

Agile Extension to the
**Business Analysis
Body of Knowledge**

Draft for review

International Institute of Business Analysis, Toronto, Ontario, Canada.

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This release of the *Agile Extension to the Business Analysis Body of Knowledge* represents draft content made available to the business analysis community for review and feedback. All content is subject to change before final publication.

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Preface

Purpose of this Release

This is a draft of the introductory chapter of the *Agile Extension to the Business Analysis Body of Knowledge (Agile BABOK Extension)* for release to our review community. The document has been through several pre-release review cycles within the content development team. Once the Agile BABOK Extension has been through this alpha review stage, it will be released (as beta) to the global agile and business analysis practitioner communities and other interested parties, for review and feedback.

The extension will grow and evolve as additional content becomes available, and as each chapter is ready it will follow the same review and release cycle. When the beta versions are released for review, a structured feedback mechanism will be provided to help manage any comments submitted.

Restrictions

This extension draft is copyrighted and follows the same copyrights and restrictions as other IIBA publications. This is a draft for review only, not to be distributed or copied in parts or whole.

Questions about the *Agile Extension to the Business Analysis Body of Knowledge* should be directed to Kevin Brennan at kevin.brennan@theiiba.org.

Introduction

Business analysis arose as a method of ensuring technology solutions were aligned with the needs of the business. Powerful business analysis techniques have become best practices that have helped technology organizations deliver valuable solutions. Agile software development practices have led to a shift away from traditional up-front design toward iterative and incremental delivery. This shift has increased the ability of technology organizations to meet emerging needs. In this agile approach, business analysis practices are still just as critical to the delivery of value to organizations, but this shift impacts the techniques and timing needed to enable the delivery of valuable software.

The purpose of the *Agile BABOK Extension* is to act as an **agile business analysis** primer that is:

- an introduction to agile practices for business analysts;
- an overview of business analysis for agile practitioners;
- a definition of typical working practices followed by business analysts working on agile projects; and
- an overview of the new and changed roles, skills, and competencies for business analysis.

Emergence of Agile Practices

Agile practices are a set of lightweight approaches to project management and product development based on uncovering better ways of developing software by doing it and helping others do it. This has resulted in a set of practices that include frequent delivery of product, self-organizing teams, and adaptability to changing scope. These agile practices emerged during the mid-to-late 1980s as an evolution from the then prevailing methodologies—typically referred to as *'waterfall'*—that focused on managed teams, working to fixed plans of functionally separate phases, and strict scope control. Through the 25 years that followed, agile practices have become steadily better defined and more widespread, with most media now recognizing them as mainstream best practices (Mari, 2008). See also the section 'History of Agile Practices and Methods' (on page 21).

Although there is evidence of agile practices from the 1960s, they are first clearly seen during the 1980s, with working practices such as rapid application development (RAD), evolving in reaction to delays and missing features caused by overly-structured *waterfall* phased approaches. RAD developed in a very ad hoc and unstructured way, and what was gained in speed was often lost in lack of governance, so RAD was superseded in the mid-1990s by more robust lightweight approaches, like the Dynamic Systems Development Method (DSDM) and Scrum, which placed these practices in a flexible framework.

However, it wasn't until February 2001 that these working practices were first referred to as *'agile'*—when 17 representatives of various lightweight alternatives to *waterfall* product development and project management methodologies met at a ski resort in Utah to discuss the values and principles behind these alternatives. They issued the following statement of values, which has acted as a key reference point for agile practices ever since:

MANIFESTO FOR AGILE SOFTWARE DEVELOPMENT (AGILE MANIFESTO)

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.

(Beck et al. 2001)

Emergence of Business Analysis

Business analysis is the discipline of identifying business needs, recommending and validating solutions. During the rise of business computing in the 1960's and 70's, computers were used largely to automate repetitive tasks and convert from paper to automated storage and recall. The Systems Analyst was responsible for documenting the existing processes and translating them into requirements for development. This worked effectively for early automation projects such as implementing accounting systems.

