SCRUMstudy

Targeting success

A Guide to the

SCRUM BODY OF KNOWLEDGE

(SBOK® Guide)

1.INTRODUCTION

A Comprehensive Guide to Implementing and Scaling Scrum, with Practical Examples

(Includes insights into how Artificial Intelligence can enhance Scrum processes)

1. INTRODUCTION

A Guide to the Scrum Body of Knowledge (SBOK® Guide) provides guidelines for the successful implementation of Scrum—the most popular Agile project delivery and product development approach. It provides a comprehensive framework that includes the principles, aspects, and processes of Scrum.

Scrum, as defined in the *SBOK® Guide*, is applicable to the following:

- Portfolios, programs, and/or projects in *any* industry
- Products, services, or any other results to be delivered to business stakeholders
- Projects of any size or complexity

The term "product" in the *SBOK® Guide* may refer to a product, service, or other deliverable. Scrum can be applied effectively to any project in any industry—from small projects or teams with as few as six team members to large, complex projects with up to several hundred members in several teams.

This first chapter describes the purpose and framework of the *SBOK® Guide* and introduces the key concepts of Scrum. It contains a summary of Scrum principles, Scrum aspects and Scrum processes. Chapter 2 expands on the six Scrum principles which are the foundation on which the Scrum framework is based. Chapters 3 through 7 elaborate on the five Scrum aspects that must be addressed throughout any project: organization, business justification, quality, change, and risk. Chapters 8 through 12 cover the 19 Scrum processes involved in carrying out a Scrum project. These processes are part of the five Scrum phases: Initiate; Plan and Estimate; Implement; Review and Retrospect; and Release. These phases describe in detail the associated inputs and outputs of each process, as well as the various tools that may be used in each process. Some inputs, tools, and outputs are mandatory and are indicated as such; others are optional and can be used depending on the specific project, organizational requirements, and/or guidelines set forth by the organization's Scrum Guidance Body (SGB). Chapters 13 and 14 provide guidance on scaling Scrum for large projects and at the enterprise level (which involves programs and portfolios).

This chapter is divided into the following sections:

1.1 Overview of Scrum

1.2 Why Use Scrum?

1.3 Purpose of the *SBOK® Guide*

1.4 Framework of the *SBOK® Guide*

1.5 Scrum vs. Traditional Project Management

1.1 Overview of Scrum

A Scrum project involves a collaborative effort to create a new product, service, or other result as defined in the Project Vision Statement. Projects are impacted by constraints of time, cost, scope, quality, resources, organizational capabilities, and other limitations that make it difficult to plan, execute, manage, and succeed. However, successful implementation of the results of a finished project provides significant business benefits to an organization. It is therefore important for organizations to select and practice an appropriate project management approach.

Scrum is one of the most popular Agile frameworks. It is an adaptive, iterative, fast, flexible, and effective framework designed to deliver significant value quickly and throughout a project. Although the Scrum framework as defined in the *SBOK® Guide* is primarily used to deliver projects and create products, Scrum may also be used to manage the continuous maintenance of products and services, to track issues, and to manage changes.

Scrum ensures transparency in communication and creates an environment of collective accountability and continuous progress. The Scrum framework, as defined in the *SBOK® Guide*, is structured in such a way that it supports product and service development in all types of industries and in any type of project, irrespective of its complexity.

A key strength of Scrum lies in its use of cross-functional, self-organized, and empowered teams who divide their work into short, concentrated work cycles called Sprints.

Figure 1-1 depicts the Scrum Flow for one Sprint. It outlines the sequence of Scrum events, roles, and artifacts from Product Backlog to product increment, reflecting the iterative nature of Scrum.
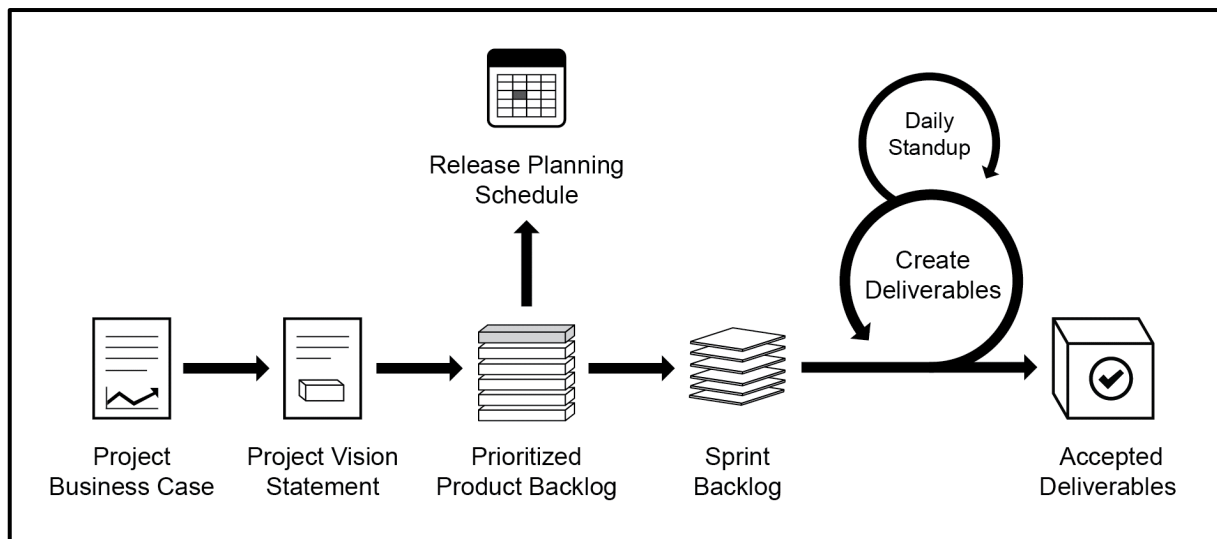

Figure 1-1: Scrum Flow for One Sprint

The Scrum cycle begins with a Stakeholder Meeting, during which the Project Vision is created. The Product Owner then develops a Prioritized Product Backlog which contains a prioritized list of business and project requirements written in the form of User Stories.

