

WATERFALL & SCRUM

THE RIGHT TOOL FOR THE RIGHT JOB

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Agenda

- Introduction
- The Frameworks
- SCRUM
- Differences in Waterfall and SCRUM
- Comparing the Frameworks
- Key Principles
- Teams
- Roles
- Review Cycles
- Synthesis

Introduction

Traditional Waterfall and SCRUM provide a very different approach to the same problem, yet they have similarities.

You need to use the “right tool for the right job”,
however, when appropriate.

A synthesis of both frameworks can be
the best tool for the job.

Robin Brandenburg

Project manager for over twenty years

Consultant for 10 years

Certifications:

- PMP, 2001
- Stanford Certified Project Manager, 2001
- Certified SCRUM Master, 2013

Organizations:

- Volkswagen and Audi Credit
- Unisys
- Leo Burnett
- Oakland County, MI County Government
- City of Chicago
- Chicago Housing Authority

Frameworks



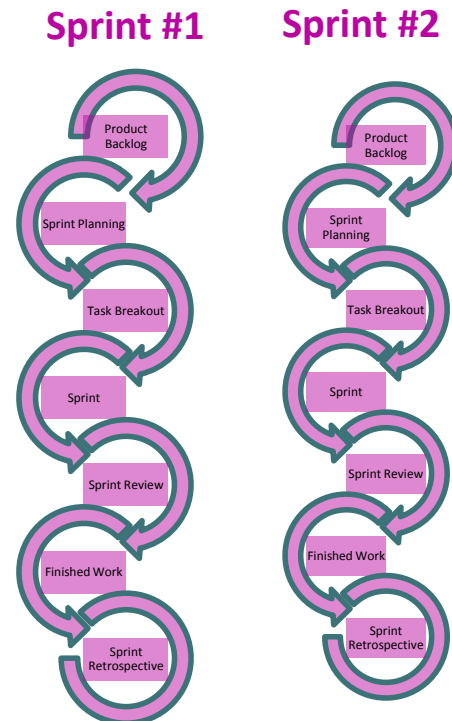
Knowledge Areas

- Project Integration
- Project Cost Management
- Project Human Resource Management
- Project Communications
- Project Procurement