From the late 1970's through the 90's, businesses started using automation to drive further savings, improvements in processes, and to create new offerings for their businesses. This required a different role than the Systems Analyst. Business analysis arose to help assess business needs, recommend new solutions, and act a liaison between the business and technology. A large body of techniques arose to support effective business analysis.

Business analysis is the set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization, and to recommend solutions that enable the organization to achieve its goals.

Business analysis involves understanding how organizations function to accomplish their purposes, and defining the capabilities that an organization requires to provide products and services to external stakeholders. It includes the definition of organizational goals, how those goals connect to specific objectives, determining the courses of action that an organization has to undertake to achieve those goals and objectives, and defining how the various organizational units and stakeholders within and outside of that organization interact.

Business analysis may be performed to understand the current state of an organization or to serve as a basis for the later identification of business needs. In most cases, however, business analysis is performed to define and validate solutions that meet business needs, goals, or objectives.

Business analysts must analyze and synthesize information provided by a large number of people who interact with the business, such as customers, staff, IT professionals, and executives. The business analyst is responsible for eliciting the actual needs of stakeholders, not simply their expressed desires. In many cases, the business analyst will also work to facilitate communication between organizational units. In particular, business analysts often play a central role in aligning the needs of business units with the capabilities delivered by information technology, and may serve as a "translator" between those groups.

A *business analyst* is any person who performs business analysis activities, no matter what their job title or organizational role may be. Business analysis practitioners include not only people with the job title of business analyst, but may also include business systems analysts, systems analysts, requirements engineers, process analysts, product managers, product owners, enterprise analysts, business architects, management consultants, or any other person who performs the tasks described in the *BABOK Guide*, including those who also perform related disciplines such as project management, software development, quality assurance, and interaction design.

Excerpt from the BABOK Guide (2009, 3-4)

The Need for Agile Business Analysis

Through its association with 'structured' analysis and design approaches, business analysis became strongly associated with the *waterfall* approaches, defining detailed business needs in advance of solution design and development. The pioneers of agile practices, to avoid the supposed restrictions and sluggishness of waterfall approaches, sought ways to identify business needs without resorting to formal analytical methods. They had success with this in small teams by focusing on roles like Product Owners and On-site Customers who were able to communicate directly with the team.

However, by 2008—as agile practices were adopted by larger organizations—the growing scale of investment, impact on existing infrastructure, and competition for increasingly scarce resources sharpened the focus on identifying business value and ensuring that it gets delivered by agile practices. This became a common theme of presentations at the Chicago Agile 2009 conference, bringing together the business analysis and agile practitioner communities. An international team of interested practitioners formed to help scope and start to answer the questions this raised, resulting in the development of the *Agile Extension to the Business Analysis Body of Knowledge (Agile BABOK Extension)*.

Agile Thinking for Business Analysts

Traditional waterfall practices were predicated on defining everything up front, through a mind-set that:

- at the start of a project the customer can definitively know, articulate, and define what the outcomes should be at the end of the project;
- once documented, the requirements will not change without incurring project delays, budget overruns, or reduced feature sets;
- the requirements process is confined to a single functional organizational area that sits apart from the team performing the project delivering the product; and
- project work is best performed serially, as: **define** → **build** → **test** → **deliver** → **operate**.

Agile practices set out with a different set of assumptions, and the impact of these alternative approaches has led to a need to clearly articulate the specific influence of agile practices on business analysis, as well as the value that business analysis provides to agile practitioners.

One of the clearest ways of understanding this is to highlight the different approaches to risk and change:

On waterfall projects, risk is managed by:

- examining requirements in detail until everything is understood;
- getting those requirements signed off by the client as the final definition of the product to be delivered;
- resisting changes to requirements once development is underway; and
- continuing the approach of completing everything in detail at one stage to be handed over as a package to the next team downstream.

