analysis] is essential for successful delivery of projects and programs” (PMI, 2014, p. 3).

Whether teams are creating a new product or service, or enhancing an existing one, investing in business analysis yields strong results. This paper describes key practices that enable stakeholders to collaboratively and creatively analyze their business and products, build strong partnerships, and successfully deliver high value products.

## **The Context for Business Analysis**

Business analysis involves more than developing and managing requirements. Let’s explore the full spectrum of business analysis work.

*Business analysis* is the application of knowledge, skills, tools, and techniques to:

- identify business problems and needs;
- identify and recommend solutions for those needs;
- elicit, document, and manage project/program stakeholders’ requirements;
- guide the successful implementation of a product, service, or project/program end result. (PMI, 2014).

Requirements are “the needs that a product must meet to successfully achieve a goal or solve a problem for its users” (Gottesdiener, 2005, p. 344).

To further set the context for business analysis, we need to distinguish “product” from “project.”

*A product is an artifact that is produced, is quantifiable, and can be either an end item in itself or a component item (PMI, 2013a). The product may be a good, service, software application, or system. In this paper I use “product” generically to represent all four.*

*A project is a temporary endeavor undertaken to create a unique product, service or result (PMI, 2013a).*

Many readers are familiar with studies showing the high costs of delivering products with erroneous, extraneous, and conflicting requirements. Worse, too many projects result in an even more dangerous predicament for people and the bottom line: solving the wrong problem. Business analysis marries the idea of getting the product requirements right, with getting the right requirements.

There continues to be much discussion and many studies evaluating the return on investing in business analysis. Recent research from PMI confirms the growing value of using a consultative approach to business analysis for project success, including timely delivery and increased product quality. This research led to the development of PMI’s Professional in Business Analysis (PMI-PBA)<sup>SM</sup> Examination Content Outline. The outline includes domains, tasks, knowledge, and skills that provide a framework for business analysis (PMI, 2013a). (Disclosure: I served on the task force that created the Examination Content Outline.) See the Appendix for a mapping of this white paper’s coverage of the outline’s domains and tasks.

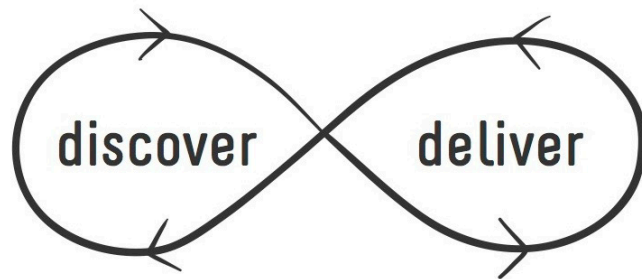
With more than 20 years working in the business analysis discipline as a practitioner, mentor, trainer, author, and consultant across a wide variety of industries and delivery methods, I have discovered that there are no set “best” practices. Rather, there are good practices used in the appropriate context. Here, I share four good business analysis patterns that project teams can adapt to their domain and development methodologies: 1) to weave analysis throughout the product life cycle; 2) to ground analysis in a sound business case; 3) to engage stakeholders as product partners; and 4) to amplify outcomes by using creative practices.

## The Power of Ongoing Business Analysis

Too many organizations impede their efforts by limiting business analysis to an initial, fixed timeframe, which is focused on identifying and documenting requirements. Business analysis is not a one-time activity that results in a static requirements document. Nor do analysis activities end when a project is completed. (Remember, projects are intended to be temporary endeavors; they will and should end.) Product problems and opportunities are ongoing and therefore require continuous analysis and assessment. Analysis work supports a product *throughout* its life cycle.

Successful business analysis is an ongoing series of interwoven activities used to discover and deliver a high-valued product. Product discovery explores new opportunities, investigates problems, and seeks innovation. Such business analysis eliminates the waste often associated with detailing requirements for the wrong solution. This high-level analysis provides a firm foundation for exploring detailed requirements. (At times, teams might

take a narrow and deep dive into detailed requirements to test out a new or innovative product or service.) During product delivery, business analysis verifies and validates that the product is built and deployed correctly. After each delivery cycle, business analysis measures the actual product results and evaluates whether the anticipated value is being achieved. These assessment results serve as input for subsequent product enhancements or corrections.

