Introduction to

Agile Scrum

AGENDA

- Introduction to Agile- Scrum Project Management
- Scrum Roles & Responsibility
- Agile Scrum Planning
- Scrum Metrics & Estimation
- Scrum – Monitoring & Controlling
- Scrum Team Communication

What is Agile?

- Agile methodology refers to a group of methodologies, typically applied to software development, based on iterative development, where requirements and solutions evolve through collaboration between self-organizing cross-functional teams.

- Agile methods or Agile processes generally promote a disciplined project management process that encourages frequent inspection and adaptation, a leadership philosophy that encourages teamwork, self-organization and accountability, a set of engineering best practices intended to allow for rapid delivery of high-quality software, and a business approach that aligns development with customer needs and company goals.

- Agile development refers to any development process that is aligned with the concepts of the Agile Manifesto. The Manifesto was developed by a group fourteen leading figures in the software industry, and reflects their experience of what approaches do and do not work for software development.

AGILE MANIFESTO

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. Business people 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.

AGILE MANIFESTO

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.

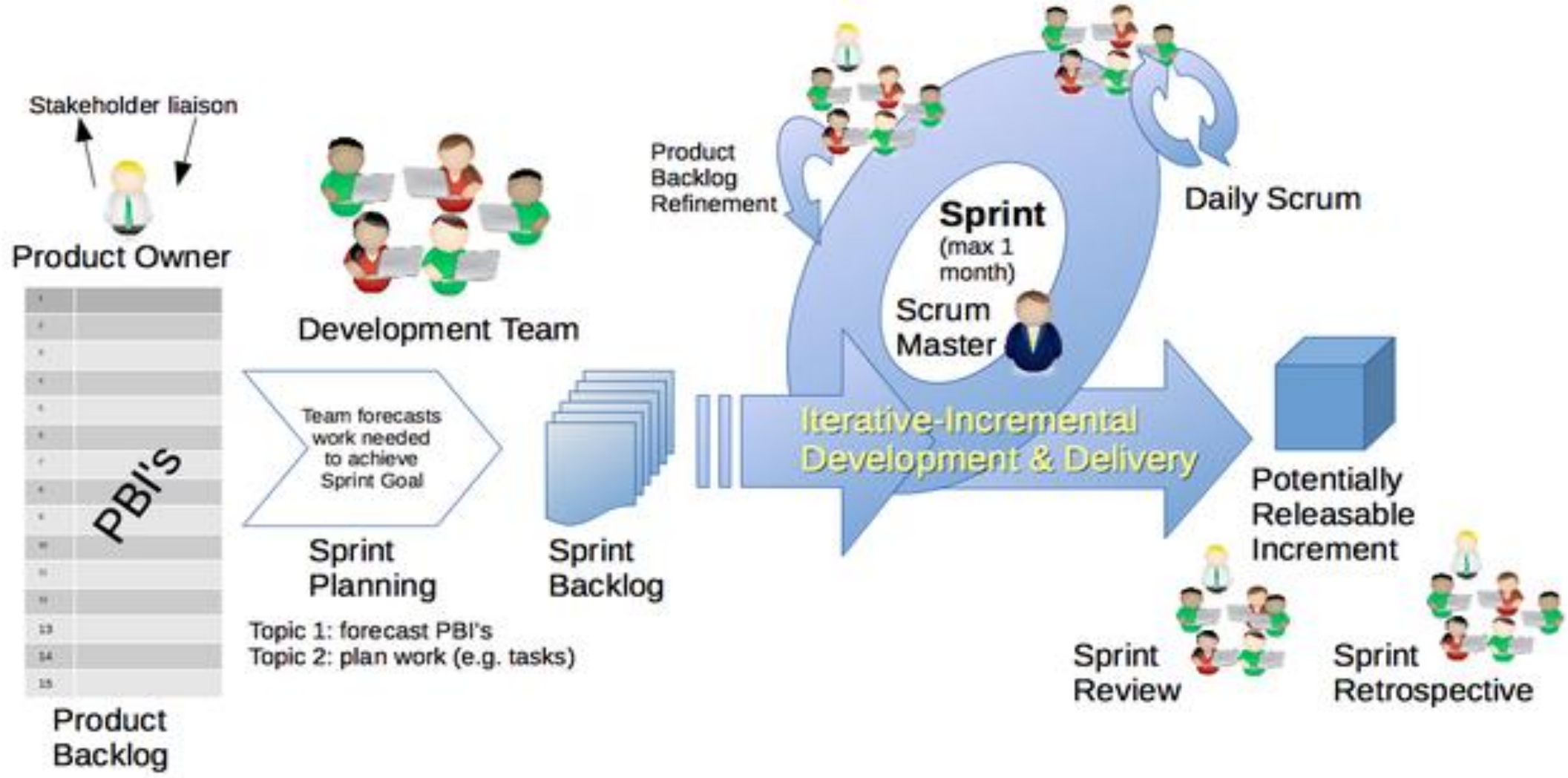
11. The best architectures, requirements, and designs emerge from self-organizing teams.

