

# : Is Scrum useful for creating decision support?

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Decision support has expanded to new tasks and analysts and developers have incorporated new technologies in applications and analyses. Business analytics projects, customization of business intelligence software, development of a novel model or algorithm-driven application, and creation of specialized cognitive systems can all benefit from agile development processes. Agility and timely decisions are critical to initiate changes and decision support can be a change enabler. Scrum is especially suited to decision support projects because of the requirement for ongoing collaboration with the product owner, the principles of team self-organization, and the use of iterative processes.

In Rugby, a Scrum (short for scrummage) is an ordered formation of players used to restart play. In a Scrum, the forwards of one team organize with arms interlocked and heads down and push toward a similar group from the opposing team. The ball is thrown into the Scrum by a referee and the players try to gain possession of it by kicking it back toward their own side. A team pushing and working together is helpful for many projects and tasks. Today the term Scrum also describes one of the agile development processes that need a self-organizing team.

For many years, iterative development and rapid prototyping were recommended for developing small-scale model-driven DSS. The agile development approach called Scrum incorporates both those approaches and adds new ideas and processes that broaden the range of decision support capabilities that can be built quickly and iteratively. Scrum teams emphasize consensus decision making, often leading to higher quality and better-informed decisions.

**Phase 1** is project initiation. This phase involves creating a Project Vision, Identifying a Scrum Master, and a Product owner/Stakeholder(s). A Scrum Team is formed early in the initiation process. Scrum work processes begin with project or product backlog creation. The backlog lists user stories and capabilities that are desired. Backlog items or features are implemented during the development process. The project backlog is ordered by priority. An example of a decision support user story is: As a manager, I want to retrieve data about employee workload. As part of the project initiation phase, some broad project planning occurs.

**Phase 2** is specific Sprint Planning and Sprint Backlog Creation. Once the Sprint duration is determined, a team can decide how much can be accomplished in that amount of time. A Sprint is time-boxed, it has a beginning and an end and a result, a working application or analyses are delivered to the product owner at the end of each sprint. A Sprint often lasts 2-3 weeks so that rapid feedback is part of the development process. The Scrum team should determine a planned number of Sprints and the team selects the most important user stories from the product backlog for the

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initial and then each subsequent Sprint. Items of a Sprint backlog may not be completed in a Sprint as planned and then the item gets moved to a later Sprint backlog. User stories can also be added to the Project backlog during the project by the Product owner.

**Phase 3** is the work phase. Team members work to complete user stories in the Sprint plan. In Scrum, a task board or spreadsheet is commonly used to track progress and effort in completing the Sprint Backlog. During a Sprint, each workday the team has a Daily Standup meeting. The goal of these meetings is to share information and discuss needs and work changes. Each Daily Standup provides the Scrum Master information about the current project status. During each daily meeting, each team member answers three questions: 1) What tasks did you finish yesterday? 2) What tasks will you work on today? and 3) What tasks you work on tomorrow? The Scrum Master should also check for problems, constraints or barriers encountered. From meeting to meeting, the Scrum Master should keep track of progress in completing the Sprint Backlog.

**Phase 4** is the review phase. The follow-up of every Sprint is a product demonstration, a shared analysis, or reviewing a working application. The team demonstrates the results of their work and the product owner and other stakeholders provide feedback and discuss any project changes.

**Phase 5** is the retrospective. It focuses on introspection, retrospection, and evaluation. An agile process is iterative, but prior to another iteration a retrospective meeting occurs. The goal of the retrospective is to discuss the Sprint results and determine how to improve the process. During the retrospective, the team should ask about what to start doing, what to stop doing, and what to continue doing and how to make that work better. Following the retrospective, the Scrum team starts a new development cycle with a return to Phase 2 and a planning meeting for the next Sprint or the Product owner concludes the project is completed and the team releases the decision support capability, dashboard/report, or algorithm.

Should a decision support team have a shared or dedicated Scrum Master? It depends. A mature team that is familiar with Agile and Scrum may be able to share a Scrum Master with another team. If a team is beginning the journey to agility and agile processes, then a dedicated Scrum Master is more appropriate. In many cases, the Scrum Master will also perform other team tasks, like recording and reporting in addition to holding a daily stand-up and managing process issues and coordinating the project backlog. In some situations, the Scrum Master is also the team lead. Organizations with multiple Scrum teams often have a Scrum coach to assist with questions and training.

A Scrum process provides agility and continuous progress toward project completion. Scrum is based on a cycle of events, a flow of work, and a clear definition of roles. To become agile, people should learn about different decision making and work processes like Scrum. Snead (2016) asserts

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..."Agile is really a collection of beliefs that teams can use for making decisions. ... Your principles and values are what will make you Agile." Managers should track work processes, especially the time that is taken for the project, the decisions made, and outcomes. The entire Scrum team works together to make sure a project is successful. Ideally, members cross-train each other, so the team is not dependent upon a single person. A Scrum team is self-organizing and each member is held accountable for quality work by all other team members.

### References

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