Waterfall

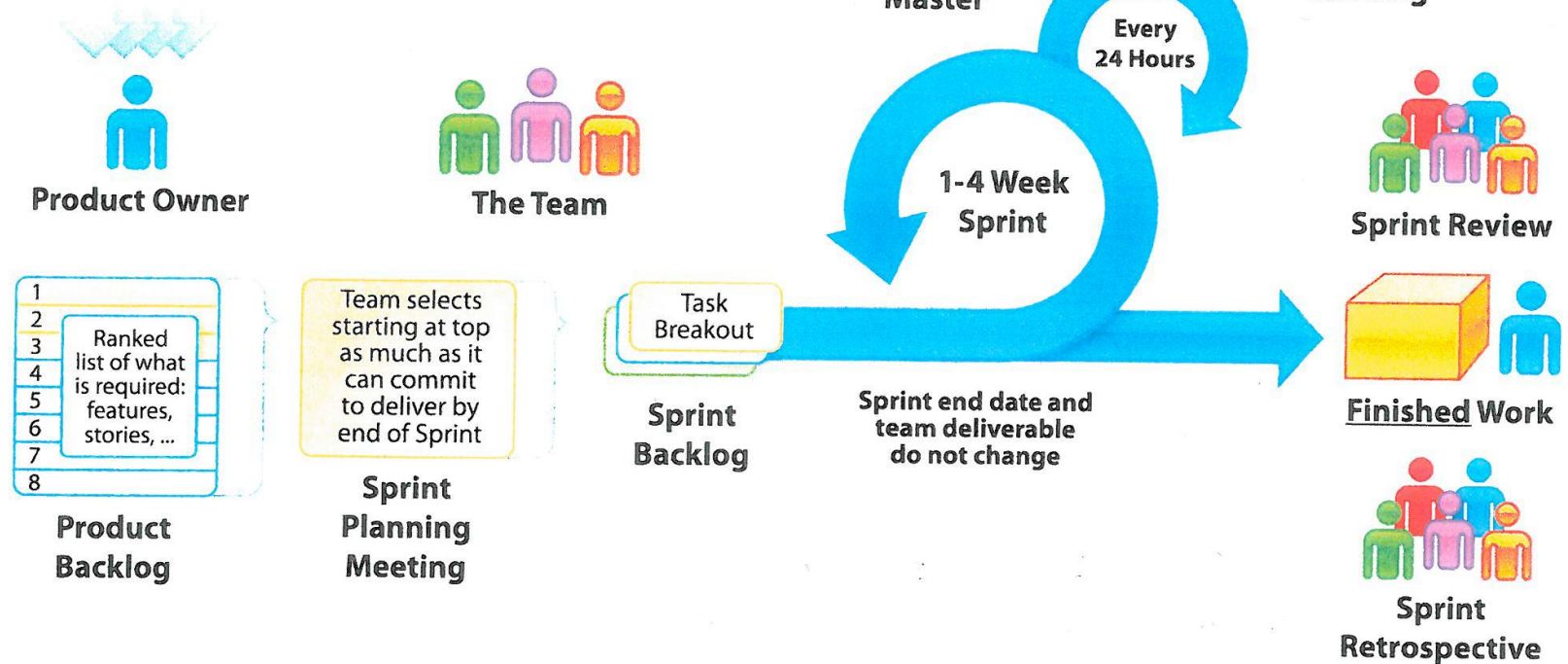


SCRUM



The Agile: Scrum Framework at a glance

Inputs from Executives,
Team, Stakeholders,
Customers, Users



Comparisons

Activities	Waterfall	SCRUM
Defined Process	Defined Required	Planning and Closure Only
Final Product	Determined During Planning	Set During Project
Project Cost	Determined During Planning	Set During Project
Completion Date	Determined During Planning	Set During Project
Responsive to Environment	Planning Only	Throughout
Team, Flexibility, Creativity	Limited Cookbook Approach	Unlimited During Iterations
Knowledge transfer	Training Prior to Project	Teamwork During Project

Key Principles

Waterfall:

1. Linear & Heavy
2. Rigid, highly structured
3. Black Box
4. All aspects of project are known at the beginning
5. What's delivered is "what it is"
6. Little room for change from the initial planning phase
7. Lessons learned (inspections) are held at end of project – if at all, Inspections – at end
8. Comprised of varying sized siloed (individual) teams
9. Business Owner participation is tangential

SCRUM:

1. Iterative & Light
2. Flexible, Adaptative
3. Transparent
4. Recognition and acceptance of "known unknowns"
5. Product may not be as envisioned
6. Change is expected based on last iteration
7. Intense focus on process and product continuous improvement Inspections – early and often
8. Uniform small, close knit teams of people – 7+/-2
9. Product Owner participation is essential & required

Project Teams

Waterfall:

1. Organized based on the individual's unique, dissimilar skillset
2. "Project team" managed from above and assigned work
3. Functional and cross-functional *individuals* who work independent of others
4. Project team model is designed to be rigid, inflexible and add value based on defined tasks

SCRUM:

1. Self-organizing and cross-functional, use and grow skillset
2. SCRUM team chooses how best to accomplish their work
3. Cross-functional teams have all competencies needed to accomplish the work – *team*
4. SCRUM team model is designed to optimize flexibility, creativity, and productivity


Team Roles

Waterfall:

- **Project Sponsor:**

1. Holds a singular vision for the product
2. Organizational influencer
3. Benefits directly from successful product
4. Prioritization occurs at beginning of project
5. Requirements are tested in UAT
6. Peripherally involved after envisioning

- **Project Manager:**

1. Accountable, responsible 
2. Manager
3. Fixer
4. Impediments reported to

- **Development Team Member:**

1. Given task
2. Directed to complete that task
3. Responsible for that task
4. Delivers on *that* task
5. Siloed

SCRUM:

- **Product Owner:**

1. Holds an evolving vision for the product
2. Represents the customer
3. Owns the product backlog
4. Continually prioritizes backlog
5. Creates acceptance criteria for the backlog
6. Is available to answer team's questions

- **SCRUM Master:**

1. SCRUM expert and advisor
2. Coach
3. Facilitator
4. Immediate impediment bulldozer

- **Team Member:**

1. Chooses task
2. Owns estimates and “how to do the work” decisions
3. Responsible to incrementally increase product value
4. Self-organizes to complete *all* necessary work
5. Avoids siloed “not my job” thinking

Review Cycles

Waterfall:

- Occurs sporadically at specified dates
 - Schedule Review
 - estimated to executed
 - Status
 - what have we done
 - what is left to do
 - when will it be done
- End of development cycle
- UAT

