แก้ไขครั้งล่าสุดเมื่อวันที่ 5 พฤษภาคม 2568

2301361

SYSTEMS ANALYSIS AND DESIGN

13

Agile Development Methods

(adj) กระฉับกระเฉง, See Also:ว่องไว, คล่องแคล่วว่องไว

Origins of Agile

As discussed previously, a group of software developers came together in 2001 to propose a new way of developing software "by doing it and helping others do it."[1] The essential values stated by the members of this group are listed in Figure 13-1.

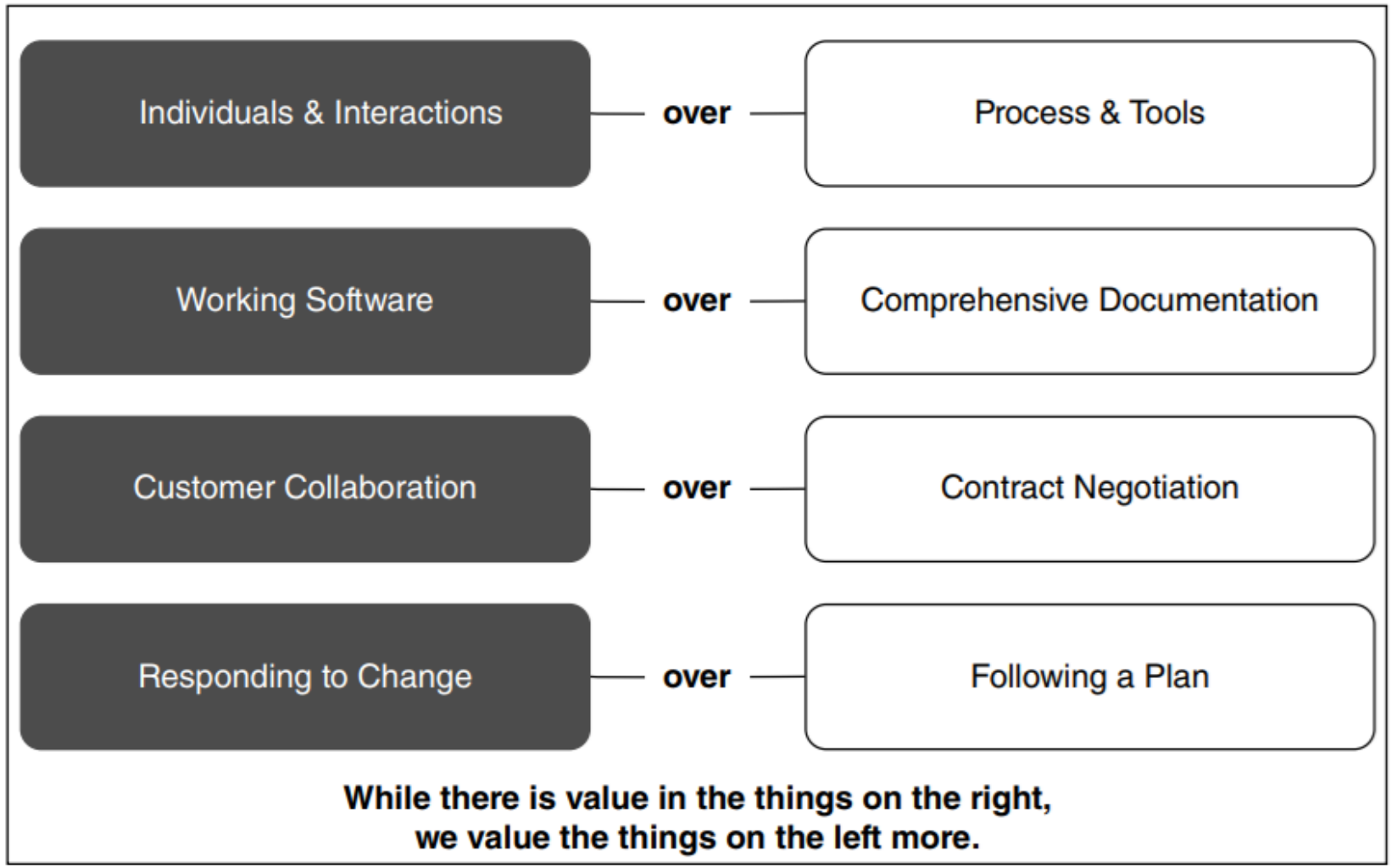

FIGURE 13-1
Agile Manifesto values.
Source: www. Agile-manifesto.org

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Businesspeople and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity—the art of maximizing the amount of work not done—is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

FIGURE 13-2
Agile Manifesto principles.