Each Sprint begins with a Sprint Planning Meeting during which high priority User Stories are considered for inclusion in the Sprint. A Sprint lasts between one and four weeks and involves the Scrum Team working to create potentially shippable deliverables or product increments. During the Sprint, short, highly focused Daily Standup Meetings are conducted where team members discuss daily progress. The Product Owner can assess completed deliverables during the Sprint and can accept the deliverables that meet the predefined Acceptance Criteria. Toward the end of the Sprint, a Sprint Review Meeting is held during which the Product Owner and relevant business stakeholders are provided a demonstration of the deliverables. The Sprint cycle ends with a Retrospect Sprint Meeting where the team members discuss ways they can improve the way they work and their performance as they move forward into the subsequent Sprint.

1.1.1 Brief History of Scrum

In the mid 80's, Hirotaka Takeuchi and Ikujiro Nonaka defined a flexible and all-inclusive product development strategy where the development team works as a unit to reach a common goal. They described an innovative approach to product development that they called a holistic or "rugby" approach, "where a team tries to go the distance as a unit, passing the ball back and forth." The authors based their approach on manufacturing case studies from various industries. Takeuchi and Nonaka proposed that product development should not be like a sequential relay race but rather should be analogous to the game of rugby where the team works together, passing the ball back and forth as they move as a unit down the field. The rugby concept of a "Scrum" (where a group of players form together to restart the game) was introduced in this article to describe the authors' proposal that product development should involve "moving the Scrum downfield."

Since then, several Scrum practitioners, experts, and authors have continued to refine the Scrum conceptualization and framework based on best practices. A major milestone in the Scrum journey was the creation of the original version of the *SBOK® Guide* in 2013. Over time, the *SBOK® Guide* has been continuously improved based on reviews and feedback provided by several thousand Scrum and Agile practitioners, including 5000+ faculty in 110+ countries who teach Scrum and Agile practices using the *SBOK® Guide* framework. This fourth edition is the product of further refinement that ensure the *SBOK® Guide* continues to remain valid and relevant in an ever-changing world.

The *SBOK® Guide* is now the industry standard for companies and practitioners interested in implementing Scrum or Agile practices. In recent years, Scrum has increased in popularity and is now the preferred project development approach for many organizations globally. To facilitate its application across multinational settings, the *SBOK® Guide* has been translated into multiple languages including Spanish, Portuguese, French, Italian, Arabic, Chinese, and Japanese. For more information about accessing translated versions, please visit www.scrumstudy.com.

1.2 Why Use Scrum?

Some of the key benefits of using Scrum in any project are:

1. **Adaptability**—Empirical process control and iterative delivery make projects adaptable and open to incorporating change.

2. **Transparency**—All information radiators like a Scrumboard and Sprint Burndown Chart are shared, leading to an open work environment.

3. **Continuous Feedback**—Continuous feedback is provided through the *Conduct Daily Standup* and *Demonstrate and Validate Sprint* processes.

4. **Continuous Improvement**—The deliverables are improved progressively Sprint by Sprint, through the *Refine Prioritized Product Backlog* process.

5. **Continuous Delivery of Value**—Iterative processes enable the continuous delivery of value through the *Ship Deliverables* process as frequently as the customer requires.

6. **Sustainable Pace**—Scrum processes are designed such that the people involved can work at a sustainable pace that they can, in theory, continue indefinitely.

7. **Early Delivery of High Value**—The *Create Prioritized Product Backlog* process ensures that the highest value requirements of the customer are satisfied first.

8. **Efficient Development Process**—Time-boxing and minimizing non-essential work leads to higher efficiency levels.

9. **Motivation**—The *Conduct Daily Standup* and *Retrospect Sprint* processes lead to greater levels of motivation among employees.

10. **Faster Problem Resolution**—Collaboration and colocation of cross-functional teams lead to faster problem solving.

11. **Effective Deliverables**—The *Create Prioritized Product Backlog* process and regular reviews after creating deliverables ensures effective deliverables to the customer.

12. **Customer Centric**—Emphasis on business value and having a collaborative approach to engage business stakeholders ensures a customer-oriented framework.

13. **High Trust Environment**—*Conduct Daily Standup* and *Retrospect Sprint* processes promote transparency and collaboration, leading to a high-trust work environment ensuring low friction among employees.

14. **Collective Ownership**—The *Commit User Stories* process allows team members to take ownership of the project and their work, leading to better quality.

15. **High Velocity**—A collaborative framework enables highly skilled cross-functional teams to achieve their full potential and high velocity.

16. **Innovative Environment**—The *Retrospect Sprint* and *Retrospect Release* processes create an environment of introspection, learning, and adaptability leading to an innovative and creative work environment.

1.2.1 Scalability of Scrum

To be effective, Scrum Teams should ideally have six to ten members. This practice may be the reason for the misconception that the Scrum framework can only be applied to small projects. However, the framework can easily be scaled for effective use in large projects, programs, and portfolios. In situations where the Scrum Team size exceeds ten people, multiple Scrum Teams can be formed to work on the project. The logical approach of the guidelines and principles in this framework can be used to manage projects of any size, spanning geographies and organizations. Large projects may have multiple Scrum Teams working in parallel making it necessary to synchronize and facilitate the flow of information and enhance communication. Large or complex projects are often implemented as part of a program or portfolio.

Details on Scaling Scrum for Large Projects are provided in chapter 13. Guidance on Scaling Scrum for the Enterprise is covered in chapter 14.