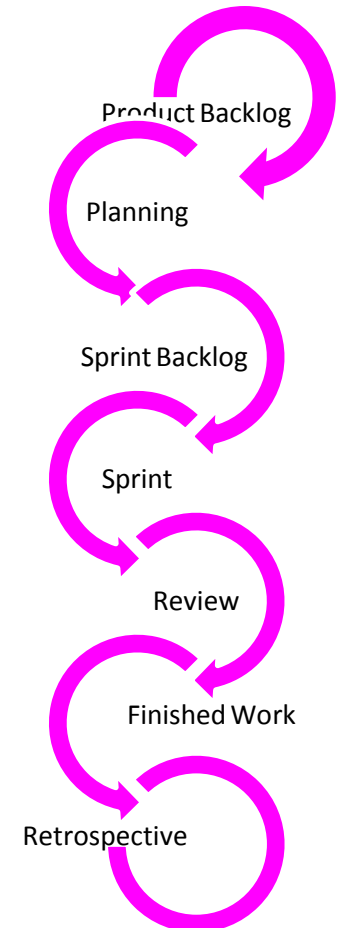
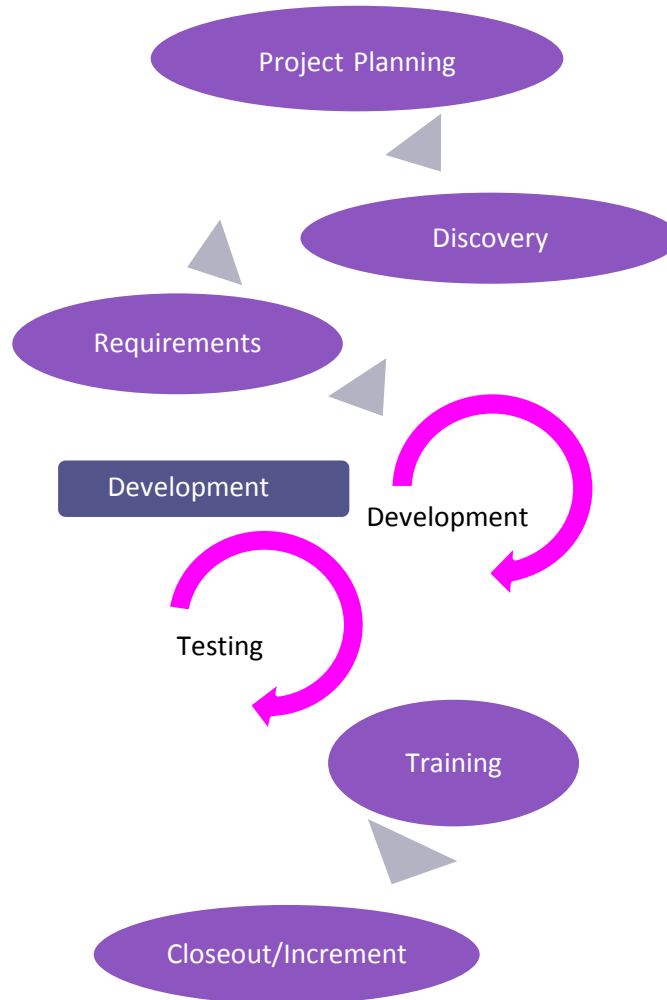
SCRUM:

- Four formal opportunities for inspection and adaptation
 - Sprint Planning Meeting
 - what will we do
 - how will we do it
 - Daily SCRUM
 - brief - pointed
 - Sprint Review (Public)
 - inspect and adapt for the product
 - Sprint Retrospective
 - inspect and adapt for the team

Sprint Backlog Owner: Development Team

- Identifies the team's to do list for the sprint.
- Has a finite life-span – the length of the current sprint.
- Includes all the stories the team has committed to for that sprint and associated tasks.
- Stories are deliverables – “units of value”
- A story is something the team delivers, a task is a bit of work that a person does. Each story will normally require many tasks
 - **As a <type of user>, I want to <do something>, so that <some value is created>.**