12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

INTRODUCTION -SCRUM

- Scrum is a subset of Agile. It is a lightweight process framework for agile development, and the most widely-used one.
- Ken Schwaber and Jeff Sutherland have written The Scrum Guide to explain Scrum clearly and succinctly.
- Scrum is most often used to manage complex software and product development, using iterative and incremental practices. Scrum significantly increases productivity and reduces time to benefits relative to classic “waterfall” processes.
- Scrum processes enable organizations to adjust smoothly to rapidly-changing requirements, and produce a product that meets evolving business goals.

SCRUM PROCESS WORK FLOW



SCRUM HAS BEEN USING BY :

- Microsoft
- Nielsen Media
- First American Real Estate
- BMC Software
- Ipswich
- John Deere
- Lexis Nexis
- Sabre
- Salesforce.com
- Time Warner
- Turner Broadcasting
- Oce
- Yahoo
- Google
- Electronic Arts
- High Moon Studios
- Lockheed Martin
- Philips
- Siemens
- Nokia
- Capital One
- BBC
- Intuit


Why Scrum?

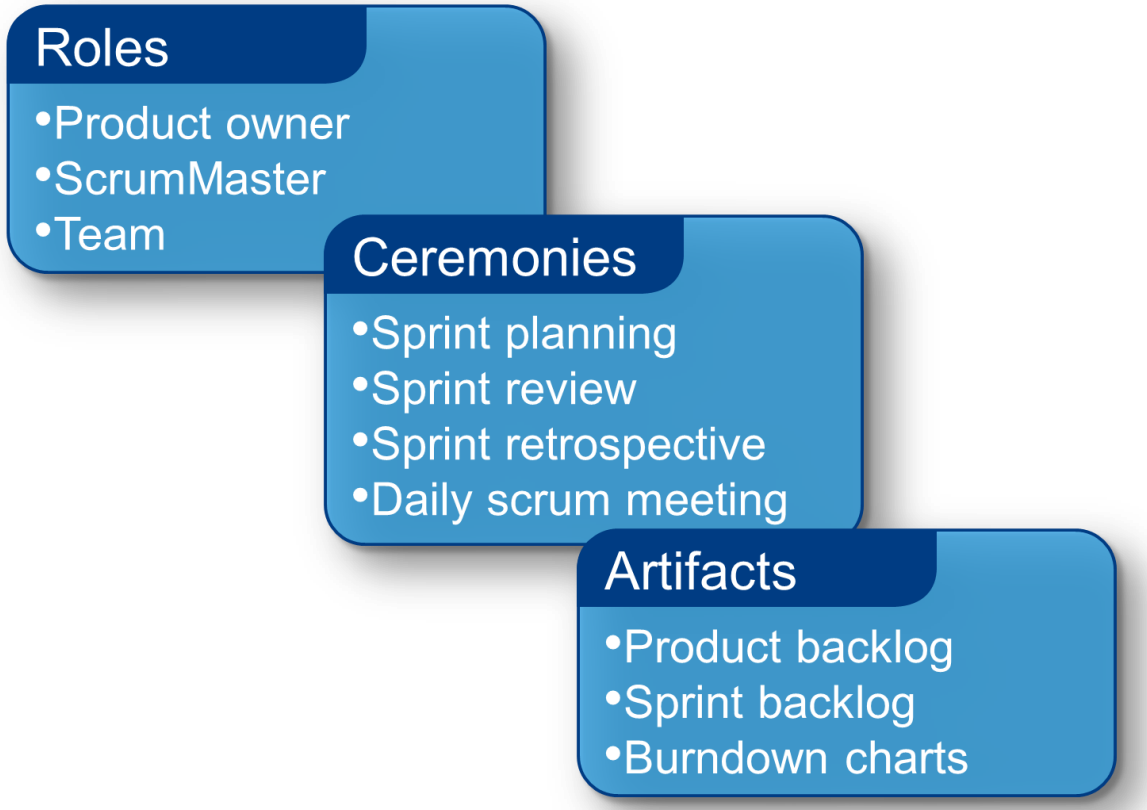
WHY SCRUM?