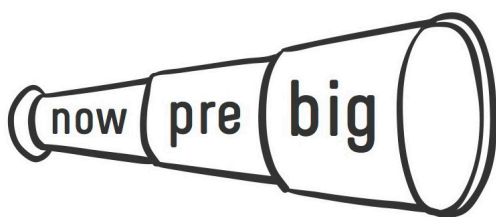


**Exhibit 1:** Business analysis is ongoing throughout product discovery and delivery (Gottesdiener & Gorman, 2012, p. 53).

Teams often struggle to calibrate the breadth and depth of the analysis work. These three planning horizons serve as a guide, regardless of method.

View	Focus	Granularity	Timeframe
Big-View	Long-term product vision or roadmap	Generalized product <b>wants</b>	1 to 5 years, depending on industry
Pre-View	Next product iteration or release	Narrowly focused product <b>needs</b>	1 to 2 months
Now-View	Next product increment for immediate development and potential delivery	Sufficiently detailed, fine-grained product <b>requirements</b>	Few days to a month

**Exhibit 2:** The three planning horizons serve as a guide, regardless of method.



**Exhibit 3:** Three planning horizons are useful for planning (Gottesdiener & Gorman, 2012, p. 55).

Stakeholders analyze the business at every planning horizon: Big-View, Pre-View, and Now-View. They stay alert to changes in market conditions, availability of resources, costs of delay, etc., analyzing their potential impact on the product, and modifying plans as needed.

## Creating a Sound Business Case

Many organizations use some form of a business case to outline the rationale for investing in products. Typically, a business case includes identifying stakeholders and their sometimes disparate needs, clarifying the problem or opportunity, linking the product to the organization's overall strategy, eliciting and analyzing customer needs, hunting down risks, specifying tools for prioritizing solution options, exploring and evaluating options, guiding sound decision making, and validating that the solution meets the needs. In other words, business analysis.

*A Guide to the Project Management Body of Knowledge (PMBOK® Guide)—Fifth Edition* considers the business case as input to developing a project charter. Further, it assumes “that business case assessment, approval, and funding are handled externally to the project boundaries” (PMI, 2013, p. 54).

For a list of events that trigger the development of a business case see page 69 of the *PMBOK® Guide—Fifth Edition*

A sound business case requires collaborative and creative analysis. A good way to achieve this is through elicitation techniques, such as facilitated workshops, focus groups, competitive analysis, prototypes, interviews, observation, and surveys. Teams should use multiple elicitation techniques, selecting a combination that aligns with the product’s life cycle state and the stakeholders’ expertise, access, and availability.

Visual analysis models can also aid communication and increase understanding about the problem or opportunity. Business case analysis benefits from creating and analyzing models, including process models, data models, journey maps, state diagrams, user role maps, prototypes, and value stream maps. Techniques including competitive

analysis, cost-benefit analysis, criteria matrices, PESTLE, and visual analysis tools including Boston Box, force field analysis, Kano matrix, market position matrix, and SWOT analysis also help teams evaluate and validate product possibilities; experiment and run A/B tests; and use systems thinking to understand how the product fits within the context of larger systems.

Savvy analysis takes place in “the beginner’s mind”: it’s curious, courageous, and creative. The beginner’s mind questions and seeks out the “why” to discover root causes (Ohno, 2006). Moreover, by defying conventional wisdom, teams can discover something that gives them a competitive advantage. This expansive thinking opens up product innovation, experimentation, and mutual learning (Dyer, Gregersen, & Christensen, 2012).