The biggest drawback to this approach is that the world does not remain fixed while the project team is busy, and business stakeholders are not permitted to check whether the solution is fit-for-purpose in the prevailing environment, so any changes in scope caused by altered circumstances typically have to be dealt with in a phase two (which may never happen). So while the risk to project delivery is managed (i.e. *something* might still be delivered on time), the risk to meeting business needs is much higher (i.e. will the solution delivered provide the *business value* promised).

On agile projects, risk is managed in a totally different way. By starting from the assumption that the circumstances around the project will change, agile practices seek to minimize the impact of this by delivering smaller parts of the product more frequently, with constant or at least frequent business review/feedback, so that the product can be checked against the business needs and may be adapted more readily when circumstances change.

These different approaches can be summarized as *plan-driven* and *change-driven*, where waterfall practices are driven by highly-structured plans and agile practices are driven

first and foremost by delivering viable solutions in incremental releases that provide discrete *business value*. Of course, most projects following waterfall practices are set up to deliver business value; however once initiated their prime focus becomes to deliver to the plan as explained below.

Plan-Driven

The values and principles of waterfall practices are driven by a need for predictability and return on investment. This is reflected in the desire to 'plan the work' and then 'work the plan'. Plan-driven development is primarily effective in cases where: the outcomes of the project can be perfectly articulated, requirements can be fully defined in advance, technical and market drivers remain fixed during the project, and development has to be managed as one delivery rather than incrementally. In the 21st century, these conditions apply less and less often.

Change-Driven

As teams have established the ability to reliably deliver working solutions on a frequent or continuous basis, the options available to develop projects have changed. The desire to leverage emerging technology, rapidly respond to changing customer preference, and dramatically reduce time to market makes plan-driven development less optimal. When outcomes are not explicitly articulated up front, the delivery team has to constantly make decisions about what to do next; as the business should still be optimizing its *return on investment*, each decision has to be made in the context of *business value*.

While several methodologies have arisen to support agile practices—as demonstrated by the diverse group behind the *Agile Manifesto*—they have several things in common:

- focus on progressive elaboration and iterative and incremental delivery in delivering business value;
- drive transparency in the project status, viability of the product, and performance of the team;
- compel collaboration and learning about both the product and the delivery capabilities; and
- reduce risk by facilitating change associated with learning throughout the project.

Agile practices challenge the basic notion that everything can be defined and designed up front. They introduce a significant shift in how teams look at requirements and when they are defined in the process. Business analysis should be integrated with other agile practices throughout the life of the project.

While the *BABOK Guide* has some references to agile practices—referred to as '*change-driven*'—with agile practices becoming mainstream, the role of business analysis in value-driven approaches needs to be more clearly articulated.

That is the purpose of the *Agile Extension to the Business Analysis Body of Knowledge*.

Agile Manifesto Applied to Business Analysis

On projects following agile practices, the role of business analysts evolves to more of a *'business consultant'* or *'business value coach'*. There is far more emphasis on skills and attributes such as digging deeper for insights, experimentation to fail fast, overcoming roadblocks, collaboration, experience design, and storytelling. This section examines how business analysis is influenced by agile values and working practices.

The *Agile Manifesto* is seen as a clear statement of the values behind agile practices.

Individuals and interactions over processes and tools

Agile business analysis shifts the focus from following strict processes and templates to focusing on helping the delivery team identify and implement business value.

Working software over comprehensive documentation

Agile practices recognize that there is little intrinsic value in transitory internal products that will not be referenced after implementation. The focus of agile business analysis is not on delivering perfect documents to the team, but rather on helping the team deliver working solutions, based on incremental just-in-time (JIT) delivery of requirements.

Customer collaboration over contract negotiation

Traditionally, a key focus of business analysis has been to use requirements documents to gain customer approvals and even signatures. Agile business analysis addresses this by producing the minimum responsible documentation that is developed as late as possible in the project. Not only is customer collaboration heightened, collaboration between all parties is increased. The relationship with the customer is one of cooperation, not hand-offs between phases, and business analysis is critical to facilitating cooperation and ensuring that there is sufficient communication.

