

Sprint to Your Market With Agile

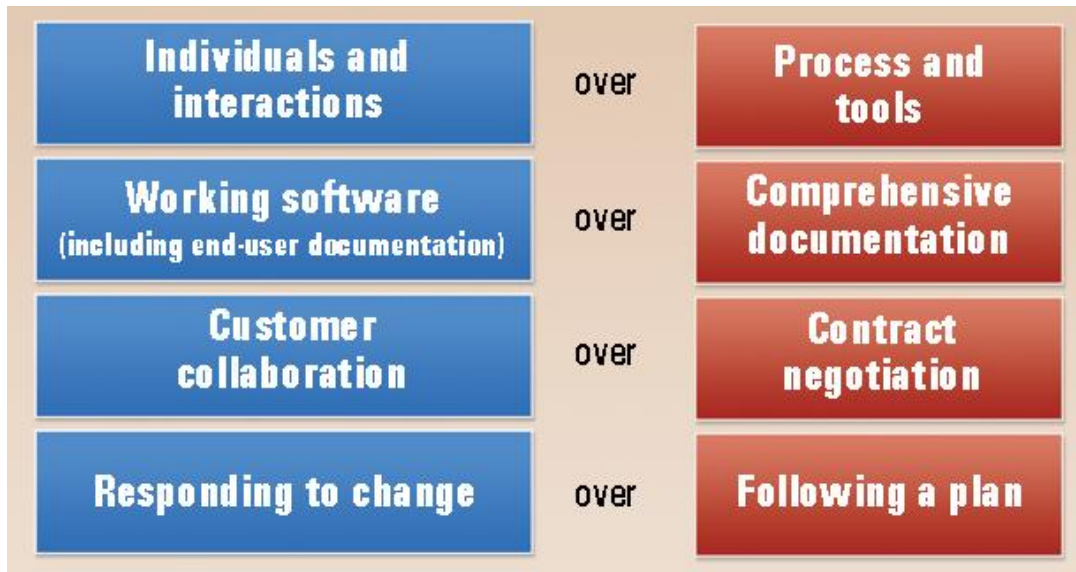
An Introduction to Agile Software Development

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What Is Agile?

Agile...

is a broad movement that is becoming the new industry standard for Software Development. Agile emphasizes:



Scrum...

is a specific Agile development process that is the most widely used today

- Scrum allows us to focus on delivering the highest business value in the shortest time
- Scrum allows us to rapidly and repeatedly inspect actual working software (every two weeks to one month)
- The business sets the priorities. Teams self-organize to determine the best way to deliver the highest priority features



How Agile Differs from Waterfall

Waterfall (Mercury)

Work plan for whole release created up-front

Activities monitored for conformance to plan

Sequential hand-off from one phase to the next; different owners at each phase

All features complete at the same time at the end of the release

Values Predictability

Analyze

Design

Develop

Test

Agile (Scrum)

Work planned for 2-4 weeks at a time (Called a **Sprint** or **Iteration**)