Questions to ask when developing a business case include:

#### ■ Strategy

- What is the company’s strategy? Might this strategy be revised in light of recent technological, political, or social changes?
- What is the competition doing or not doing? What is the company’s competitive advantage?
- What are the desired outcomes?
- How does this product align with the strategy?
- What are the consequences of non-action?
- What is the business value of taking on these problems or opportunities? What evidence of success will be used?
- What risks might be encountered? What new problems might a solution create?

#### ■ Customers

- Who are the customers? Which customer segments will the team focus on? Might there be customers beyond the current market?
- What problems do customers have? Or what opportunities might they benefit from?
- What data exists about customers’ past behavior that indicates that the product (or change) is viable?

A solid business case is anchored on a compelling vision or problem statement, supported with a clearly defined hypothesis for outcomes and measures for testing expectations. The vision serves to synthesize the long-term

business concept. Further analysis yields product goals and measurable objectives. The vision, goals, objectives—the *ends*—describe the product’s anticipated value. The product becomes the *means* to deliver the ends. The case describes expected benefits, risks and ways to address them, key milestones, and dependencies. The business case serves as a basis for all product discovery and delivery, before, during, and after projects.

It is essential that people from diverse disciplines are involved with crafting the business case. This includes people with expertise in product management, marketing and sales, user experience, technology and operations. To be successful, they should work in close collaboration, which leads to the next topic.

## Partnering for Optimal Collaboration

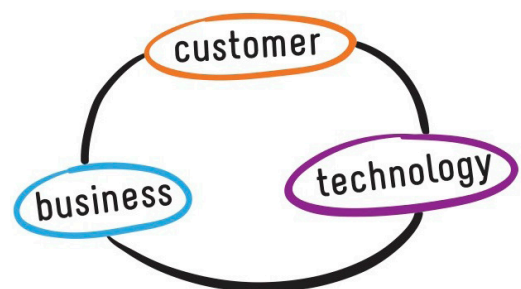
Business analysis is not a spectator sport! It requires a fully engaged team that incorporates the perspectives of diverse stakeholders. These stakeholders represent three realms: business, technology, and customer. Ideally they form a product partnership with a shared goal—to discover and deliver a valued product. Each partner group offers unique perspectives about the product.

The *customer* partners represent users, buyers, and advisers—people or systems that interface with the product, choose to buy it, or influence others to buy it. They tend to value improved productivity, heightened efficiency, greater speed, entertainment, and similar benefits.

*Business* partners represent the people who authorize, champion, or support the product or who provide subject matter expertise. They typically value achieving their business case through improving market position, increasing revenue, complying with regulations, achieving a business case, reducing overhead costs, enhancing internal performance, and so on.

*Technology* partners (the delivery team, internal, or third party) design, deliver, test, support, deploy, and support the product or advise those who do. They value building a high-quality product, offering smooth, continual delivery, adopting a stable architecture, and the like.

Together, the partners continually collaborate to reach a shared understanding of the product. They learn from each other, sharing their perspectives. They expand their thinking, look at the problem (or opportunity) with fresh eyes, and consider new or unique possibilities. They listen to differing perspectives and reach agreement. They weigh and balance product options and decide what will be delivered at any given time. This partnership offers two benefits. First, it exploits the wisdom (attributed to Aristotle) that the whole is greater than the sum of its parts. Second, the product partners collectively own the discoveries. This mix of partners and perspectives is essential, no matter what kind of delivery method the team adopts (agile, traditional, hybrid, or another approach).



**Exhibit 4:** The product partners come from three realms (Gottesdiener & Gorman, 2012, p. 54).

“only 46 percent of organizations believe there is good collaboration between their project managers and business analysts. Yet 68 percent of organizations indicate this collaboration is essential for project success. It is clear that there is significant room for improved collaboration – the first step on the path to project success and better business outcomes”

(PMI, 2014, p. 16).