Responding to change over following a plan

On traditional waterfall projects, the big design up-front effort was then turned into a plan and the team held to the plan—even when the customer and team both realize their understanding of the requirements has changed. Agile practices delay commitment to the next work to be performed until the *'last responsible moment'*, and provides visibility and transparency for the customer to make decisions about what to build and when. Agile business analysis requires establishing a strong framework to ensure the development teams stay focused on value while still being able to respond to change.

Agile Extension to the Business Analysis Body of Knowledge

The Guide to the Business Analysis Body of Knowledge (BABOK Guide) is a globally recognized standard for the practice of business analysis. The *BABOK Guide* describes business analysis areas of knowledge, their associated activities and tasks, and the skills necessary to be effective in their execution. The *BABOK Guide* was first published in 2006, and the current version 2.0 was released March 2009.

The primary purpose of the *BABOK Guide* is to define the discipline of business analysis. It serves as a baseline that practitioners can agree upon in order to discuss the work they do and to ensure that they have the skills they need to effectively perform the role, and defines the skills and knowledge that people who work with and employ business analysts should expect a skilled practitioner to demonstrate. It is a framework that describes the business analysis tasks that must be performed in order to understand how a solution will deliver value to the sponsoring organization. The form those tasks take, the order they are performed in, the relative importance of the tasks, and other things may vary, but each task contributes in some fashion, directly or indirectly, to that overall goal.

Excerpt from the BABOK Guide (2009, 3)

Mentions of Agile Practices in the *BABOK Guide*

The *BABOK Guide* does not prescribe a process or an order in which [business analysis] tasks are performed ... [it] only prescribes that the input must exist. The input may be incomplete or subject to change and revision, which may cause the task to be performed multiple times. Iterative or agile lifecycles may require that tasks in all knowledge areas be performed in parallel.

Excerpt from the BABOK Guide (2009, 8)

Change-driven approaches focus on rapid delivery of business value in short iterations in return for acceptance of a higher degree of uncertainty regarding the overall delivery of the solution. These approaches tend to be preferred when taking an exploratory approach to finding the best solution or for incremental improvement of an existing solution. The authority to approve requirements usually rests with a single individual, who is an active participant in the team's daily activities—others may advise or be informed but may not withhold consent, and the approval process must be completed within a strict time limit.

Excerpt from the BABOK Guide (2009, 20)

This section covers an explanation of the key types of information presented, the structure of this document, and how this document can be used by itself or in parallel with the main Business Analysis Body of Knowledge.

The *Agile BABOK Extension* summarizes the knowledge areas and tasks from the BABOK, and explicitly casts them in an agile context, showing how the tasks within each knowledge area fit with agile practices, and how business analysis ensures that efforts are aligned with the delivery of value by the team. Additionally, the *Agile BABOK Extension* demonstrates business analysis skills in an agile context, showing how they can be applied in situation-specific ways to ensure they are helping the team achieve its goals. If there are new skills used by agile teams to accomplish business analysis, these will be presented as well. Finally, we will review the competencies that a business analyst must have to perform this emerging role effectively.

Structure of the Agile Extension to the Business Analysis Body of Knowledge

Knowledge Areas

Chapters 2 to 7 will define the impact of agile practices on each of the six knowledge areas that define what business analysis practitioners need to understand and the tasks they must be able to perform.

Underlying Competencies

Chapter 8 covers the competencies required to effectively undertake business analysis following agile practices.

Techniques

Chapter 9 will include a range of specific techniques that support the agile practice of business analysis.

Bibliography

The bibliography will provide the references used in this document and provides guidance for further research on the part of agile business analysis practitioners.

Contributors

The contributors section lists the individuals and roles that participated in the development of this extension.

Using the Agile Extension to the Business Analysis Body of Knowledge

This extension is intended to be used along with the Business Analysis Body of Knowledge. Each section will refer to existing definitions and practices, with the extension describing additions and changes that are necessary to support agile business analysis.