1.3 Purpose of the *SBOK® Guide*

The Scrum framework has proven to be the preferred project delivery framework to consistently deliver high business value and improve Returns on Investment. Scrum's focus on value-driven delivery helps Scrum Teams deliver results as early in the project as possible.

The *SBOK® Guide* was developed as a means to create a necessary guide for organizations and project management practitioners who want to implement Scrum, as well as those already doing so who want to make needed improvements to their processes. It is based on experience drawn from thousands of projects across a variety of organizations and industries. The contributions of many Scrum experts and project management practitioners have been considered in its development.

The *SBOK® Guide* is especially valuable:

- to Scrum Core Team members including:
  - Product Owners who want to fully understand the Scrum framework and particularly the customer or stakeholder-related concerns involving business justification, quality, change, and risk aspects associated with Scrum projects;
  - Scrum Masters who want to learn their specific role in overseeing the application of the Scrum framework to Scrum projects;
  - Scrum Team members who want to better understand Scrum processes and the associated used to create the project's product or service.
- as a comprehensive guide for all Scrum practitioners working on Scrum projects in any organization or industry.
- as a reference source for anyone interacting with the Scrum Core Team, including but not limited to the Portfolio Product Owner, Portfolio Scrum Master, Program Product Owner, Program Scrum Master, Scrum Guidance Body, and business stakeholders (i.e., sponsors, customers, and users);
- as a handbook for any person who has no prior experience or knowledge of Scrum framework but wants to learn more about the subject.

The content of the *SBOK® Guide* is also helpful for individuals preparing to write the following SCRUMstudy™ certification exams:

- Scrum Developer with AI Certified (SDC®)
- Scrum Master with AI Certified (SMC®)
- Scaled Scrum Master with AI Certified (SSMC™)
- SCRUMstudy Agile Master with AI Certified (SAMC™)
- Scrum Product Owner with AI Certified (SPOC®)
- Scaled Scrum Product Owner with AI Certified (SSPOC™)
- Expert Scrum Master with AI Certified (ESMC™)

1.4 SBOK® vs. other Scrum Books or Bodies of Knowledge

1.4.1 Free download of SBOK®

To support growth and standardization in Scrum frameworks and knowledge, Scrumstudy.com has made the Scrum Reference Guide (SBOK®) available for free on its website. Any Scrum practitioner or anyone interested in the field of Scrum can easily download and use the guide as a convenient reference for personal study or professional work.

Not sure about the quality of SBOK®? Just download it and see for yourself—***it's free***!

1.4.2 Free certifications, webinars, videos, study guides

The SBOK® is supported on Scrumstudy.com with free certifications, webinars, videos, and study guides—ideal for any professional seeking a fundamental understanding of Scrum or exploring a career in the field. The free certification will also give you a head start and recognition in the Scrum field.

Please visit Scrumstudy.com for more details.

1.4.3 Practical, Contemporary, and supports AI

Most Scrum books and Bodies of Knowledge are overly theoretical, lengthy, and lack practical examples or explanations of contemporary concepts—such as how Artificial Intelligence (AI) or automation tools can be used by Scrum practitioners to work more effectively. However, SBOK® is written with a focus on real-life issues and practical problems faced by Scrum practitioners, and how these can be addressed using modern tools and AI.

1.4.4 Practice Scrum in Real Life with Vabro.ai

Scrumstudy has partnered with Vabro.ai—an AI-enabled SaaS platform—to practically demonstrate how the theoretical concepts taught in SBOK® are applied using an AI-enabled tool.

For more details, please visit Scrumstudy.com.

1.4.5 80-20 Rule: (20% of SBOK® is Sufficient)

Most Scrum books are overly comprehensive and expect readers to go through the entire content to understand key concepts. However, SBOK® follows the 80-20 rule—meaning 80% of the core concepts can be understood by reading just 20% of the book. The remaining content can be referred to as needed when dealing with more complex Scrum tasks.

All five process chapters—*Initiate, Plan and Estimate, Implement, Review and Retrospect,* and *Release*—include mandatory inputs, tools, and outputs, and are ideal for those seeking a high-level understanding of Scrum. These essential sections make up only 20% of the book's content. The more detailed concepts are designed for experienced practitioners and can be easily accessed as needed while performing specific Scrum activities.

1.4.6   Easily organized and Fun to read

Unlike other Scrum books or Bodies of Knowledge (BOKs), the SBOK® is well-organized and engaging to read. Chapter 2 discusses the six principles of Scrum, while Chapters 3 to 7 focus on the five aspects of Scrum: Organization, Business Justification, Quality, Change, and Risk. The actual work performed by Scrum practitioners is structured into five chapters covering the Scrum processes— Initiate, Plan and Estimate, Implement, Review and Retrospect, and Release. These chapters include nineteen processes that provide step-by-step guidance to help Scrum practitioners carry out their work effectively.

1.4.7   Applicable to Organizations of all Sizes and Industries

The concepts in the Scrum Reference Guide (SBOK®) are applicable to the following:

- Scrum initiatives in any industry
- Products, services, or any other outcomes delivered to stakeholders
- Scrum initiatives of any size or complexity

The Scrum concepts in SBOK® can be effectively applied to initiatives across any industry—from small efforts or teams with as few as six team members to large, complex initiatives involving thousands of team members across multiple teams.

1.4.8   Aligns with other Frameworks including Kanban, OKRs, DevOps, Business Analysis

Unlike other Scrum books, which typically do not show how the Scrum function can interact with other popular frameworks such as Kanban, OKRs, DevOps and Business Analysis. SBOK® includes an Appendix to illustrate how the Scrum concepts align with other leading frameworks used by professionals in the industry.

1.4.9   Advanced Certifications for Senior Scrum Professionals

Multiple advanced certifications are available for senior Scrum professionals, based on the Scrum Reference Guide (SBOK®).