For the partnership to work, these three disparate groups, each with their own titles and roles, need to be interconnected. True partners don’t see themselves as dependent or independent. Instead, they’re interdependent—mutually reliant on and responsible to each other to reach their shared goal. Acting as partners, they apply their skills and knowledge without regard to their title or role. In a good product partnership, the lines between product and project management, business analysis, testing, user experience, quality assurance, and development and operations blur. A neutral facilitator can serve to heighten the partners’ collaboration.

View	Participating Partners
Big-View	Sponsor, product owner; business executives from customer services, operations, product management, marketing, sales; strategic technology advisors
Pre-View	Strategic and tactical product owners; entire delivery team; business and technology advisors; subject matter experts
Now-View	Tactical product owner; entire delivery team; subject matter experts

**Exhibit 5:** The participating partners may vary by planning horizon.

The following list summarizes the recommended collaborative business analysis practices:

- Involve the right people, at the right time. As needed, provide basic skills training.
  - Promote shared learning among the partners, e.g., business partners learn from technology partners and vice versa.
  - Employ analysis techniques that are shared across cultures, roles, and organizational boundaries.
  - Encourage cross-discipline teams, e.g., user experience and marketing.
  - Focus on the goal (delivering high value product), not the role (business analyst, developer)
- (Gottesdiener & Gorman, 2012, p. 55).

**CASESTUDY****From Consternation to Collaboration**

"You need to learn our business!" Amy exclaimed in exasperation when yet another person from the technology side posed a question. As the business project sponsor, she had kicked off the team's first discovery workshop by sharing the product's vision, goals, and objectives. After only a few minutes, though, she had quickly grown frustrated by the frequent interruptions and questions from the technology folks. "I can't believe you don't know the answers to these basic questions!" she said with frustration.

You could have cut the silence with a knife. After a brief pause, Samantha, the ScrumMaster, spoke up, "Well, in our defense, up until now it has been challenging to get direct access to the subject matter experts."

I wasn't surprised that this conflict had surfaced. The project team at this large financial institution was stuck. The customer and business groups blamed the technology group for failing to deliver on its commitment; the technology folks, on the other hand, felt the business and customer representatives had handed over a vague and bloated backlog and then disappeared. The only thing both sides seemed to agree on was that their new agile practices were not working. It didn't take long for me to realize that one of the keys to overcoming the project team's delivery obstacles was getting the right collaborators involved in product discovery. To that end, I arranged this discovery workshop and worked to ensure that stakeholders from the customer, business, and technology communities were present.

In this real-life scenario, what happened next was pivotal. Amy apologized. She shared that she had felt isolated from the technology group and would welcome the opportunity to engage. Everyone agreed to "restart" the workshop. The conversations quickly turned toward exploring possibilities for the next release. As the development leaders began to understand the business goals and objectives, they offered some different technology options as potential solutions. Amy and the other customer and business representatives got excited about a number of these ideas—solutions that they couldn't have thought of on their own.

I paused the workshop to facilitate a mini retrospective around how they could continue to collaborate outside of the workshop. Consequently, they outlined a number of activities. Two technology folks would engage in contextual inquiry—studying the users as they did their work. Representatives from the three realms volunteered to draft a persona of the primary user. Another sub-group stepped up to research the sources of data needed to support the product. They also decided to hold a retrospective in a couple of weeks to evaluate how these new collaborative actions were moving them forward to better business analysis.








The comments from that retrospective speak volumes about their newfound collaboration: "Better communication between team members," "Excellent teamwork through collaboration," "Managed expectation via collaboration," "Synergy," "Interactive discussions," "Great—involved all parties, often." By the end of the retrospective, the stakeholders had committed to continue cross-discipline, collaborative activities as a powerful way to learn from each other, better understand each other's perspectives, and enable participatory decision making.



## Stimulating Creative Business Analysis

Using creative analysis practices energizes the stakeholders and helps to produce better product results. One way to enable rich conversations among product partners is to use visual thinking tools, such as diagrams, models, and prototypes. Use color and simple symbols semantically. Provide physical space so that people can conveniently and spontaneously interact as they converse, sketch on posters, walls, or whiteboards, and select from and play with colored posts and markers to explore product possibilities. Ask focused questions to stimulate the product partners' discussions.