Business Analysis for Agile Practitioners

Agile practices bring about a shift from a *plan-driven* approach to one that is more *value-driven*, iterative, and incremental. This requires increased collaboration and learning about both the product and the delivery capabilities. These shifts bring about three changes in how business analysis practitioners participate in projects: the timing of business analysis, the nature of business analysis, and the level of engagement.

Timing of business analysis

On plan-driven waterfall projects, the majority of business analysis activities take place at the beginning of the project. Since learning takes place throughout a value-driven agile project, feedback gained from deliverables during the project has an impact on later deliverables, so business analysis activities continue throughout the project.

The nature of business analysis

Agile projects use progressive elaboration to exploit the iterative nature of delivery—gathering feedback on earlier deliverables and applying that feedback to later deliverables. That means business analysis activities need to support prioritization based on what needs to be learned, chunking outcomes to simultaneously support progressive elaboration and continuous delivery of value.

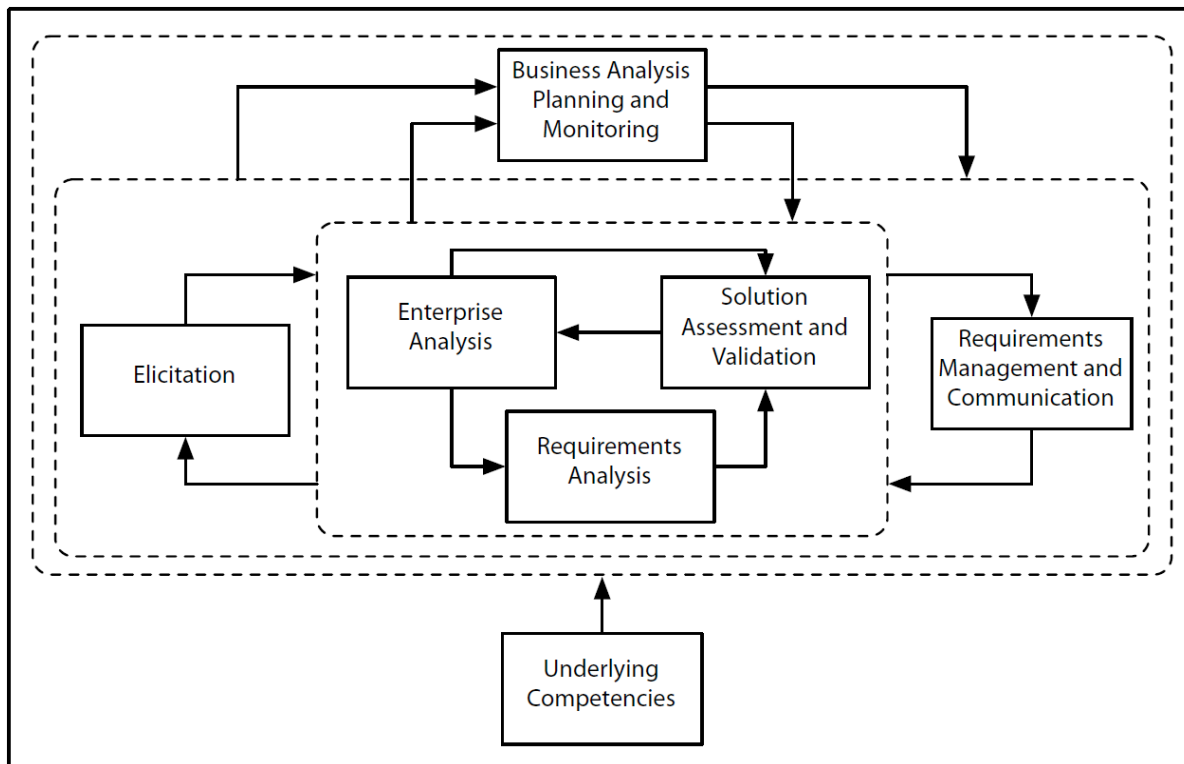
Level of engagement

To realize the most benefit from adopting agile practices in organizations with demanding environmental imperatives (market, legislation, technology, etc.) and increasingly complex infrastructures, business analysis activities have to focus more on uncovering strategic direction; recognizing market need and business intent for products, capabilities, or infrastructure; ensuring that this aligns with business architecture; and developing a product roadmap that will see business value delivered in the right places at the right times to achieve an organization's goals.