Release forecasted based on speed of activities

Whole-team collaboration in each Sprint

Some features complete in each Sprint, so priorities may change in next Sprint

Values Adaptability

Sprint 1

Sprint 2

Sprint 3

Sprint 4

Analyze

Analyze

Analyze

Analyze

Design

Design

Design

Design

Develop

Develop

Develop

Develop

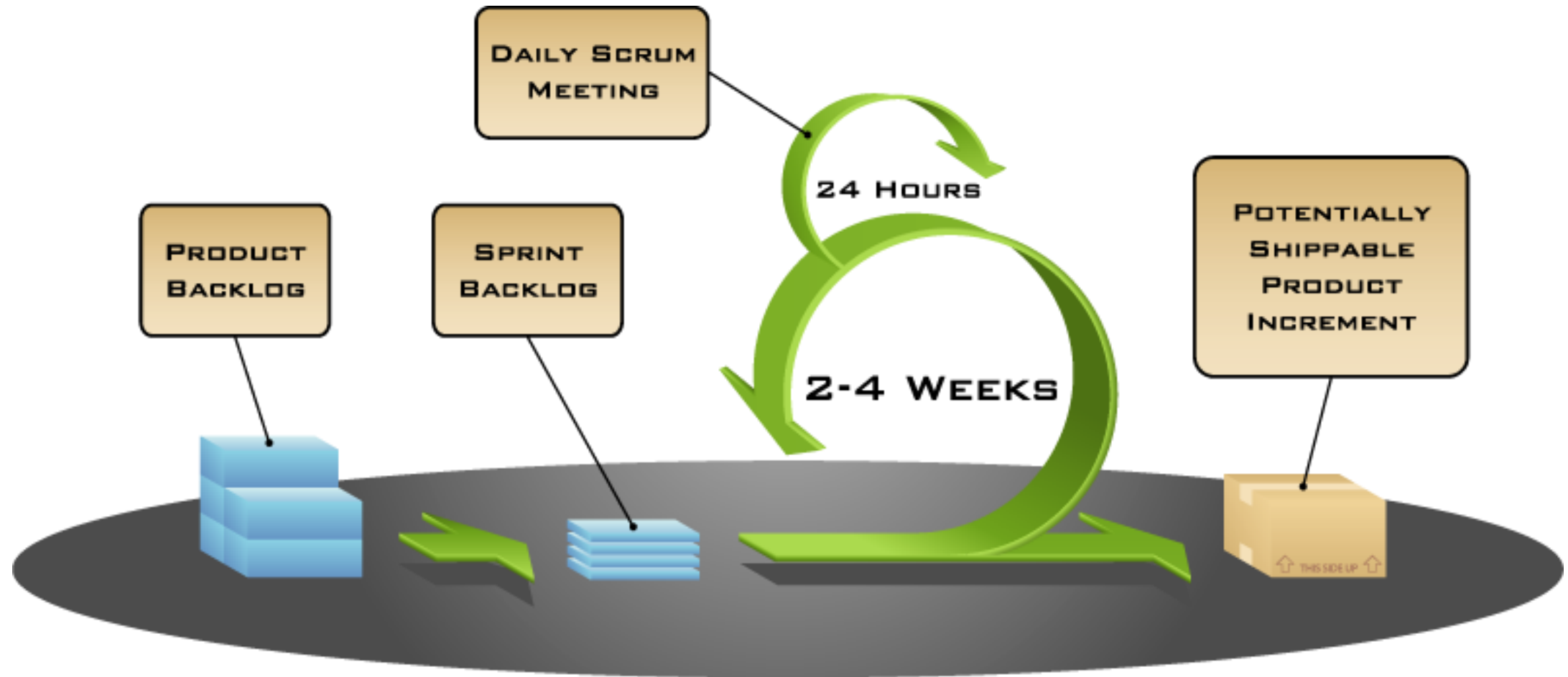
Test

Test

Test

Test

Big-Picture View of Scrum



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Sequential vs. Overlapping Development

Rather than doing all of
one thing at a time...

...Scrum teams do a little of
everything all the time



Source: "The New New Product Development Game" by Takeuchi and Nonaka
Harvard Business Review, January 1986

Quality Checkpoints are Built into the Process

“Ready”

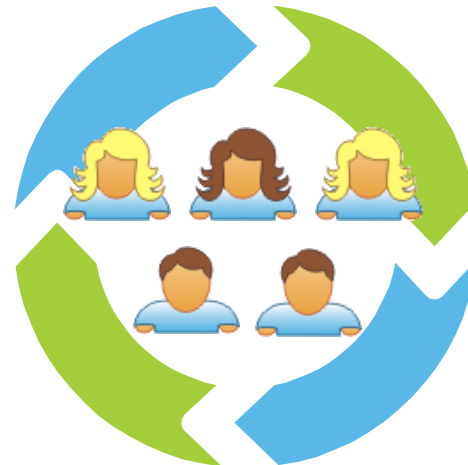
Initiative

- Business case
- User scenarios



Stories

- Requirements clarified
- Technical design drafted
- Test-plan drafted



“Done”