Synthesis



References

Becoming a SCRUM Master

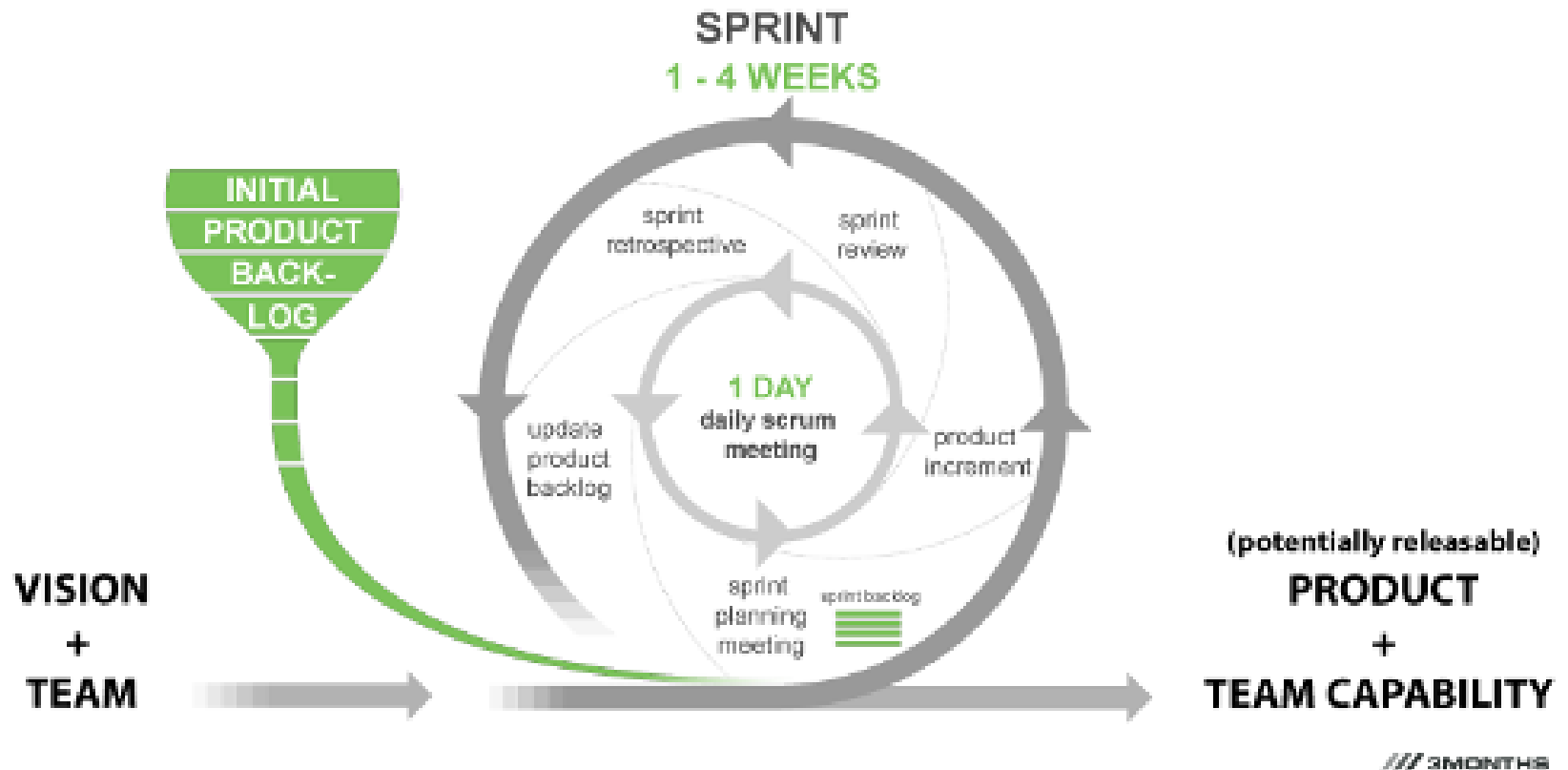
- 3Back Training: [3Back Scrum Management Consulting & Scrum Training](#)

References

- SCRUM Primer: www.scrumprimer.com
- SCRUM Alliance: <http://www.scrumalliance.org/>
- SCRUM Foundation Library: scrumfoundation.com/library

Additional Slides

Sprint Cycle



Product Backlog Owner: Product Owner

- Describes which users will benefit (who is it for)
- A brief description of the desired functionality (what needs to be built)
- The reason that this story is valuable (why we should do it)
- Is an ordered list of everything that might be needed in the product
- An estimate as to how much work the story requires to implement
- Acceptance criteria that helps to know when it has been implemented correctly
- The earliest development of it only lays out the initially known and best-understood requirements
- is the single source of requirements for any changes to be made to the product.
- Is dynamic; it constantly changes to identify what the product needs to be appropriate, competitive, and useful. It is never complete.

Increment & Done

- The “Increment” is the sum of all the Product Backlog items completed during a Sprint and all previous Sprints.
- At the end of a Sprint, the new Increment must be “Done,” which means **it must be in useable condition and meets the SCRUM Team’s Definition of “Done.”**
 - When the Product Backlog item or an Increment is described as “Done”, everyone must understand what “Done” means.
 - Although this varies significantly per SCRUM Team, members must have a shared understanding of what it means for work to be complete, to ensure transparency.