For more details, please visit Scrumstudy.com

1.4.10 Available in 6 languages

The Scrum Reference Guide (SBOK®), along with its courses and certifications, is available in six languages: English, French, German, Italian, Spanish, and Portuguese.

For more details, please visit Scrumstudy.com

1.4.11 2,500+ Partners in 50+ Countries, 300,000+ LinkedIn Group

Scrumstudy.com has partnered with VMEdu Inc.—a reputable professional learning and certification company that also collaborates with well-known brands such as KanbanStudy.com, OKRStudy.com, BALearning.com, 6SigmaStudy.com, and more. VMEdu has over 2,500 Authorized Training Partners in 50+ countries, a LinkedIn group with more than 300,000 members, and more than 2,000,000 certified students. This positions us as a global leader in the professional education field.

For more details, please visit VMEdu.com or Scrumstudy.com

1.5 Framework of the *SBOK® Guide*

The *SBOK® Guide* is broadly divided into the following three areas:

1. **Principles** covered in chapter 2, expand on the six principles which form the foundation on which Scrum is based—Empirical Process Control, Self-organization, Collaboration, Value-based Prioritization, Time-boxing, and Iterative Development.

2. **Aspects** covered in chapters 3 through 7, describe the five aspects that are important considerations for all Scrum projects—Organization, Business Justification, Quality, Change, and Risk.

3. **Processes** covered in chapters 8 through 12 include the nineteen fundamental Scrum processes and their associated inputs, tools, and outputs. Chapter 13 covers the additional inputs, tools, and outputs needed for scaling Scrum for large projects, whereas chapter 14 covers the additional processes needed for scaling Scrum for the enterprise.

Figure 1-2 illustrates the SBOK® Guide Framework, showing the structured relationship between Scrum principles, aspects, and processes, offering a comprehensive framework for applying Scrum.
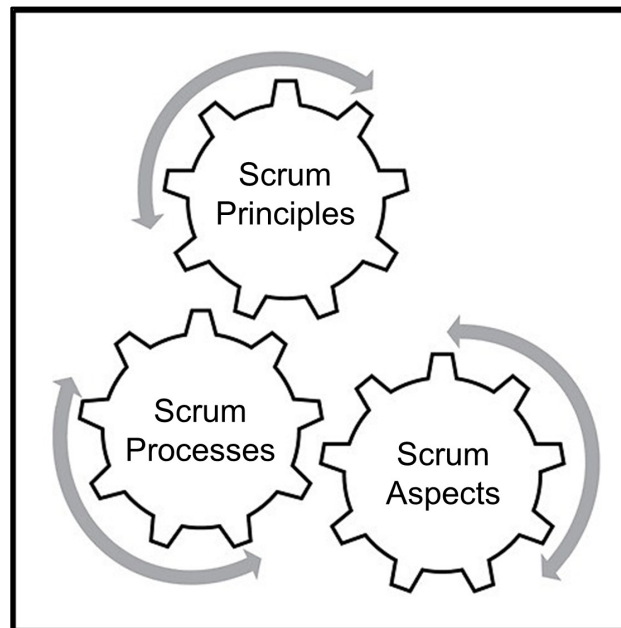

Figure 1-2: SBOK® Guide Framework

1.5.1   How to Use the *SBOK® Guide*?

The *SBOK® Guide* can be used as a reference and knowledge guide by both experienced Scrum and other product and service development practitioners, as well as by people with no prior experience or knowledge of Scrum or project management approach. The contents are organized for easy reference by the three Scrum Core Team roles: Product Owner, Scrum Master, and Scrum Team.

The chapters covering the six Scrum principles (chapter 2) and five Scrum aspects (chapter 3 through 7) include a Roles Guide. This guide provides direction regarding the relevance of each section in the chapter to the Scrum Core Team roles.

In order to facilitate the best application of the Scrum framework, the *SBOK® Guide* has clearly differentiated mandatory inputs, tools, and outputs, from non-mandatory or optional ones. Inputs, tools, and outputs denoted by asterisks (*) are mandatory, or considered critical for project success, while others with no asterisks are optional. It is recommended that those being introduced to Scrum focus primarily on the mandatory inputs, tools, and outputs; while more experienced practitioners should read the entire process chapters to benefit from the optional best practice inputs, tools, and outputs suggested.

Scrum is a framework that is not meant to be prescriptive, which means there is room for flexibility in its application. All the fundamental Scrum processes detailed in the *SBOK® Guide* (chapters 8 through 12) are required for every Scrum project but should be applied based on the specific needs of the organization, project, product, and/or team. Additional inputs, tools, and outputs would apply when Scaling Scrum for Large Projects (chapter 13) and additional processes would apply when Scaling Scrum for the Enterprise (chapter 14).

1.5.2   Scrum Principles

Scrum principles are the core guidelines for applying the Scrum framework and should mandatorily be used in all Scrum projects. The six Scrum principles presented in chapter 2 are:

1. Empirical Process Control
2. Self-organization
3. Collaboration
4. Value-based Prioritization
5. Time-boxing
6. Iterative Development

Figure 1-3 represents the key Scrum principles such as empirical process control, self-organization, collaboration, and iterative development, forming the foundational philosophy of Scrum.
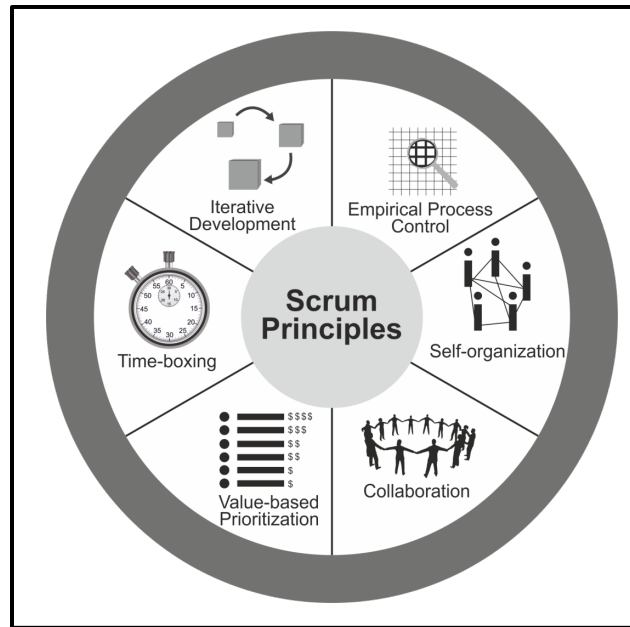

