

Project Management

Scrum and Project Management

According to the Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK) a project is defined as a temporary endeavor undertaken to create a unique product, service, or result.

Scrum is one of several Agile management methods. Its primary objective is delivering value early and often yet remaining ready to adapt to change at any point throughout the project life cycle.

Scrum is an iterative development methodology that cycles through project work in fixed durations referred to as Sprints. Each Sprint is planned and executed, typically lasts 2-4 weeks, and contains components of the full product life cycle, including planning, requirements, design, and testing. During each Sprint, work is performed collaboratively by the project team with focus on face-to-face interaction over written documentation. At the end of each Sprint stakeholders reevaluate project priorities and begin work on the next iteration.

can be applied to other types of efforts that may benefit from such an approach. However, to successfully implement and utilize Scrum organizational support from leadership, managers, subject matter experts, clients, and other stakeholders is necessary.

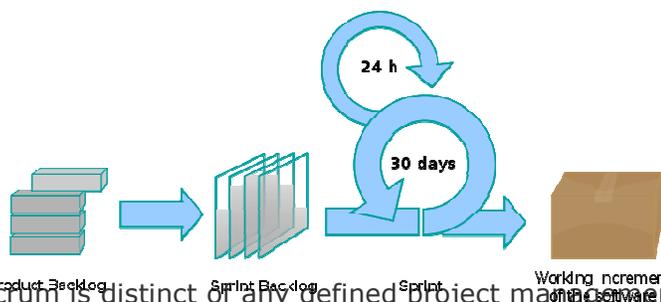
Key Scrum Principles:

Overarching Scrum principles include focusing on the following. While there is value in the items on the right, greater value is achieved by focusing on the items on the left.

- Individuals & interactions over processes & tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

These overarching principles guide the Scrum process consisting of elements/activities such as:

- Product Roadmap: A high-level view of project components that are implemented to ensure successful completion.
- User Stories: Traditional requirements designed to develop a working piece of software at the end of each sprint. Serves to represent the end product which the stakeholder desires for the software development.
- Product Backlog: A prioritized list of software requirements organized in ranking order with the highest priority items near the top.
- Product Burn-Down Chart: Utilized in other project management techniques and serves to provide visual representation of projects, which is broken down into several segments based on goals.
- Sprint: An iterative process that depicts a phase completed throughout the project life cycle. The timeframe of a sprint is determined based on a project's needs and is often distinct in terms of the duration (i.e. 2-4 weeks).
- Sprint Planning: A process conducted during the initial phase of the sprint.
- Sprint Backlog: Identifies all prioritized areas



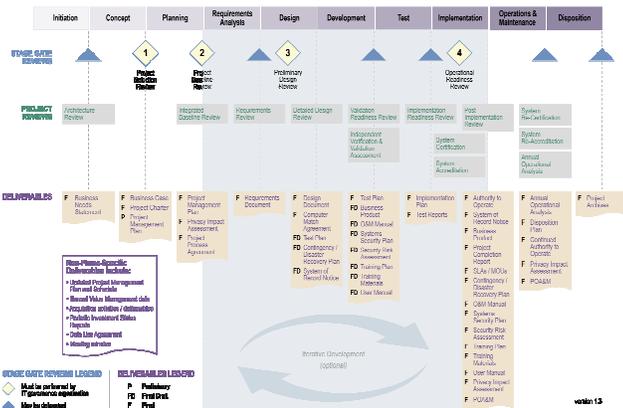
Scrum is distinct of any defined project management processes such as The Department of Health and Human Services (HHS) Enterprise Performance Life Cycle (EPLC). Scrum is simply a foundation utilizing an iterative development approach on which to apply project processes and management oversight. This iterative approach to delivery enables project teams to remain flexible and quickly adjust to change and also supports the transparency of effort needed to effectively manage delivery performance. Although Scrum is typically used for software development the concept of agile, iterative delivery

during the initial planning phase to complete based on technical needs. The project team collectively works to determine tasks for completion.

- Daily Scrum: Team stand-up meeting integral to the success of Scrum.
- Sprint Review: Meeting at the end of each sprint.
- Working Software: Represent the deliverable (i.e. product) developed at the end.

Traditional projects are typically divided into phases of delivery to allow for better control over project progress. A traditional waterfall approach contains life cycle phases such as requirements, design, build, test, and implement. This approach typically involves a great deal of investment early in the project, well before any real business value has been achieved. Product development is also pushed later into the life cycle further delaying delivery of value and potentially yielding earlier requirements obsolete.

The benefits of combining Scrum with traditional project management methods has also been recognized by the HHS EPLC as illustrated in the lower-center of the EPLC image below.



Scrum techniques and approaches can be leveraged in just about any collaborative environment that has executive support for a targeted development approach to delivering incremental benefit throughout the project life cycle. Benefits of Scrum combined with traditional management may include:

- Providing multiple views of a project
- Handling rapid customer changes, which often common to research oriented environments
- Promoting the faster completion of more software
- Communicating during daily Scrum meetings provides focus and encourages project team to rapidly address problems
- Fostering leadership involvement and serves to inform all parties of the project's activities

Portions of this newsletter were paraphrased from a presentation by Chase Beasley, CSM and Tom Brinks, PMP, CSM delivered during the May 2010 meeting of the CDC Project Management Community of Practice (PMCoP). For more information on the PMCoP, or the CDC Unified Process please visit the CDC UP website at <http://www.cdc.gov/cdcup/>.

Project Management Community of Practice

- **June 25, 2010**
Controlling Project Execution
- **July 30, 2010**
Microsoft Project (Desktop & Server)
- **August 27, 2010**
EPLC Tailoring
- **September 24, 2010**
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- **October 29, 2010**
Leadership and Mentoring
- **December 10, 2010**
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For more information on the Project Management Community of Practice visit the PMCoP website at <http://www2.cdc.gov/cdcup/library/pmcp/>

CDC Unified Process Presentations

The CDC UP offers a short overview presentation to any CDC employee and/or contractor group, upon your request. Presentations are often performed at your facility, on a day of the week convenient for your group, and typically take place over lunch structured as 1-hour brown bag/lunch-and-learn style meeting.

Contact the CDC Unified Process at cdcup@cdc.gov or visit <http://www.cdc.gov/cdcup> to arrange a short overview presentation for your group.

Contact the CDC Unified Process

The *CDC Unified Process Project Management Newsletter* is authored by Daniel Vitek, MBA, PMP and published by the Office of Surveillance, Epidemiology, and Laboratory Services.

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