Increment

- Fully tested
- Integrated in build
- Documented
- Reviewed
- Code-quality

Software Release

- Regression tested
- Performance tested

Scrum Framework

Roles

- Product owner
- Scrum Master
- Team Member

Artifacts

- Product backlog
- Sprint backlog
- Burndown charts

Events

- Sprint planning
- Daily scrum meeting
- Sprint review
- Sprint retrospective

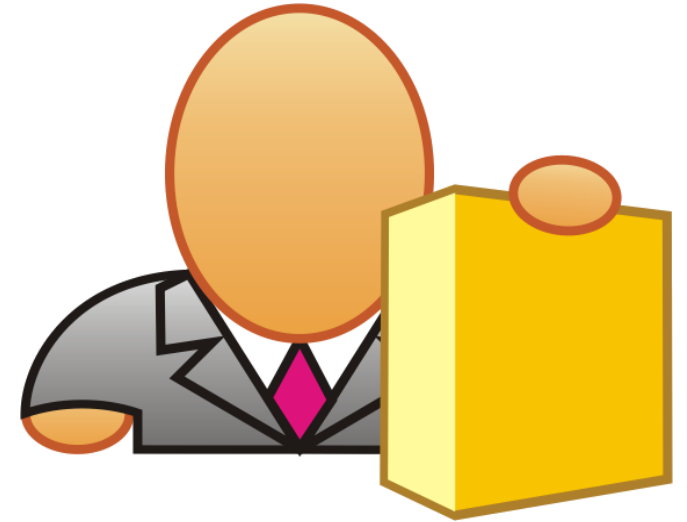
Product Owner

■ Accountabilities

- Maintain Product Backlog
 - Define features of the product
 - Decide on release date and content
 - Prioritize features according to market value
 - Adjust features and priority every iteration, as needed
- Be responsible for the profitability of the product (ROI)
- Accept or reject work results

■ Limitations

- May be a Team Member but NOT the Scrum Master



Scrum Master

■ Accountabilities

- Responsible for enacting Scrum values, practices & rules and ensuring that the Team adheres to them
- Remove impediments
- Ensure that the team is fully functional and productive
- Enable close cooperation across all roles and functions
- Shield the team from external interferences
- Represent management to the project
- Coach the team
- Facilitate Scrum Events (Planning, Daily Scrum, Review & Retrospective)

■ Limitations

- May be a Team Member but NOT the Product Owner



Team Members

- Typically 7 +/- 2 (excluding Scrum Master and Product Owner unless they are also Team Members)
- Cross-functional
 - Programmers, Testers, Tech Writers, Usability, etc.
- Members are full time
 - May be exception (e.g., shared services – QPE build)
- Membership should change only between sprints, if there is no other alternative