To reach a holistic, comprehensive understanding of the product, many successful teams use the 7 Product Dimensions (Gottesdiener & Gorman, 2012). These dimensions encompass functional (users, actions, data, and controls) as well as nonfunctional (interfaces, environments, and quality attributes) product needs. The 7 Product Dimensions construct also gives the partners a visual language to use in communicating about the product. Together, they can explore options within and across each dimension. This cross-dimension perspective helps inform and balance discovery.

						
<b>User</b>	<b>Interface</b>	<b>Action</b>	<b>Data</b>	<b>Control</b>	<b>Environment</b>	<b>Quality Attribute</b>
Users interact with the product	The product connects to users, systems, and devices	The product provides capabilities for users	The product includes a repository of data and useful information	The product enforces constraints	The product conforms to physical properties and technology platforms	The product has certain properties that qualify its operation and development

**Exhibit 6:** The 7 Product Dimensions help the product partners reach a holistic, comprehensive understanding of the product (Gottesdiener & Gorman, 2012, p. 58).

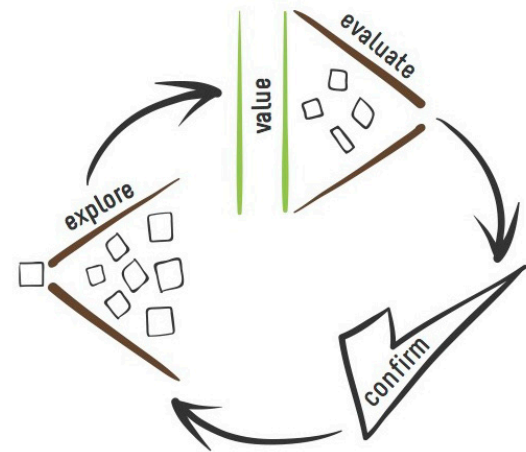
Questions to ask when analyzing the 7 Product Dimensions include:

- **User:** Who initiates actions, and what are their goals? Who receives output from the product?
- **Interface:** What interfaces send data or messages to or from the product?
- **Action:** What activities achieve the users' needs?
- **Data:** What data do users need from the product?
- **Control:** What are the policies, regulations, and business rules the product must enforce?
- **Environment:** Where will the product be used? What software and hardware will be used to develop and operate the product?
- **Quality Attribute:** What are the levels of service for availability, installability, usability, etc.?

In conjunction with the 7 Product Dimensions, effective teams use structured conversations to explore, evaluate, and confirm requirements options.



The structured conversation is a lightweight, repeatable framework that guides the product partners as they learn about the product's possibilities and decide what to deliver. First, explore options for all 7 Product Dimensions, using carefully selected analysis models to energize and focus the conversations. Then evaluate the benefits and risks of each product option, using clear and transparent understanding of the partners' value to identify high-value options. Next, confirm the partners' understanding of the options using unambiguous acceptance criteria, including examples and acceptance tests. This cycle repeats as needed.



Questions to use during the structured conversation include:

- Explore
  - What options might help achieve the product's business case?
- Evaluate
  - What options (individually and collectively) will optimize value?
  - How do dependencies and risks affect evaluation decisions?
- Confirm
  - What evidence will the team use to verify the expected outcomes?
  - How will the team validate that the solution meets business objectives?

**Exhibit 7:** The structured conversation guides analysis work (Gottesdiener & Gorman, 2012, p. 53).

Creative business analysis is essential in every planning horizon: Big-View, Pre-View, and Now-View. The 7 Product Dimensions and structured conversation serve to guide the analysis. Adjust the scope and level of detail of the conversation and the analysis tools for each view.

