Agile Development: The Scrum Framework
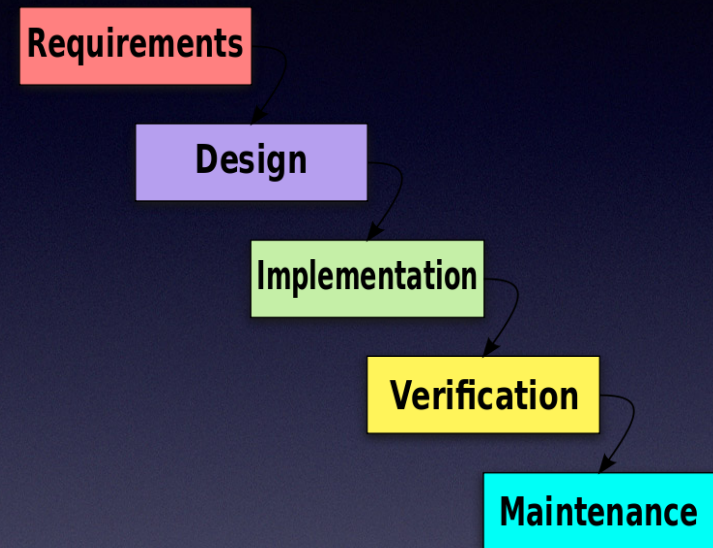
Afshin Chaharmahalian

Purpose

- The purpose of this presentation is to provide the audience with a brief overview of Agile Principles and the SCRUM development framework.

Agenda

- Software Development Methods
- What is Agile?
- SCRUM
- SCRUM Roles
- SCRUM Meetings
- SCRUM Artifacts
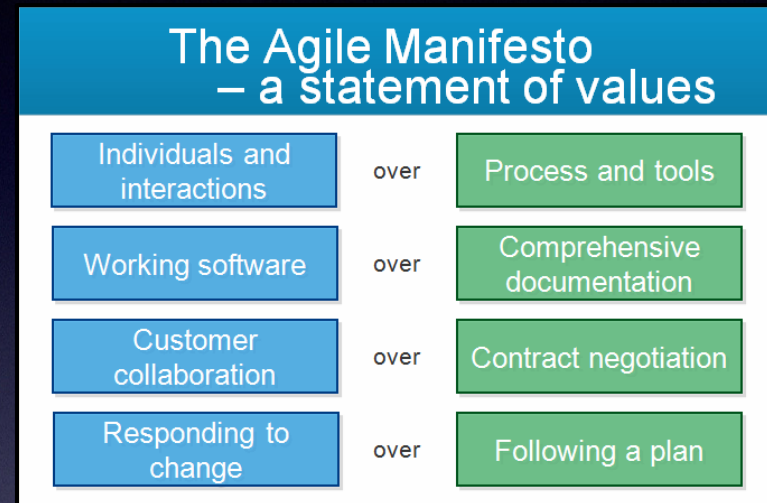- Summary

Software Development Methods

- Waterfall development characterized by discrete hand off points
  - Long lead time to implementation (Months-Years)
  - Requirements are constantly changing
  - Less funding for requirements and design.

Requirements

Design

Implementation

Verification

Maintenance

As software complexity grows a more dynamic development process is needed.
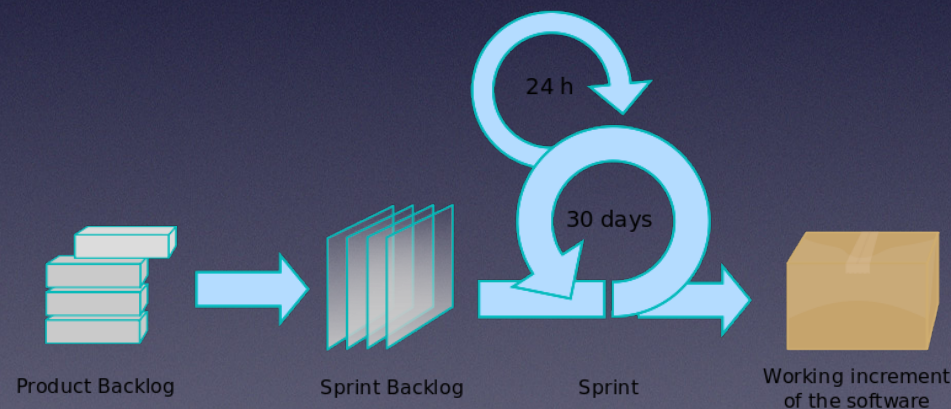
What is Agile?

- Software Development Methods that promote iterative and incremental development.
  - Build smaller pieces of working functionality.
  - Highest priority delivered to user first
  - Timeboxed development periods (2-4 weeks)
  - Manageable integration sizes

The Agile Manifesto – a statement of values

Individuals and interactions	over	Process and tools
Working software	over	Comprehensive documentation
Customer collaboration	over	Contract negotiation
Responding to change	over	Following a plan

Agile processes have proven to develop software with higher quality, while providing an empowering environment for its developers.