Source: "The Agile Manifesto", The key values and principles of agile, Scrum Alliance Inc. Retrieve from https://www.scrumalliance.org/resources/agile-manifesto

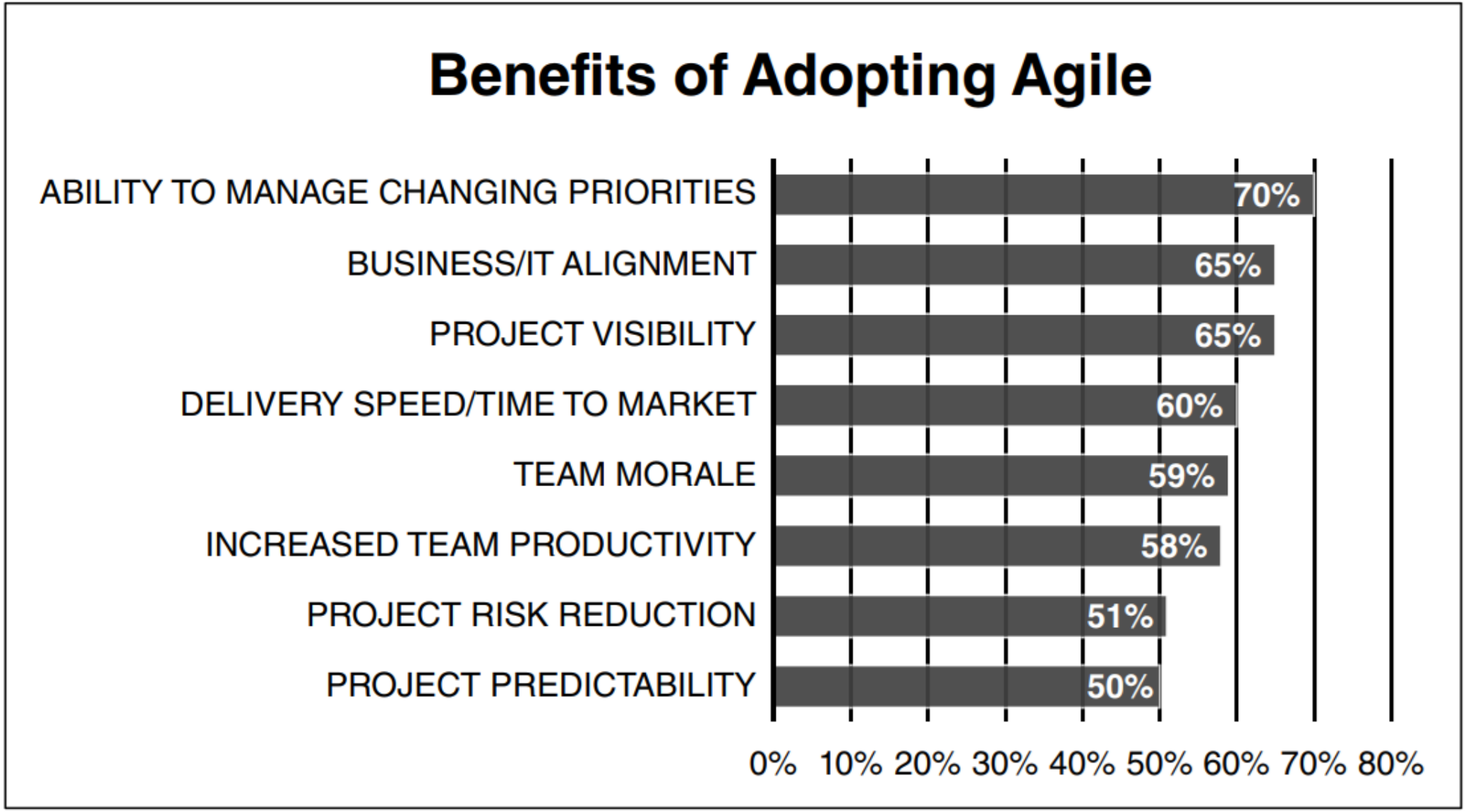

FIGURE 13-3
Benefits of adopting Agile.