Scrum Framework

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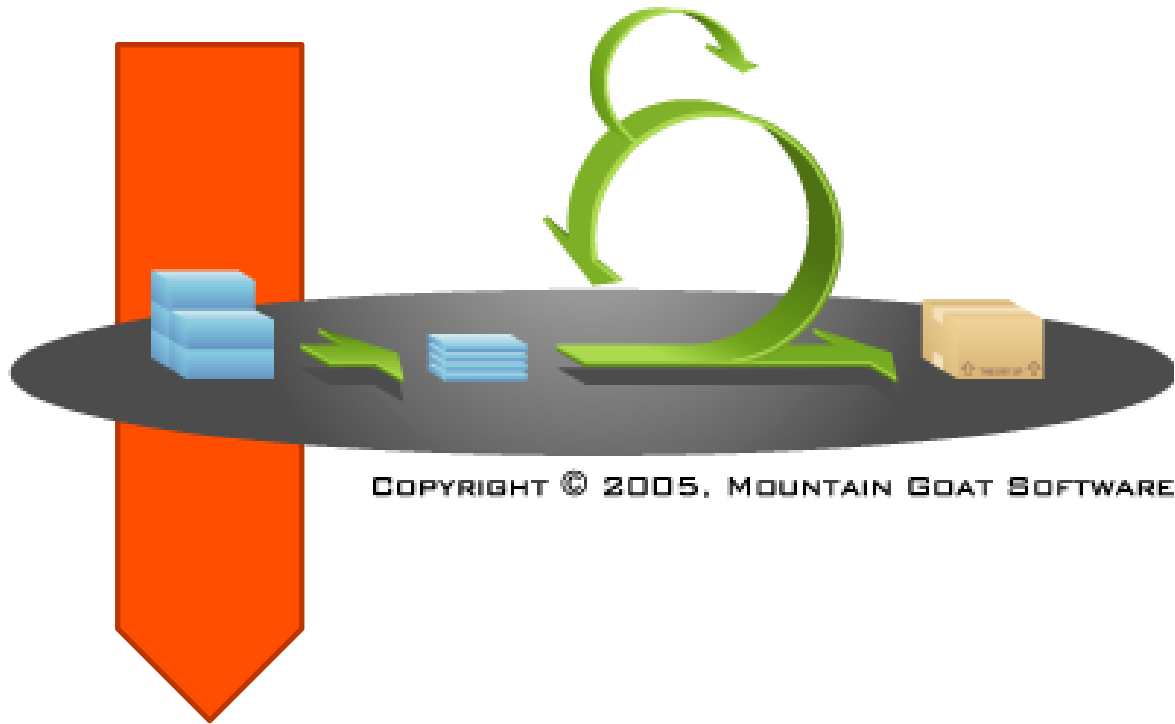
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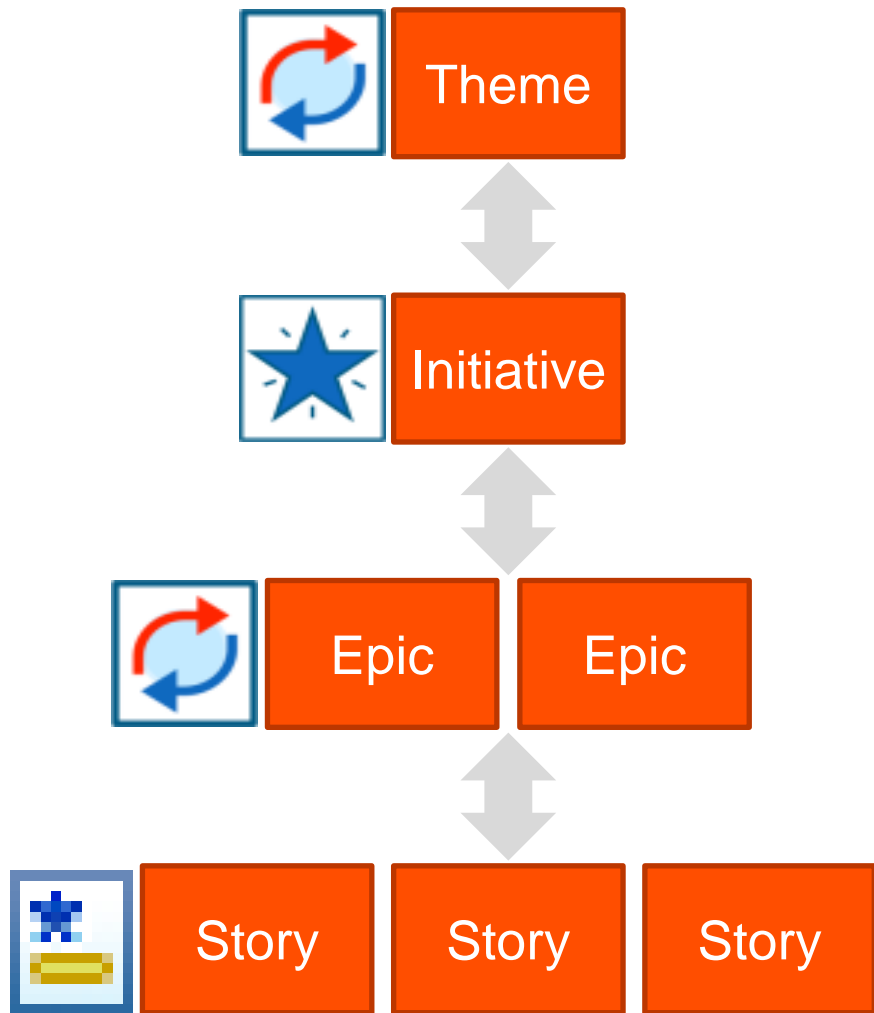
Product Backlog



This is the
Product
Backlog

- An ordered list of all valuable things the team could do
- The single source of requirements for any changes to be made to the product
- Ordered by the Product owner
- Reprioritized before the start of each sprint

Agile Artifacts



- Top-level categories on the Product Roadmap
- Set during Product Strategy Process
- May span releases