1/11/14

Scrum

- Scrum is an iterative and incremental development framework
  - Divide end product into features (stories) with associated tasks.
  - Includes multiple phases of life cycle development for software increments.

24 h

30 days

Product Backlog   Sprint Backlog   Sprint   Working increment of the software

Scrum Team is responsible for determining how much work is done in each Sprint timebox.

Scrum Roles

Scrum Roles	
Role	Responsibility
Product Owner	Communicates the vision for the final product. Owns the product backlog.
Scrum Master	Facilitates the Scrum framework. Assists in generating the product and sprint backlogs.
The Team	Group responsible for completing assigned work within a sprint.

Three main roles used in Scrum.

Scrum Meetings

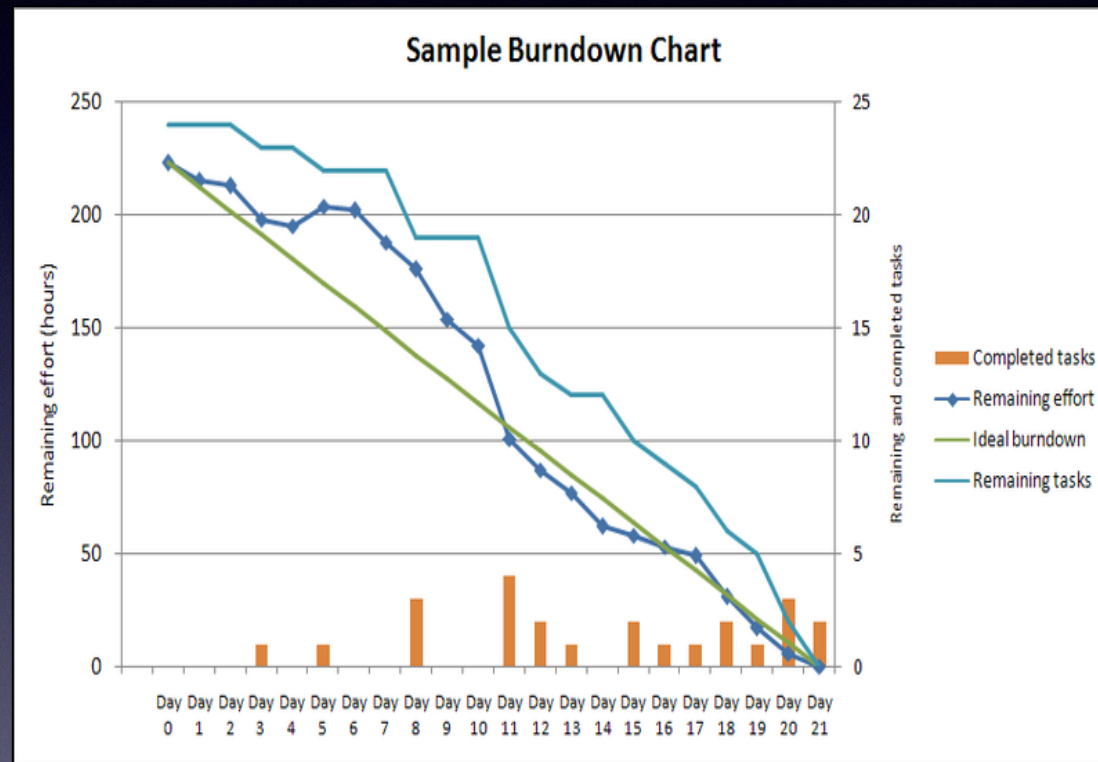| Role	Responsibility
Release Planning	Product Owner and ScrumMaster develop top level schedule for delivery of features.
Sprint Planning 1	Product Owner and ScrumMaster develop prioritized list of stories remaining to be developed.
Sprint Planning 2	The team determines which stories are to be developed based on priority and generates tasks for them.
Daily Standup	Daily 15 minute meeting that focuses on 3 questions only! 1) What did you do yesterday? 2) What are you planning to do today? 3) What is preventing you from completing your work?

Meetings provide constant guidance and communication for team members.

Scrum Artifacts: Example Backlog/Task Board

Backlog & Taskboard allow team to identify tasks for completion of a feature.

Scrum Artifact: Sprint Burndown Chart

Sprint Burndown provides team with a tool to measure progress.

Summary

- Why is this important?

- Development team has several characteristics
  - Produce good work
  - Require constant direction (hard time moving forward)
  - Dis-integrated
  - Uninspired

- Great (not good) teams have 3 characteristics
  - Autonomous
  - Completely Integrated (Systems, Software, and Test)
  - Empowered

Great teams are self reliant, extremely productive and provide a competitive edge.

Questions?

1/11/14