Figure 1-3: Scrum Principles

Scrum principles can be applied to any type of project in any organization and must be adhered to in order to ensure effective implementation of the Scrum framework. Scrum Principles are non-negotiable and must be applied as specified in the *SBOK® Guide*. Keeping the principles intact and using them appropriately instills confidence in the Scrum framework with regard to attaining the objectives of the project. The Scrum aspects and processes, however, can be modified to meet the requirements of the project or the organization.

1. **Empirical Process Control**—This principle emphasizes the core philosophy of Scrum based on the three main ideas of transparency, inspection, and adaptation. Empirical process control aids learning through experimentation, especially when the problem is not well defined or when there are no clear solutions.

2. **Self-organization**—This principle focuses on today's workers, who deliver significantly greater value when self-organized, and this results in better team buy-in and shared ownership; and an innovative and creative environment which is more conducive for growth.

3. **Collaboration**—This principle focuses on the three core dimensions related to collaborative work: awareness, articulation, and appropriation. It also advocates project delivery as a shared value-creation process with teams working and interacting together, as well as with the customer and other business stakeholders, to deliver the greatest value.

4. **Value-based Prioritization**—This principle highlights the focus of Scrum to deliver maximum business value, from early in the project and continuing throughout.

5. **Time-boxing**—This principle describes how time is considered a limiting constraint in Scrum and used to help effectively manage project planning and execution. Time-boxed elements in Scrum include Sprints, Daily Standup Meetings, Sprint Planning Meetings, Sprint Review Meetings, and Retrospect Sprint Meetings.

6. **Iterative Development**—This principle defines iterative development and emphasizes how to better manage changes and build products that satisfy customer needs. It also delineates the Product Owner's and organization's responsibilities related to iterative development.

1.5.3   Scrum Aspects

The Scrum aspects must be addressed and managed throughout a Scrum project. The five Scrum aspects presented in chapter 3 through 7 are:

1.5.3.1   Organization

Understanding defined roles and responsibilities in a Scrum project is important for ensuring the successful implementation of Scrum. Scrum roles fall into two broad categories:

1. **Core Roles**—Core roles are those roles which are mandatorily required for producing the project's product or service. Individuals who are assigned core roles are fully committed to the project and are responsible for the success of each sprint and that of the project as a whole.

   Core roles comprise the Scrum Core Team members, which include:

   - The **Product Owner** is the person responsible for achieving maximum business value for the project. He or she is also responsible for articulating customer requirements and maintaining business justification for the project. The Product Owner represents the Voice of the Customer.

   - The **Scrum Master** is a facilitator who ensures that the Scrum Team is provided with an environment conducive to completing the project successfully. The Scrum Master guides, facilitates, and teaches Scrum practices to everyone involved in the project; clears impediments for the team; and ensures that Scrum processes are being followed.

   - The **Scrum Team** is the group or team of people who are responsible for understanding the requirements specified by the Product Owner and creating the deliverables of the project.

2. **Non-core Roles**—Non-core roles are those roles that are not mandatorily required for the Scrum project. They may include team members who are interested in the project but have no formal role in the project team. These individuals may interface with the team but may not be responsible for the success of the project. The non-core roles should be considered in any Scrum project.

   Non-core roles include the following:

   - **Business Stakeholder(s),** which is a collective term that includes customers, users, and sponsors who frequently interface with the Scrum Core Team and also influence the project throughout the project's development. Most importantly, it is for the business stakeholders that the project produces collaborative benefits.

Business stakeholders are a subset of all stakeholders in a Scrum project - stakeholders include all individuals and groups affected by the Scrum project, both within and outside the organization (e.g., all core and non-core roles, vendors, internal groups, experts, and so on).

- **Scrum Guidance Body** (SGB) is an optional role, which generally consists of a set of documents and/or a group of experts who are typically involved with defining objectives related to quality, government regulations, security, and other key organizational parameters. The SGB guides the work carried out by the Product Owner, Scrum Master, and Scrum Team.

- **Vendors**, include external individuals or organizations that provide products and/or services that are not within the core competencies of the project organization.