Source: Modified from 14th Annual State of agile report, of Digital.ai Software, Inc. Available at https://stateofagile.com/#ufh-i-615706098-14th-annual-state-of-agile-report/7027494

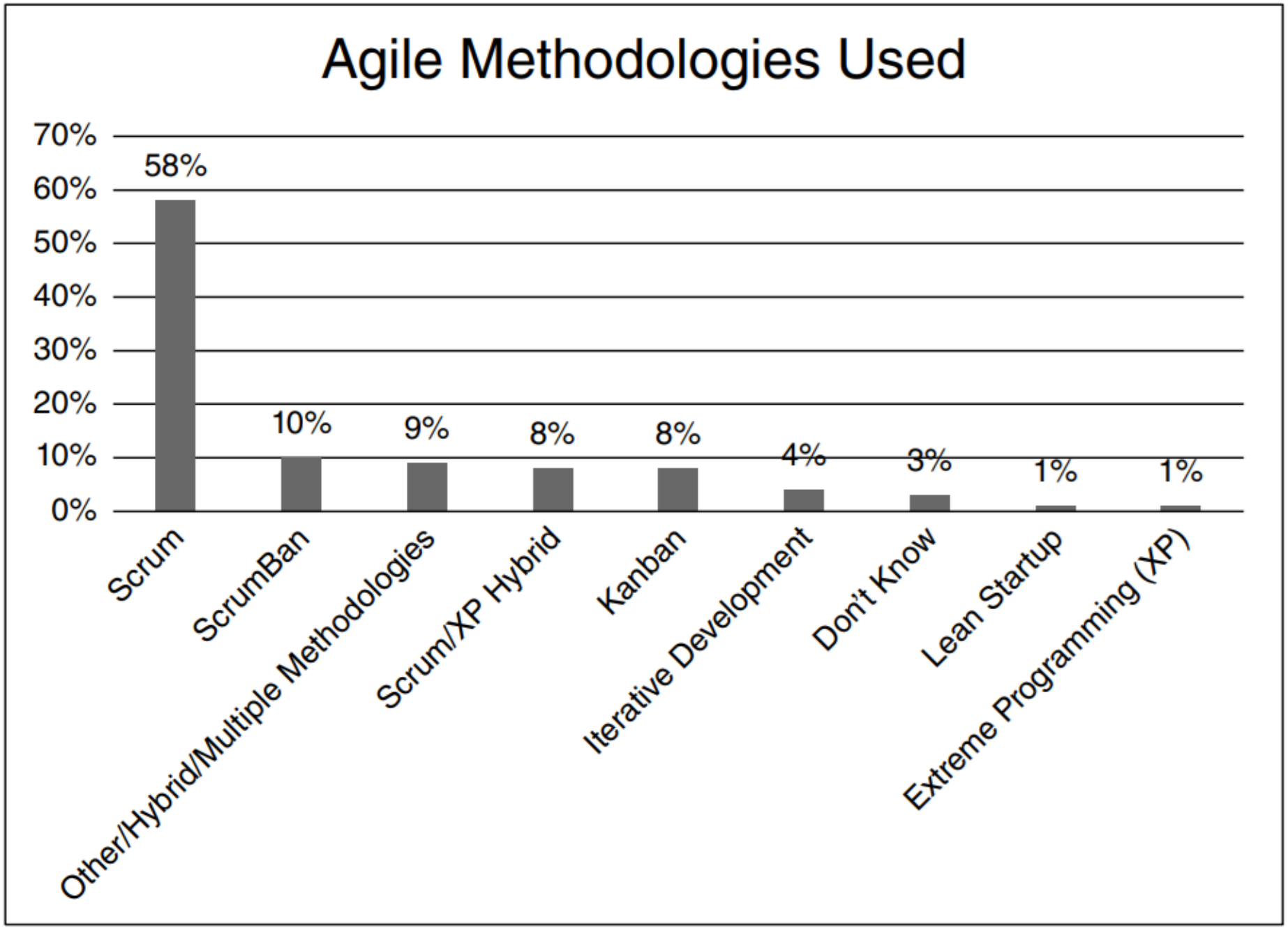

FIGURE 13-4 Agile methods in use.