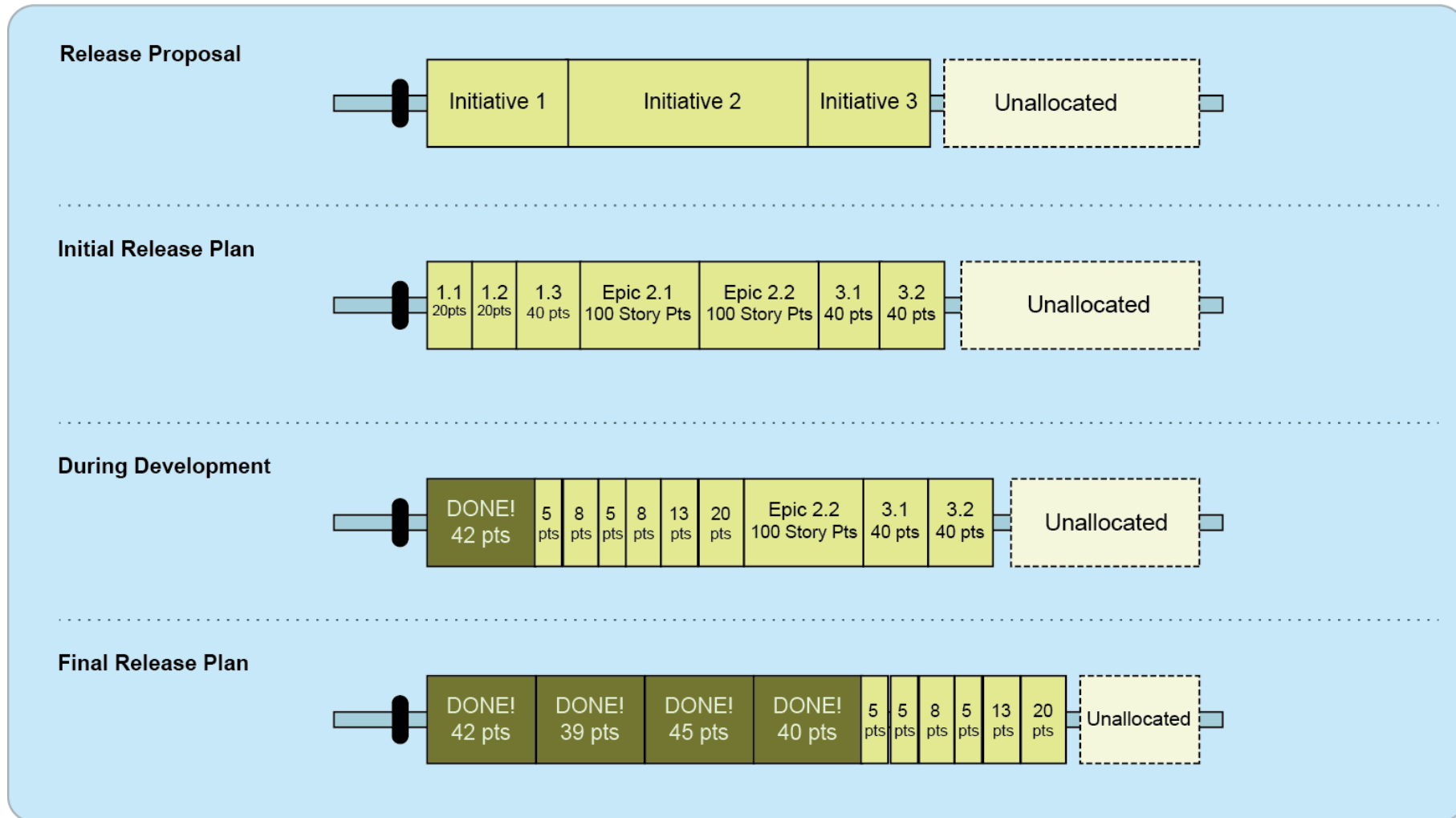
- Specific items on the Product Roadmap
- Set during the Product Planning Process
- Delivered in a single release

- Functional parts of an Initiative on a Release Plan
- Created by Engineering during Release Planning & Agile Processes
- Used to group stories & adjust the scope of an Initiative

- A small piece of functionality that can be built in one Sprint
- Created by Engineering during Agile Process
- When possible, described from the end user's point of view using "As a <Role>, I want <function>, so that <purpose>"