Agile Practices for Business Analysis

The *Guide to the Business Analysis Body of Knowledge (BABOK Guide)* itself is composed of six knowledge areas. Chapters defining the impact of agile practices on each of these knowledge areas will be added incrementally to this extension as they are developed, and will be complemented by appendices covering the underlying competencies required to effectively undertake business analysis following agile practices, a range of specific techniques that support the agile practice of business analysis, a glossary, and a bibliography.

The discipline of business analysis is represented in the BABOK in six knowledge areas, all of which are important to agile teams.



Business Analysis Planning and Monitoring

While work on projects following agile practices is not fully planned up front, it is still important to agree on the business analysis approaches to identifying stakeholders and their business needs, how they will manage communications, how they will manage requirements from cradle to grave, and how they will verify and improve the performance of business analysis activities. Importantly, these need to be planned in line with the *cadence* of agile practices.

Elicitation

It can be difficult for any single stakeholder to represent all views, so agile practitioners need to work with stakeholders to understand their needs and concerns, and to understand the environment in which they work. Agile practices help them ensure that stakeholders' underlying needs are understood, although they still need to understand where and how to get quality requirements, elicit and validate needs, and confirm the elicitation results. This process should be highly collaborative, flexible, and allow for learning and progressive elaboration.

Requirements Management and Communication

There needs to be a commonly understood and communicated scope for what will be implemented, maintaining a relationship between business objectives and the team's deliverables. Product owners typically set the scope of each release, which guides what is worked on as the understanding of business value develops. They also need to ensure that what is learned about the requirements is maintained for future use in the organization, and that a shared understanding of requirements is established and communicated across all impacted stakeholders.

Enterprise Analysis

Agile teams need a clear understanding of *business architecture*, to understand the existing enterprise *capabilities* and the impact of the changes they'll be introducing. They need to decide the scope of what they will deliver, ensure it is aligned to the business architecture, and justify the investment required to deliver the solution.

Requirements Analysis

Requirements are prioritized, organized, appropriately specified, and modelled as useful and valuable. It is just as important to define assumptions and constraints. The team still must verify and validate requirements. In agile teams, requirements analysis must take place throughout the project.

Solution Assessment and Validation

There must be collaboration between the development team, the customer, the product owner, the business investor/sponsor, quality assurance (QA), and other suppliers and stakeholders to ensure the proposed solution will fulfill the business need. The team must prioritize the requirements to maximize early delivery of business value, ensure the organization is ready for the new solution, and be able to support their transition. As the solution is delivered, the team needs to validate that the solution meets the needs and evaluate solution performance. Validation is an ongoing process on agile projects, as the team continuously (or frequently) delivers to the customer.

Business Analysis in the Life of an Agile Practitioner

Roles on Agile Projects

In many cases, there is a blending of roles on agile teams. Business analysis practitioners will no longer necessarily own all the business analysis activities, with developers and testers directly interacting with stakeholders and subject matter experts (SMEs), for example. There are several distinct roles on agile projects; the first three are defined by Scrum.

- **Product owner:** the person responsible for business value, who represents the interests of all business stakeholders, and crucially has the authority to decide on scope.
- **ScrumMaster:** the person responsible for ensuring the team is functional and productive.
- **Delivery team:** a cross-functional self-organizing group of people to deliver the product.
- **Subject matter expert (SME):** a key reference for a particular business or technical topic, interacting via the product owner or more typically is involved directly with the business analyst or delivery team.
- **Business analyst:** any person who performs business analysis activities, no matter what his or her formal job title or organizational role, and typically has authority only to recommend on scope.
- **Project manager:** the person who maintains a view of the overall objectives and helps manage resources, capital expenditures, external dependencies, and touch points with the team.