Source: Modified from 14th Annual State of agile report, of Digital.ai Software, Inc. Available at https://stateofagile.com/#ufh-i-615706098-14th-annual-state-of-agile-report/7027494

Scrum

Scrum is an Agile approach that is designed to enable delivery of working software providing the highest business value in the shortest amount of time. Scrum is structured so that the development team rapidly and repeatedly produces actual working software that is ready for inspection in two week to four-week cycles. Priorities established by the business define the development team's "to-do" list. The team self-organizes to determine the best way to deliver the features in response to those priorities. Every two to four weeks, the team demonstrates real working software. At that point, business users can decide to release that software as-is or continue to enhance it for another two- to four-week cycle.

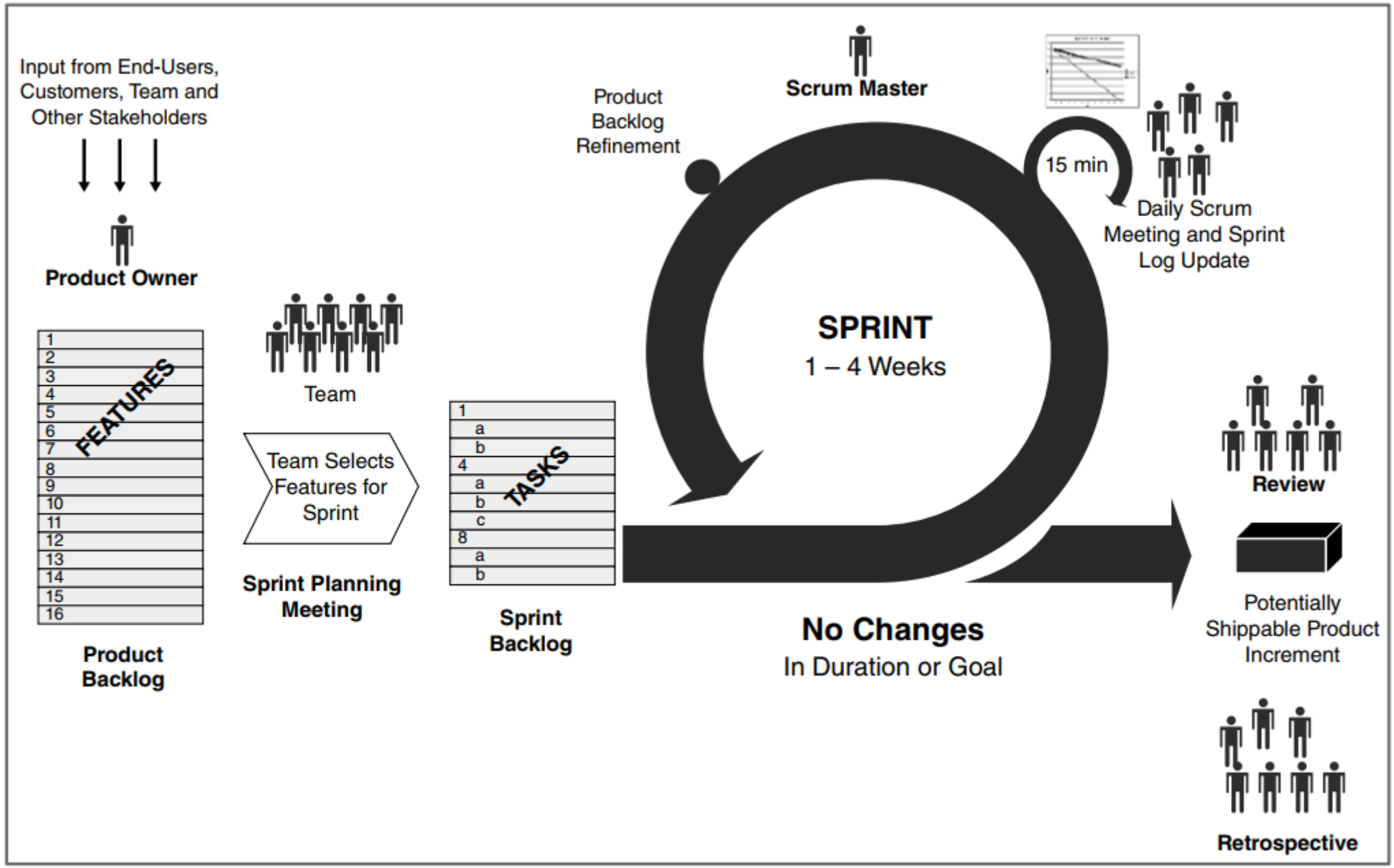

FIGURE 13-5 Scrum overview.