Figure 1-4 shows the organizational structure in Scrum, highlighting roles like the Product Owner, Scrum Master, and Scrum Team within a flat, collaborative hierarchy.
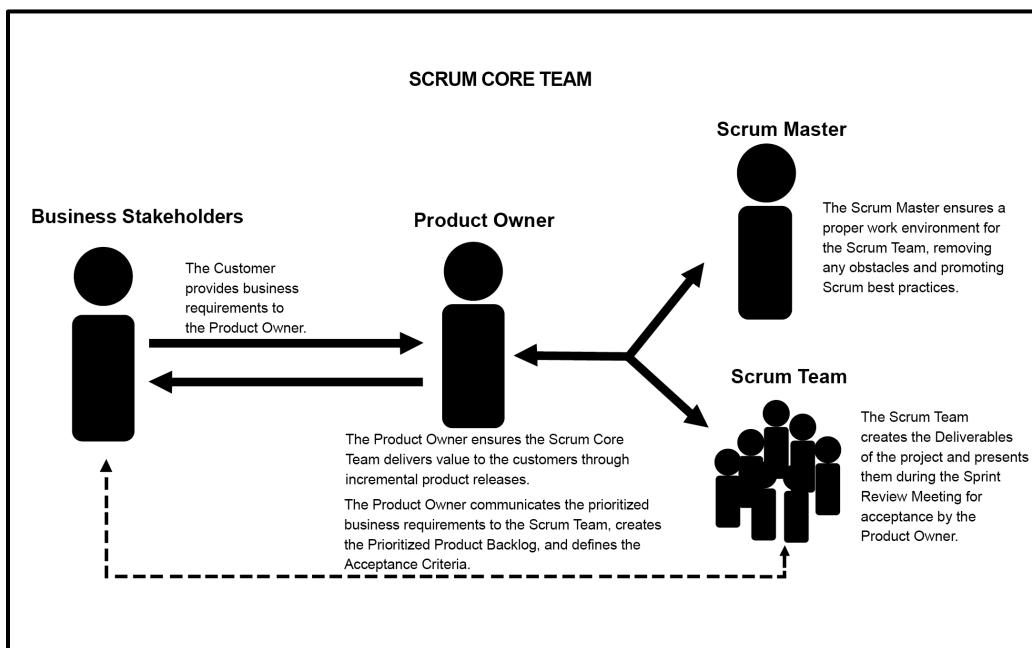

Figure 1-4: Organization in Scrum

The Organization aspect of Scrum also addresses the team structure requirements to implement Scrum in large projects, programs, and portfolios.

1.5.3.2   Business Justification

It is important for an organization to perform a proper business assessment prior to starting any project. This helps key decision makers understand the business need for a change or for a new product or service, the justification for moving forward with a project, and its viability.

Business justification in Scrum is based on the concept of value-driven delivery. One of the key characteristics of any project is the uncertainty of results or outcomes. It is impossible to guarantee project success at completion, irrespective of the size or complexity of a project. Considering this uncertainty of achieving success, Scrum attempts to start delivering results as early in the project as possible.

This speedy delivery of results, and thereby value, provides an opportunity for reinvestment and proves the worth of the project to interested business stakeholders.

Scrum's adaptability allows the project's objectives and processes to change if its business justification changes. It is important to note that although the Product Owner is primarily responsible for business justification, other team members contribute significantly.

1.5.3.3   Quality

In Scrum, quality is defined as the ability of the completed product or deliverables to meet the Acceptance Criteria and achieve the business value expected by the customer.

To ensure a project meets quality requirements, Scrum adopts an approach of continuous improvement whereby the team learns from experience and stakeholder engagement to constantly keep the Prioritized Product Backlog updated with any changes in requirements. The Prioritized Product Backlog is simply never complete until the closure or termination of the project. Any changes to the requirements reflect changes in the internal and external business environment and allow the team to continually work and adapt to achieve those requirements.

Since Scrum requires work to be completed in increments during Sprints, this means that errors or defects get noticed earlier through repetitive quality testing, rather than when the final product or service is near completion. Moreover, important quality-related tasks (e.g., development, testing, and documentation) are completed as part of the same Sprint by the same team—this ensures that quality is inherent in any deliverable created as part of a Sprint. Such deliverables from Scrum projects, which are potentially shippable, are referred to as 'Done.' Thus, continuous improvement with repetitive testing optimizes the probability of achieving the expected quality levels in a Scrum project. Constant discussions between the Scrum Core Team and business stakeholders (including customers and users) with actual increments of the product being delivered at the end of every Sprint, ensures that the gap between customer expectations from the project and actual deliverables produced is constantly reduced.

The Scrum Guidance Body may also provide guidelines about quality which may be relevant to all Scrum projects in the organization.

1.5.3.4   Change

Every project, regardless of its method or framework used, is exposed to change. It is imperative that project team members understand that the Scrum development processes are designed to embrace change. Organizations should try to maximize the benefits that arise from change and minimize any negative impacts through diligent change management processes in accordance with the principles of Scrum.

A primary principle of Scrum is its acknowledgement that a) business stakeholders (e.g., customers, users, and sponsors) change their minds about what they want and need throughout a project (sometimes referred to as "requirements churn") and b) it is very difficult, if not impossible, for business stakeholders to define all requirements during project initiation.

Scrum projects welcome change by using short, iterative Sprints that incorporate customer feedback on each Sprint's deliverables. This enables the customer to regularly interact with the Scrum Team members, view deliverables as they are ready, and change requirements if needed earlier in the Sprint.

Also, the portfolio or program management teams can respond to Change Requests pertaining to Scrum projects applicable at their level.

1.5.3.5 Risk

Risk is defined as an uncertain event or set of events that can affect the objectives of a project and may contribute to its success or failure. Risks that are likely to have a positive impact on the project are referred to as opportunities, whereas threats are risks that could affect the project in a negative manner. Managing risk must be done proactively, and it is an iterative process that should begin at project initiation and continue throughout the project's lifecycle. The process of managing risks should follow some standardized steps to ensure that risks are identified, evaluated, and a proper course of action is determined and acted upon accordingly.

Risks should be identified, assessed, and responded to on the basis of two factors—the probability of each risk's occurrence and the possible impact in the event of such occurrence. Risks with a high probability and impact value (determined by multiplying both factors), should be addressed before those with a lower value. In general, once a risk is identified, it is important to understand the risk with regards to the probable causes and the potential effects if the risk occurs.

1.5.4 Scrum Processes

Scrum processes address the specific activities and flow of a Scrum project. However, Scrum processes are not sequential but are iterative in nature and may overlap with one another. In total there are nineteen fundamental Scrum processes that apply to all projects. These nineteen processes are grouped into five phases as shown in Table 1-1. Details on each phase and its corresponding processes are presented in chapters 8 through 12 of the *SBOK® Guide*.