View	Analysis Tools	
	Textual	Visual
Big-View	Business policies, data domains, features, events, environment architecture, personas, processes, scenarios, terms, high-level quality attributes	Architectural drawings, business process diagrams, capability maps, conceptual data models, empathy maps, relationship maps, state diagrams, value stream map
Pre-View	Business policies, data entities and relationships, events, examples, features, glossary, interfaces, locations, minimum marketable features, personas, scenarios, stories, use cases, and user roles	Business process diagrams, context diagrams, data models, dependency graphs, prototype sketches, state diagrams, story maps
Now-View	Acceptance criteria, atomic business rules, data entities, data relationships and attributes, detailed interfaces, environment specifications, examples, personas, scenarios, stories, and measurable quality attributes	Decision tables, decision trees, detailed process diagrams, prototypes, wireframes, logical data model

**Exhibit 8:** The analysis tools can be adjusted for each planning horizon.

Pausing, regularly, to reflect provides valuable insights. Consider the work. Is the analysis going smoothly? What's working that the team wants to continue doing? What could be adjusted, amended, or adapted? Reflect on the product. Is it delivering the expected results? Are there upcoming changes that could enhance or threaten the product? Use these retrospectives to creatively fine-tune and improve analysis work as well as the product.

The following is a recap of creative business analysis practices:

- Engage with a mix of elicitation and analysis techniques.
- Encourage expansive thinking—innovation, experimentation.
- Stimulate thinking through visuals, models, symbols, colors.
- Energize partners with a variety of activities.
- Reflect on the process and product to continually improve.

**CASESTUDY****Creative Business Analysis in Action**

My organization was brought in to help a project team that was struggling with requirements. They had written a lot of user stories but still didn't feel they understood what needed to be developed. Meanwhile, promises made to external business partners had created enormous pressure to deliver results. During our first on-site session with the team, we gathered in a workroom to develop a release plan. I showed them how to use the 7 Product Dimensions and structured conversation to holistically understand the product needs – then facilitated a discovery session.

The team had been hard at work for about three hours, when Jim, a colleague who was not part of the project team, poked his head in the door and said, "Wow—I love what you've done with the place. Is this a new decorating scheme?"

Pam, our product owner, glanced up in surprise. She looked around at what just three hours ago had been a bland and empty workroom and immediately understood Jim's question. Every wall was covered in posters. They had been logically divided into sections identified with Discover To Deliver™ symbols. The team was using a variety of stickies and markers—all color-coded for their semantic meaning—to fill in the posters with the results of their analysis work. There were sketches of a context diagram, a process map, a conceptual data model, and some screen mockups. Under each of the 7 Product Dimensions, the team had listed product options, with bright yellow star shapes distinguishing the high-value options—the basis for writing user stories. Four team members were standing in front of a release plan poster, placing and repositioning story cards as they weighed a number of factors.

Pam looked back at Jim and smiled, "Not quite, Jim. It might look a little overwhelming but what you see is actually a remarkably clear picture of what our product is going to be and do. I can't believe what we've been able to accomplish. It's like magic!"

I see these kinds of results all the time when teams tap into their knowledge and wisdom using practices designed to unleash people's creative abilities. It's amazing what happens when people are invited to imagine through scenario generation; visualize using analysis models; provoke by exploring options across 7 Product

Dimensions; energize by working tactically with low-fidelity posts and markers on walls; and generate ideas and evaluate them by creating and demonstrating prototypes.

In a retrospective of this first work session, the team shared their experiences:

From Pam: "I loved being able to walk the walls."

From the business analyst: "It was helpful to expose dependencies and discuss them visually."

From the lead developer: "Understanding the 7 (color) dimensions of a story makes me more confident in estimating."

It might seem like magic, but what Jim saw and Pam experienced was simply creative business analysis in action.