Scrum Characteristics

- First is the use of dedicated, self-organizing teams.
- Second, the software product development is accomplished in a series of short work cycles, called sprints.
- Third, the system’s requirements are captured from end-users, customers, and other interested stakeholders in a list called a product backlog.
- Finally, it should be noted that no specific software engineering practices are prescribed in the Scrum methodology.

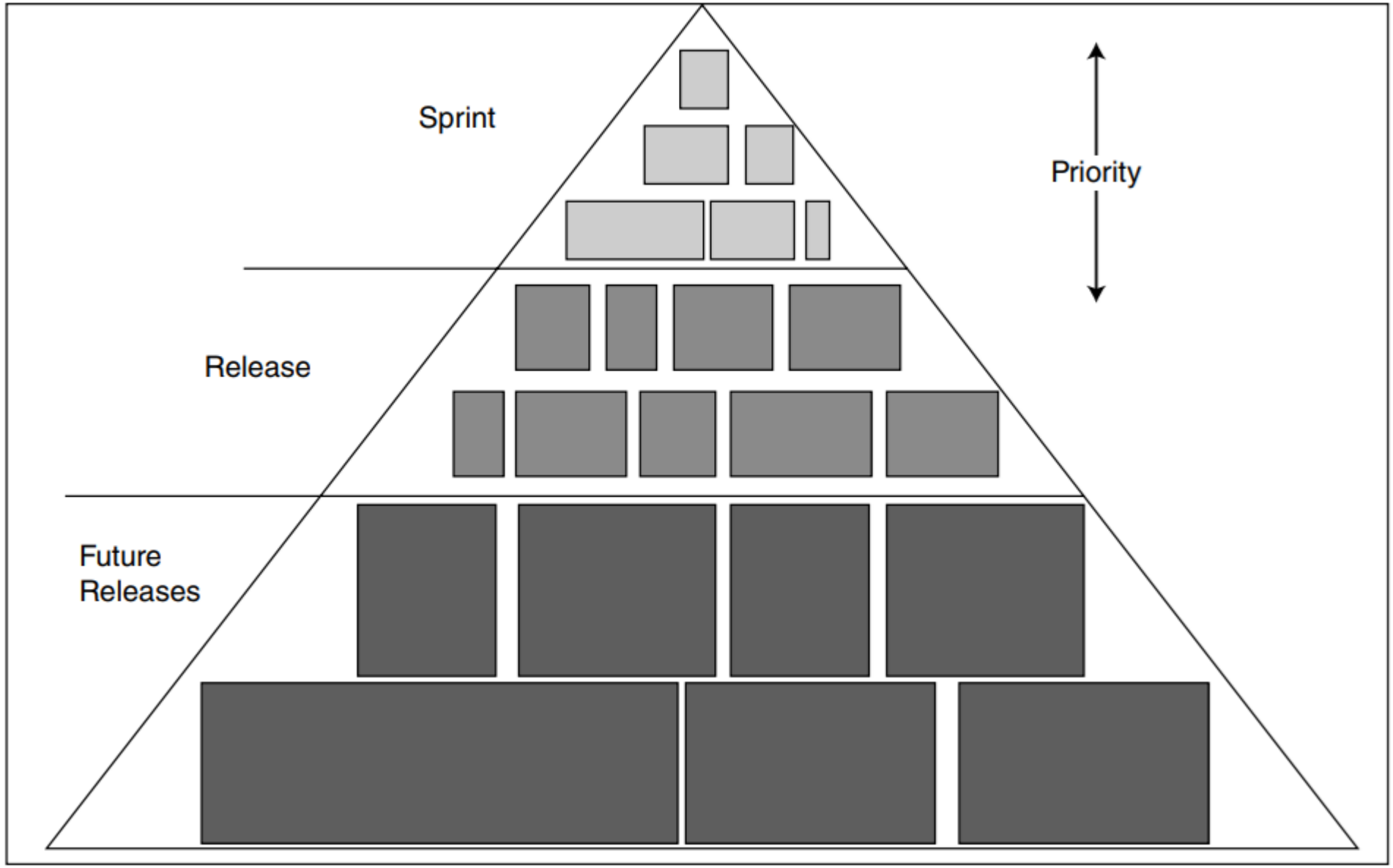

FIGURE 13-6
User stories in the product backlog.