Chapter	Phase	Fundamental Scrum Processes
8	Initiate	1. Create Project Vision 2. Identify Scrum Master and Business Stakeholder(s) 3. Form Scrum Team 4. Develop Epic(s)

		5. Create Prioritized Product Backlog 6. Conduct Release Planning
9	Plan and Estimate	7. Create User Stories 8. Estimate User Stories 9. Commit User Stories 10. Identify Tasks 11. Estimate Tasks 12. Update Sprint Backlog
10	Implement	13. Create Deliverables 14. Conduct Daily Standup 15. Refine Prioritized Product Backlog
11	Review and Retrospect	16. Demonstrate and Validate Sprint 17. Retrospect Sprint
12	Release	18. Ship Deliverables 19. Retrospect Release

Table 1-1: Summary of Fundamental Scrum Processes

The chapters that focus on each phase describe each process in detail including their associated inputs, tools, and outputs. In each process, some inputs, tools, and outputs are mandatory (those with an asterisk [*] after their names), while others are optional. Whether to include the optional inputs, tools, and/or outputs depends on the particular project, organization, or industry. Inputs, tools, and outputs denoted with an asterisk are considered mandatory or critical to the successful implementation of Scrum in any organization.

For large-scale Scrum projects that require coordination across multiple teams, there are additional inputs, tools, and outputs needed. These are defined in Chapter 13—Scaling Scrum for Large Projects.

Also, there are additional processes defined when implementing Scrum at the enterprise level. These are covered in Chapter 14—Scaling Scrum for the Enterprise.

1.5.4.1 Initiate Phase

The processes relevant to the Initiate phase are as follows:

1. *Create Project Vision*—In this process, the project business case is reviewed to create a Project Vision Statement that will serve as the inspiration and provide focus for the entire project. The Product Owner is identified in this process. The company may also choose to evaluate and select an AI-powered Scrum project tool that can significantly reduce the complexity of setting up the Scrum initiative and increase the productivity of Scrum projects within the organization.

2. *Identify Scrum Master and Business Stakeholder(s)*—In this process, the Scrum Master and business stakeholders are identified using specific selection criteria.

3. *Form Scrum Team*—In this process, Scrum Team members are identified. Normally the Product Owner has the primary responsibility of selecting team members but often does so in collaboration with the Scrum Master.

4. *Develop Epic(s)*—In this process, the Project Vision Statement serves as the basis for developing Epics. User Group Meetings may be held to discuss appropriate Epics.

5. *Create Prioritized Product Backlog*—In this process, Epic(s) are refined, elaborated, and then prioritized to create a Prioritized Product Backlog for the project. The Done Criteria is also established at this point.

6. *Conduct Release Planning*—In this process, the Product Owner with support from the Scrum Team develops a Release Planning Schedule, which is essentially a phased deployment schedule that can be shared with the project's business stakeholders. Length of Sprint is also determined in this process.

1.5.4.2 Plan and Estimate Phase

The processes relevant to the Plan and Estimate phase are as follows:

7. *Create User Stories*—In this process, User Stories and their related Acceptance Criteria are created by the Product Owner and incorporated into the Prioritized Product Backlog. User Stories are designed to ensure that the customer's requirements are clearly depicted and can be fully understood by all business stakeholders.

8. *Estimate User Stories*— In this process, the Scrum Team, supported by the Scrum Master, estimates the User Stories and identifies the effort required to develop the functionality described in each User Story.

9. *Commit User Stories*—In this process, the Scrum Team commits to deliver Product Owner-approved User Stories for a Sprint. The results of this process are the committed User Stories and the Sprint Backlog.

10. *Identify Tasks*—In this process, the committed User Stories are broken down into specific tasks and compiled into a Task List.

11. *Estimate Tasks*—In this optional process, the Scrum Core Team estimates the effort required to accomplish each task in the Task List.

12. *Update Sprint Backlog*—In this process, the Scrum Core Team updates the Sprint Backlog with further details about the tasks as part of the Sprint Planning Meeting.

1.5.4.3   Implement Phase

The processes relevant to the Implement phase are as follows:

13. *Create Deliverables*—In this process, the Scrum Team works on the tasks in the Sprint Backlog to create Sprint Deliverables. A Scrumboard is often used to track the work and activities being carried out. Issues or problems being faced by the Scrum Team should be updated in an Impediment Log.

14. *Conduct Daily Standup*—In this process, every day a highly focused, Time-boxed meeting, referred to as the Daily Standup Meeting, is conducted. This is the forum for the Scrum Team to update each other on their individual progress and any impediments they may be facing.

15. *Refine Prioritized Product Backlog*—In this process, the Prioritized Product Backlog is continuously updated and maintained. A Prioritized Product Backlog Review Meeting is held, in which any changes or updates to the backlog are discussed and incorporated into the Prioritized Product Backlog as appropriate.

1.5.4.4   Review and Retrospect Phase

The processes relevant to the Review and Retrospect phase are as follows:

16. *Demonstrate and Validate Sprint*—In this process, the Scrum Team demonstrates the Sprint deliverables to the Product Owner and relevant business stakeholders in a Sprint Review Meeting. The purpose of this meeting is to secure approval and acceptance of the Sprint User Stories by the Product Owner.

17. *Retrospect Sprint*—In this process, the Scrum Master and Scrum Team meet to discuss the lessons learned throughout the Sprint. This information is documented and should be applied to future Sprints. Often, as a result of this discussion, there may be agreed actionable improvements or updated Scrum Guidance Body recommendations.

1.5.4.5   Release Phase

The processes relevant to the Release phase are as follows:

18. *Ship Deliverables*—In this process, all deliverables from the accepted User Stories of previously completed Sprints are delivered or transitioned to the relevant business stakeholders. A formal Working Deliverables Agreement documents the successful completion of the release.