## The Value of Effective Business Analysis

I hope teams use the ideas presented here to maximize their organizations' investment in ongoing business analysis. These adaptable practices are suitable for both traditional or agile environments and are appropriate for creating new products, enhancing existing products, or acquiring and integrating products. Used together, they offer the following benefits:

- Achieving higher quality requirements through partner collaboration.
- Building a knowledgeable product community across disciplines.
- Saving time and money by getting the right people involved and giving them appropriate resources to do the work.
- Reducing the most insidious and costly problem in product development: requirements errors that result in building the wrong product or building the right product the wrong way.

Business analysis is a process, not an event. Ongoing business analysis is essential for the continuous delivery of a highly valued product. From the creation of the business case and throughout the discovery, delivery and validation of the evolving product, investing in business analysis yields a high return.

## References

- Dyer, J., Gregersen, H., & Christensen, C. (2012). *The innovator's DNA: Mastering the five skills of disruptive innovators*. Boston, MA: Harvard Business Review Press.
- Gottesdiener, E. (2005). *The software requirements memory jogger: A pocket guide to help software and business teams develop and manage requirements*. Salem, NH: Goal/QPC.
- Gottesdiener, E. & Gorman, M. (2012). *Discover to deliver: Agile product planning and analysis*. Sudbury, MA: EBG Consulting, Inc.
- Gottesdiener, E. & Gorman, M. (2011). It's the goal, not the role: The value of business analysis in Scrum. In *Agile Connections*. Retrieved from <http://www.stickyminds.com/article/its-goal-not-role-value-business-analysis-scrum>
- Ohno, T. (2006). Ask "why" five times about every matter. *Toyota Traditions*. Retrieved from [http://www.toyota-global.com/company/toyota\\_traditions/quality/mar\\_apr\\_2006.html](http://www.toyota-global.com/company/toyota_traditions/quality/mar_apr_2006.html)
- Project Management Institute. (2013). *A guide to the project management body of knowledge (PMBOK® guide)* – Fifth edition. Newtown Square, PA: Author.
- Project Management Institute. (2013a). *PMI Professional in Business Analysis (PMI-PBA)™ Examination Content Outline*. Retrieved from [http://www.pmi.org/~media/PDF/Certifications/PMI\\_Professional\\_Business%20Analyst%20ContentOutline.ashx](http://www.pmi.org/~media/PDF/Certifications/PMI_Professional_Business%20Analyst%20ContentOutline.ashx)
- Project Management Institute. (2014). *Requirements management: A core competency for project and program success. Pulse of the Profession® In-Depth Report*. Retrieved from <http://www.pmi.org/pulse>

## Appendix

The following table shows this white paper's coverage of the PMI-PBA Exam Content Outline's domains and tasks.