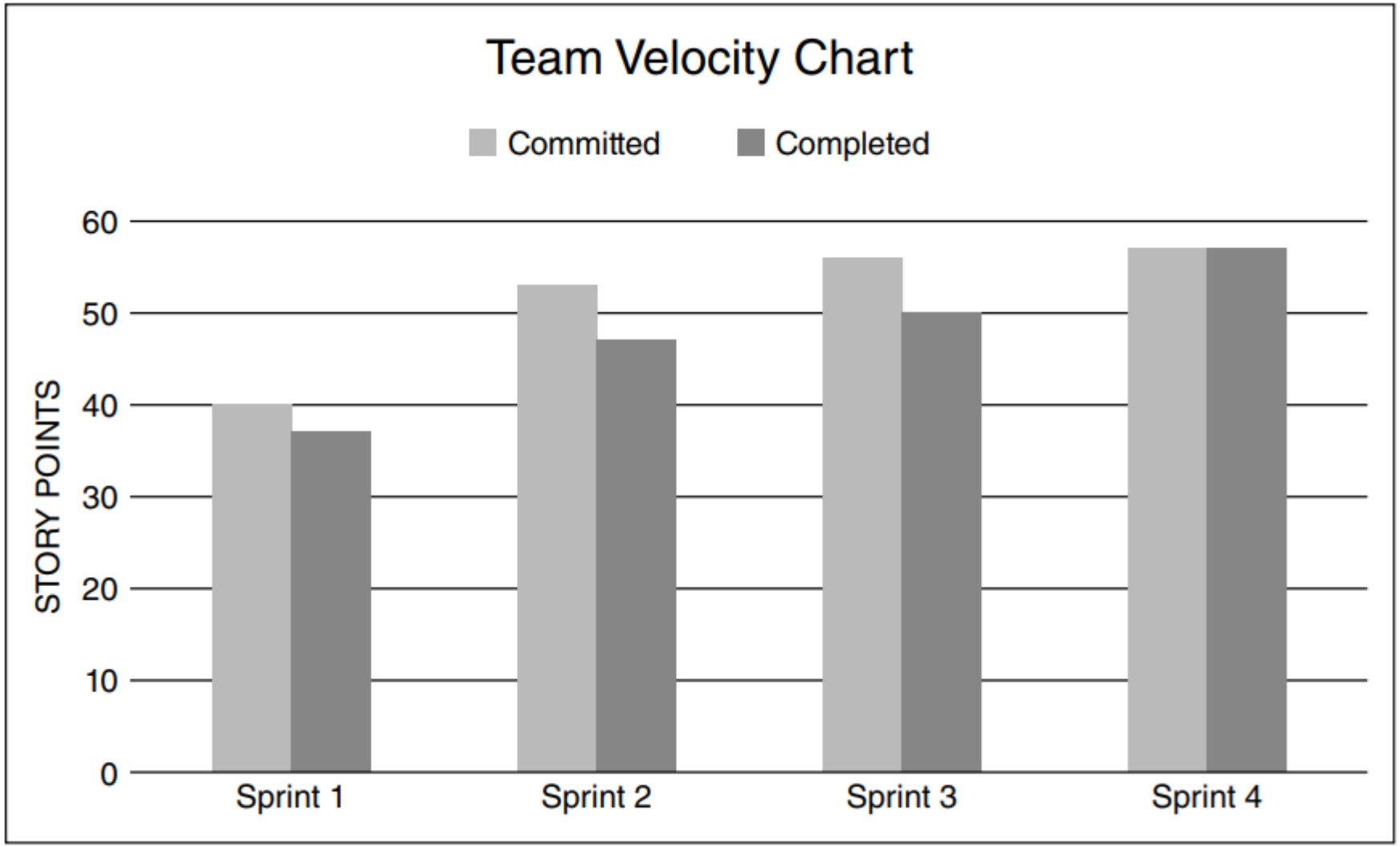

FIGURE 13-9
Team velocity history.