While all roles have some distinct responsibilities, on small project teams a single person may fulfil the responsibilities of multiple roles. In an effective agile team, these roles are recognized as existing within the team collaboratively supporting development in delivery of business value.

For instance, there are a number of ways that business analysts can be involved, up to and including acting as the product owner (see table on following page):

Function	Focus of effort	Locus of activity	Situation and competencies
Systems analysis	assessing impact on existing systems or processes, helping coordinate an approach to change and implementation	firmly within the delivery team	high technical competencies; low business knowledge and soft-skills; highly involved product owner
Requirements facilitation	facilitating requirements and acceptance criteria, ensuring the delivery team understands the business value	both within the delivery team and interacting across the organization	proficient across all aptitudes; product owner actively involved, but doesn't have the time to collate requirements
Requirements ownership	assisting senior stakeholders articulate a strategic roadmap, developing this into requirements for the delivery team	mostly interacting across the organization, helping plan iterations with team	proficient across all aptitudes, including enterprise analysis; product owner's time is restricted on project
Product owner (proxy)	work with product managers to coordinate requirements; owning the requirements	working as the product owner, outside the delivery team	highly competent, with great business acumen and soft-skills, respected and empowered to make decisions

History of Agile Practices and Methods

Agile practices have been steadily growing in awareness, popularity, and application since the 1960s. This slow and progressive advance is typical of the adoption lifecycle of any new technology, where pioneers and innovators develop the concepts and become *'thought leaders'* for those that follow, so that early adopters can adopt new practices to be at the leading edge, typically in new or *'green field'* situations. Then, there is typically a long period of consolidation and gradual adoption while the majority wait for something to be proven as more *'state-of-the-art'*. This is the typical point of failure, or *'chasm'*, for many new technologies (Moore, 2002). Most media accept that agile practices have now made this transition (Mari, 2008).

Agile Practices in the 1960's and 70's

As early as 1960, NASA was applying incremental and iterative development to Project Mercury. They applied very short iterations (half day) and practiced test-driven development (TDD). This team was core in forming the IBM Federal Systems Division (FSD), which published a report in 1968 recommending incremental and iterative development. IBM and TRW both applied incremental and iterative development, feedback-driven requirements refinement, and evolving design and architecture by the early 1970's. Tom Gilb introduced 'Evolutionary Project Management' (EVO) in 1976 in *Software Metrics* magazine. This is probably the first introduction of a lightweight approach, with adaptive iterations and fast time to value. By 1977 FSD was practicing complete integration at the end of each iteration. Out of necessity, borne from the evolutionary nature of the space shuttle program, the space shuttle avionics software platform was developed in eight-week iterations with feedback-driven refinement of specifications and an evolving design.

Agile Practices in the 1980's

In 1980, Gerry Weinberg wrote 'Adaptive Programming: The New Religion', where the fundamental idea was to build in small increments, with customer-driven feedback at the end of each increment. Throughout the 1980's this model matured and became increasingly common. Tom Gilb recommended two-week iterations in 1984. Barry Boehm promoted the spiral model where the team prioritized development cycles based on risk in 1985. In 1986, Frederick Brooks published 'No Silver Bullet', which specifically identified the benefits of incremental development over a waterfall approach. In 1988, Gilb published 'Principles of Software Engineering Management'. His approach prescribed frequent evolutionary delivery and quantified measurable goals for each deliverable.

Agile Practices in the 1990's

Scrum: By 1990, Jeff Sutherland and Ken Schwaber were using an approach known as the *'Scrum'* method (Takeuchi and Nonaka 1986). This involved time-boxed 30-day iterations and small, co-located, self sufficient teams. Scrum also emphasizes the team prioritizing work for each iteration, feedback-driven refinement of specifications, and an evolving design.