PMI Professional in Business Analysis (PMI-PBA) <sup>SM</sup>	
Examination Content Outline - Domains and Tasks	White Paper Coverage
<b>Domain 1: Needs Assessment</b>	<b>x</b>
1. Define or review a business problem or opportunity using problem and opportunity analysis techniques in order to develop a solution scope statement and/or to provide input to create a business case.	x
2. Collect and analyze information from a variety of sources using valuation tools and techniques to contribute to determining the value proposition of the initiative.	x
3. Collaborate in the development of project goals and objectives by providing clarification business needs and solution scope in order to align the product with the organization's goal and objectives.	x
4. Identify stakeholders by reviewing goals, objectives, and requirements in order that the appropriate parties are represented, informed and involved.	x
5. Determine stakeholder values regarding the product using elicitation techniques in order to provide a baseline for prioritizing requirements.	x
<b>Domain 2: Planning</b>	
1. Review the business case, and the project goals and objectives, in order to provide context for business analysis activities.	x
2. Define strategy for requirements traceability using traceability tools and techniques in order to establish the level of traceability necessary to monitor and validate the requirements.	
3. Develop requirements management plan by identifying stakeholders, roles and responsibilities, communication protocols, and methods for eliciting, analyzing, documenting, managing, and approving requirements in order to establish a roadmap for delivering the expected solution.	stakeholders, methods
4. Select methods for requirements change control by identifying channels for communicating requests and processes for managing changes in order to establish standard protocols for incorporation into the change management plan.	
5. Select methods for document control by using documentation management tools and techniques in order to establish a standard for requirements traceability and versioning.	
6. Define business metrics and acceptance criteria by collaborating with stakeholders for use in evaluating when the solution meets the requirements.	x
<b>Domain 3: Analysis</b>	
1. Elicit or identify requirements using individual and group elicitation techniques in order to discover and capture requirements with supporting details (e.g., origin and rationale).	x
2. Analyze, decompose, and elaborate requirements using techniques such as dependency analysis, interface analysis, and data and process modeling in order to collaboratively uncover and clarify product options and capabilities.	x
3. Evaluate product options and capabilities by using decision-making and valuation techniques in order to determine which requirements are accepted, deferred, or rejected	x
4. Allocate accepted or deferred requirements by balancing scope schedule, budget, and resource constraints with the value proposition using prioritization, dependency analysis, and decision-making tools and techniques in order to create a requirements baseline.	x
5. Obtain sign-off on requirements baseline using decision-making techniques in order to facilitate stakeholder consensus and achieve stakeholder approval.	x
6. Write requirements specifications using process (such as use cases, user stories), data, and interface details in order to communicate requirements that are measurable and actionable (that is, suitable for development).	x
7. Validate requirements using tools and techniques such as documentation review, prototypes, demos, and other validation methods in order to ensure requirements are complete, accurate and aligned with goals, objectives, and value proposition.	x
8. Elaborate and specify detailed metrics and acceptance criteria using measurement tools and techniques for use in evaluating whether the solution meets requirements.	

PMI Professional in Business Analysis (PMI-PBA) <sup>SM</sup> (continued)	
Examination Content Outline - Domains and Tasks	White Paper Coverage
<b>Domain 4: Traceability and Monitoring</b>	
1. Track requirements using a traceability artifact or tools, capturing the requirements' status, sources and relationships (including dependencies), in order to provide evidence that the requirements are delivered as stated.	
2. Monitor requirements throughout their lifecycles using a traceability artifact or tool in order to ensure the appropriate supporting requirements artifacts (such as models, documentation, and test cases) are produced, reviewed and approved at each point in the lifecycle.	
3. Update a requirement's status as it moves through its lifecycle states by communicating with appropriate stakeholders and recording changes in the traceability artifact or tool in order to track requirements towards closure.	
4. Communicate requirements status to project manager and other stakeholders using communication methods in order to keep them informed of requirements issues, conflicts, changes, risks, and overall status.	
5. Manage changes to requirements by assessing impacts, dependencies, and risks in accordance with the change control plan, and comparing to the requirements baseline in order to maintain the integrity of the requirements and associated artifacts.	
<b>Domain 5: Evaluation</b>	
1. Validate the solution's test results, reports, and other test evidence against the requirements acceptance criteria in order to determine whether the solution satisfies the requirements.	x
2. Analyze and communicate the solution's identified gaps and deltas using quality assurance tools and methods in order to enable stakeholders to resolve discrepancies between solution scope, requirements, and developed solution.	
3. Obtain stakeholder sign-off on the developed solution using decision-making techniques in order to proceed with deployment.	
4. Evaluate the deployed solution using valuation techniques in order to determine how well the solution meets business case and value proposition.	x





Beijing | Bengaluru | Brussels | Buenos Aires | Dubai | Dundalk | London | Mumbai | New Delhi  
Philadelphia | Rio de Janeiro | São Paulo | Shanghai | Shenzhen | Singapore | Sydney | Washington, D.C.

**PMI.org**

Project Management Institute  
Global Operations Center  
14 Campus Blvd  
Newtown Square, PA 19073-3299 USA  
Tel: +1 610 356 4600

©2015 Project Management Institute. All rights reserved. "PMI", the PMI logo  
and "Making project management indispensable for business results."  
are marks of Project Management Institute, Inc. BRA-128-2014 (10/15)



*Making project management  
indispensable for business results.®*