- Flexibility - Welcome changing requirements, even late in development
- Deliver Valuable Working Software early on.
- Early visibility to Business Benefit as well as issues
- Product owners (Business) and developers work together daily throughout the project, at a sustainable pace.
- Inspect and adapt, faster feedback loop
- Self Organizing, Collaborative teams
- Reduces Risks

HIGH LEVEL SCRUM

- The Product Requirements Document is described as a list of features: "**Product Backlog**"
- The Features/Requirements are described in terms of "**User Stories**“
- The Scrum team "**estimates**" the "**work**" associated with each story.
- Features in the backlog are "**Ranked**" in order of importance
- A ranked and weighted list of product features, a "**Roadmap**“
- The Product owner "**owns**" the product backlog

SCRUM FRAMEWORK



SCRUM ROLE – PRODUCT OWNER [PO]

- Defines the features of the product
- Decides what will be built and in which order.
- Decide on release date and content
- Be responsible for the profitability of the product (ROI)
- Prioritize features according to market value
- Adjust features and priority every iteration, as needed
- Accept or reject work results
- Partly plays a role of traditional project manager for the business stake holders on providing updates & communication on the ROI.

SCRUM ROLE – SCRUM MASTER

Represents management to the project

Responsible for enacting Scrum values and practices

Removes impediments

Ensure that the team is fully functional and productive

Enable close cooperation across all roles and functions

Shield the team from external interferences

Facilitates the daily scrums.

SCRUM ROLE – TEAM / PROJECT TEAM

- Typically 3-9 people
- Cross-functional:
  - Programmers, testers, user experience designers, etc.
- Members should be full-time
  - May be exceptions (e.g., database administrator)
- Teams are self-organizing, self-managing
  - Ideally, no titles but rarely a possibility
- Membership should change only between sprints

WHAT IS A SPRINT?

- Sprint is an Iteration/Cycle
- Scrum projects make progress in a series of “sprints”
- Each Sprint has very specific, measurable, attainable goals.
- Sprints start with a planning meeting and ends with a Sprint Retrospective.
  - At the planning meeting, we "commit" to an amount of work.
- Each day we have a "Daily Scrum Meeting“
- Typical duration is 2–4 weeks or a calendar month at most
- Product is designed, coded, and tested during the sprint

PRODUCT BACKLOG

- The Product Backlog is a prioritized list of everything that might be needed in the final product of the project.
- The Product owner is responsible for the contents, prioritization and availability of the Product backlog
- All items are described in simple, non-technical, business language, and all of them are presentable to every stakeholder.
- The Product Backlog is dynamic and never complete; management constantly refines it to identify what the Product needs to be appropriate, competitive and useful.
- The Product Backlog items will then be ordered based on their business value, in a way that the higher an item is, the sooner it will be delivered by the Development

SPRINT PLANNING MEETING

- Team selects items from the product backlog they can commit to completing
- Sprint backlog is created
  - Tasks are identified and each is estimated (1-16 hours)
  - Collaboratively, not done alone by the Scrum Master
- High-level design is considered
- User stories are broken down into tasks in this ceremony.

SPRINT REVIEW

- ✓ Team presents what it accomplished during the sprint
- ✓ The Team should not spend more than one hour preparing for Sprint Review.
- ✓ Functionality that isn't "Done" cannot be presented.
- ✓ At the end of Sprint Review meeting, Scrum Master announces the place and date for next Sprint Review to Product Owner and stakeholders.
- Scrum Team & Customers, Stake Holders Participates in this meeting

SPRINT RETROSPECTIVE MEETING

➢Meeting at the end of each sprint, facilitated by Scrum Master, where the team reviews the sprint just completed and discusses what improvements they would like to make to the next sprint to make it more productive.

- ➢ Process Improvements made at the end of every sprint
- ➢ All team members identify what went well and what can be improved
  - ➢ Processes
  - ➢ Communication
  - ➢ Environment
  - ➢ Artifacts
  - ➢ Tools
  - ➢ Team dynamics
- ➢ Team devises their own solutions to problems
- ➢ Assists with team formation and bonding as conflicts identified quickly and thus can be dealt with

- Scrum Team Participates in this meeting Stakeholders are optionals

DAILY SCRUM / STANDUP MEETING

- Daily meeting
  - 15 minutes
  - Participants to Standup for the meeting (to avoid too long meeting)
  - Not for problem solving

- Three questions:
  - *What did you do yesterday?*
  - *What obstacles are in your way?*
  - *What will you do today?*