Dynamic System Development Method (DSDM): In 1994, a group of commercial organizations, consultancies, and software development agencies in the UK formed the

DSDM Consortium to formalize, publish, and develop the Dynamic System Development Method (DSDM). DSDM has a set of defined roles, supports time boxing, and incremental and iterative development. DSDM includes user involvement, co-located teams, team empowerment, frequent delivery, a high-level baseline at the beginning of the project that is progressively elaborated throughout the project, ongoing testing, and a business level validation of all deliverables.

Rational Unified Process (RUP): In 1995, the Rational Corporation created the Rational Unified Process (RUP). This drew on some of the earlier practices, while itself contributing the idea of technical risk (e.g. new architecture) being the basis for prioritizing alongside business needs.

Extreme Programming (XP): By 1996 Kent Beck was practicing Extreme Programming (XP) (Beck 2000). XP incorporated the process and engineering advances to date, but also recognized that the team would have to evolve the practices to fit its environment. XP includes time-boxed releases, pair programming, unit testing of all code, programming only what is needed when it is needed, simplicity in the code, and frequent communication between programmers and the customer. XP also focused on developing software at a sustainable pace.

Feature Driven Development (FDD): In 1997, Peter Coad and Jeff DeLuca developed Feature Driven Development (FDD). FDD incorporated many of the prior agile practices and provided methods for focusing development on client-valued functionality, and provides clear insight into the progress of the project as features are developed and delivered.

Agile Practices from 2000 on

Agile Manifesto: In 2001, the values and principles that embody agile practices were documented in the Agile Manifesto.

Lean and ***Kanban***: Over the past decade these practices have grown in maturity and have become more widespread. More recently, concepts from ‘*Theory of Constraints*’ (Goldratt 1990) have become more commonplace and agile practices have expanded to include continuous-flow methods like Lean Software Development and Kanban.

Bibliography

The following works were referenced by contributors to the Agile BABOK extension during the development of this draft. In cases where multiple editions of a work were consulted, only the most recent edition is listed.

In addition to the works listed here, many other sources of information on business analysis were consulted by contributors and reviewers or otherwise influenced the development of the Agile BABOK Extension, including articles, white papers, websites, blog postings, online forums, seminars, workshops, and conferences.

With only a very few exceptions, the ideas and concepts found in the Agile BABOK Extension were not created for or original to it. The Agile BABOK Extension is a synthesis of decades of research into how organizations work and methods that can be used to identify potential improvements. The works listed below build on the thoughts and research of many others.

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International Institute of Business Analysis (IIBA) is an independent non-profit professional association formed in 2003 to serve the growing field of business analysis. For individuals working in a broad range of roles—business analysis, systems analysis, requirements analysis or management, project management, consulting, process improvement and more—IIBA can help you do your job better and enhance your professional life.

The mission of IIBA is to develop and promote the business analysis profession. We want to help business analysts like you obtain a higher level of knowledge, advance your skills and provide added value to your everyday work. Members benefit from:

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IIBA has created the Certification of Competency in Business Analysis (CCBA™) and Certified Business Analysis Professional™ (CBAP®), designations awarded to candidates who have successfully demonstrated their expertise as practitioners of business analysis.

Benefits to the individual from acquiring and maintaining CCBA™ and CBAP® certification may include:

- Demonstrated knowledge of the skills necessary to be an effective business analyst.
- A proven level of competence in the principles and practices of business analysis.
- Participation in a recognized professional group.
- Recognition of professional competence by professional peers and management.
- Advanced career potential due to recognition as a professional business analysis practitioner.
- Demonstrated commitment to the field of business analysis, increasingly recognized as a vital component of any successful project.

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- Establishment and implementation of best practices in business analysis by individuals acknowledged as knowledgeable and skilled.
- More reliable, higher quality results produced with increased efficiency and consistency.
- Identification of professional business analysts to clients and business partners.
- Professional development and recognition for experienced business analysts.
- Demonstrated commitment to the field of business analysis, increasingly recognized as a vital component of any successful project.