19. *Retrospect Release*—In this process which completes a release, business stakeholders and Scrum Core Team members assemble to reflect on the release and identify, document, and internalize the lessons learned. Often, these lessons lead to the documentation of agreed actionable improvements to be implemented in future projects.

1.5.4.6   Scrum Meetings or Ceremonies

Scrum meetings or ceremonies play a critical part in effective implementation of the Scrum framework and are a key means through which Scrum principles are implemented. The important Scrum meetings and associated processes in which these meetings are conducted are summarized in Table 1-2.

Scrum Meetings	Scrum Processes
Project Vision Meeting	• Create Project Vision
User Group Meeting	• Develop Epic(s) • Create User Stories
Focus Group Meeting	• Develop Epics • Create User Stories
Release Planning Session or Meeting	• Conduct Release Planning
Product Backlog Review Meeting	• Estimate User Stories • Refine Prioritized Product Backlog
Sprint Planning Meeting	• Estimate User Stories • Commit User Stories • Identify Tasks • Estimate Tasks • Update Sprint Backlog
Daily Standup Meeting	• Conduct Daily Standup
Sprint Review Meeting	• Demonstrate and Validate Sprint
Retrospect Sprint Meeting	• Retrospect Sprint
Retrospect Release Meeting	• Retrospect Release

Table 1-2: Scrum Meetings and Processes

1.5.5   Scrum for Large Projects

When dealing with large projects requiring the efforts of multiple (four or more) Scrum Teams with multiple Product Owners and multiple Scrum Masters, the fundamental processes defined in chapters 8 through 12, remain valid, but some additional considerations and updates to inputs, tools, and outputs may be required. This may include additional coordination and synchronization needs. The impacts to the fundamental Scrum processes when scaling Scrum to large projects are described in chapter 13.

The definition of what constitutes a large project usually depends on the organization and/or the complexity of the projects being undertaken. A key criterion for whether a project is considered small versus large is whether the project requires multiple Scrum Masters and/or multiple Product Owners. If the project requires just one Scrum Master and one Product Owner, then these individuals can normally handle any additional communication and synchronization efforts required by the project.

1.5.6   Scrum for the Enterprise

When applying Scrum at an Enterprise level (such as to a program or portfolio), there may be several hundred Scrum Teams, with several thousand people working on multiple projects within programs and/or portfolios throughout the organization. Applying Scrum at a program or portfolio level will have certain impacts on the underlying projects. In general, the Scrum projects should still be executed using the fundamental Scrum processes discussed in chapters 8 through 12 for typical small projects, while incorporating the additional considerations outlined in chapter 13 for large projects (that have multiple Product Owners and/or Scrum Masters).

Some of the challenges that arise at the program or portfolio level are similar to those that come up when applying Scrum to a large project. The synchronization between teams and the overall collaboration are usually the biggest challenges with a large Scrum project—this is also a challenge when applying Scrum at a program or portfolio level. However, the biggest challenges when applying Scrum at the program or portfolio level usually occur on the business side because the business priorities of different projects conflict with each other and may also conflict with the overall goals of the program or portfolio. These priorities and goals must be aligned.

When implementing Scrum at the enterprise level, there are not only additional inputs, tools, and outputs, as in a large Scrum project, there are also specific additional processes that are required to address the additional prioritization, alignment, and coordination efforts. These additional considerations are discussed in chapter 14.

1.6   Scrum vs. Traditional Project Management

Table 1-3 summarizes many of the differences between Scrum and traditional project management models.

	Scrum	Traditional Project Management
Emphasis is on	People	Processes
Documentation	Minimal—only as required	Comprehensive
Process style	Iterative	Linear
Upfront planning	Low	High
Prioritization of requirements	Based on business value and regularly updated	Fixed in the project plan
Quality Assurance	Customer centric	Process centric
Organization	Self-organized	Managed
Management style	Decentralized	Centralized
Change	Updates to Prioritized Product Backlog	Formal Change Management System
Leadership	Supporting	Command and control
Performance measurement	Business value	Plan conformity
Return on Investment (ROI)	Early/throughout project life cycle	End of project life cycle
Customer involvement	High throughout the project	Varies depending on the project lifecycle

Table 1-3: Scrum vs. Traditional Project Management

The Essential Guide to Successfully Deliver Projects using Scrum

A Guide to the Scrum Body of Knowledge (SBOK® Guide) provides comprehensive guidelines for the successful implementation of Scrum—the most popular Agile product development and project delivery approach. Defined in the SBOK® Guide as a flexible framework, Scrum can be applied to portfolios, programs, or projects of any size or complexity across industries to deliver products, services, or other results.

This Fifth Edition is based on the collective knowledge gained from thousands of projects across diverse organizations and industries. It reflects contributions from a large number of experts in Scrum and project delivery. Feedback from the global Scrum community played a vital role in shaping improvements and additions, making the SBOK® Guide a truly collaborative effort.

Unlike other Scrum references, the SBOK® Guide is available for free on Scrumstudy.com, along with free certifications, webinars, videos, and study guides. It is ideal for professionals seeking a foundational understanding of Business Analysis or exploring careers in related fields. The Guide addresses real-life challenges faced by Scrum practitioners and explains how to solve them using modern tools and Artificial Intelligence (AI).

Designed to be accessible and engaging, the SBOK® Guide follows the 80-20 rule—80% of key concepts can be learned by reading just 20% of the content, with the remainder available for deeper reference. It is more readable than most Scrum books, which are often either too simplistic or overly detailed.

The SBOK® Guide serves as a reference for both experienced practitioners and those with no prior knowledge of Scrum or project delivery methods. Organized for easy navigation, the SBOK® Guide aims to inform, support, and inspire all readers through its rich, collaborative content.

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