Iterative Decomposition and Development

A Release Backlog Over a Release



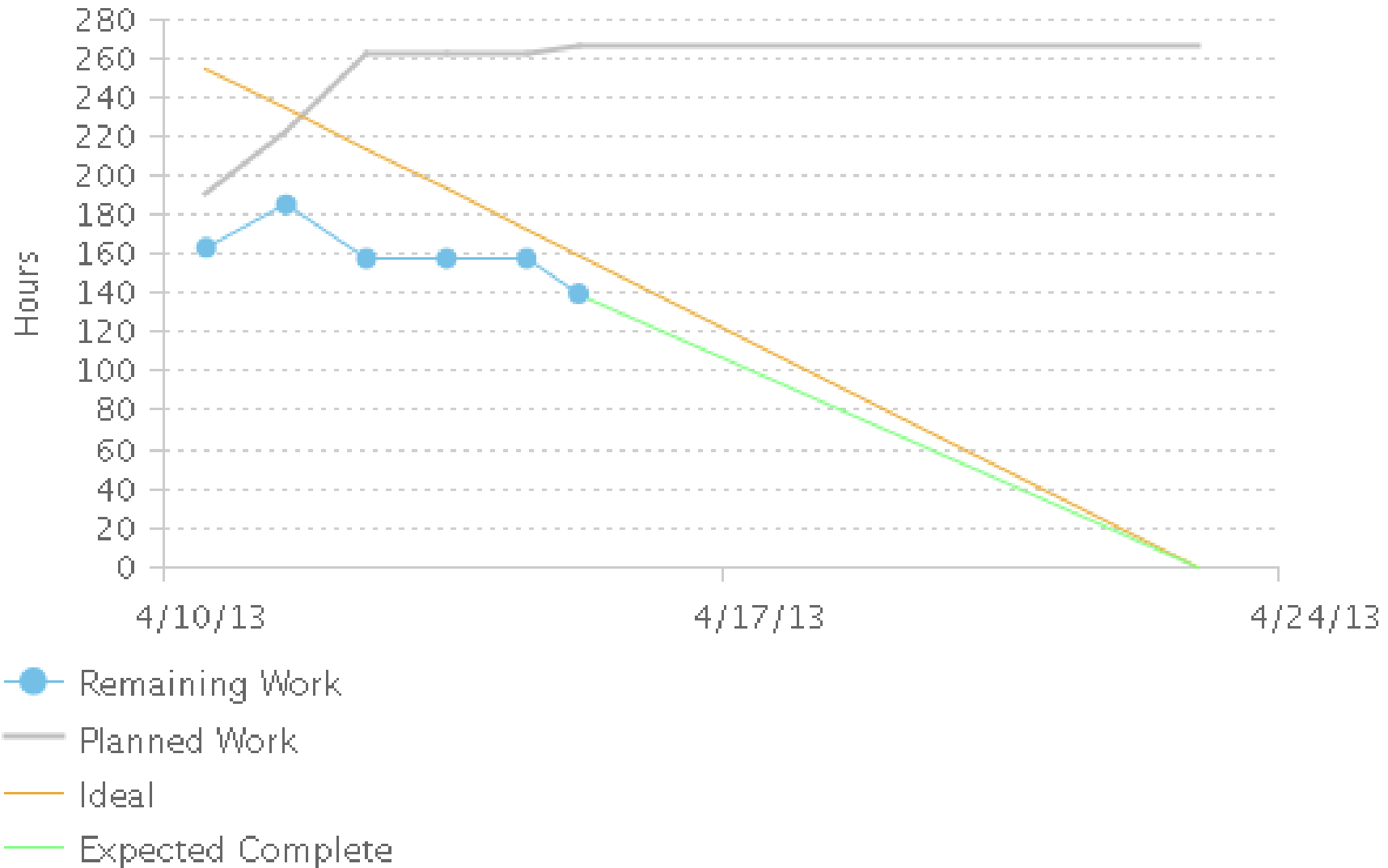
The Sprint Backlog

1. A subset of the Product Backlog
 - Starting from the top of the Product Backlog
 - But no more than what the team forecasts they get “Done” during the Sprint
2. A plan to get the items “Done”
 - Often this is the tasks needed to get each story “Done”

Sprint Task Board

Story	Open	In Progress	Implemented	Closed
<div data-bbox="402 307 649 492">Another Story --</div>		<div data-bbox="1057 307 1304 492">Do some testing 2 hours</div>		<div data-bbox="1821 307 2068 492">Do some coding --</div> <div data-bbox="1821 514 2068 699">Define test plan --</div>
<div data-bbox="402 721 649 906">Story 2A --</div>	<div data-bbox="675 721 922 906">Do the testing 2 days</div>	<div data-bbox="1057 721 1304 906">Write the code 1 day</div>		
<div data-bbox="402 928 649 1113">Story 3 --</div>	<div data-bbox="675 928 922 1113">* Do some testing 4 hours</div> <div data-bbox="675 1135 922 1320">* Write some code 3 days</div>			

Sprint Burndown



Scrum Framework

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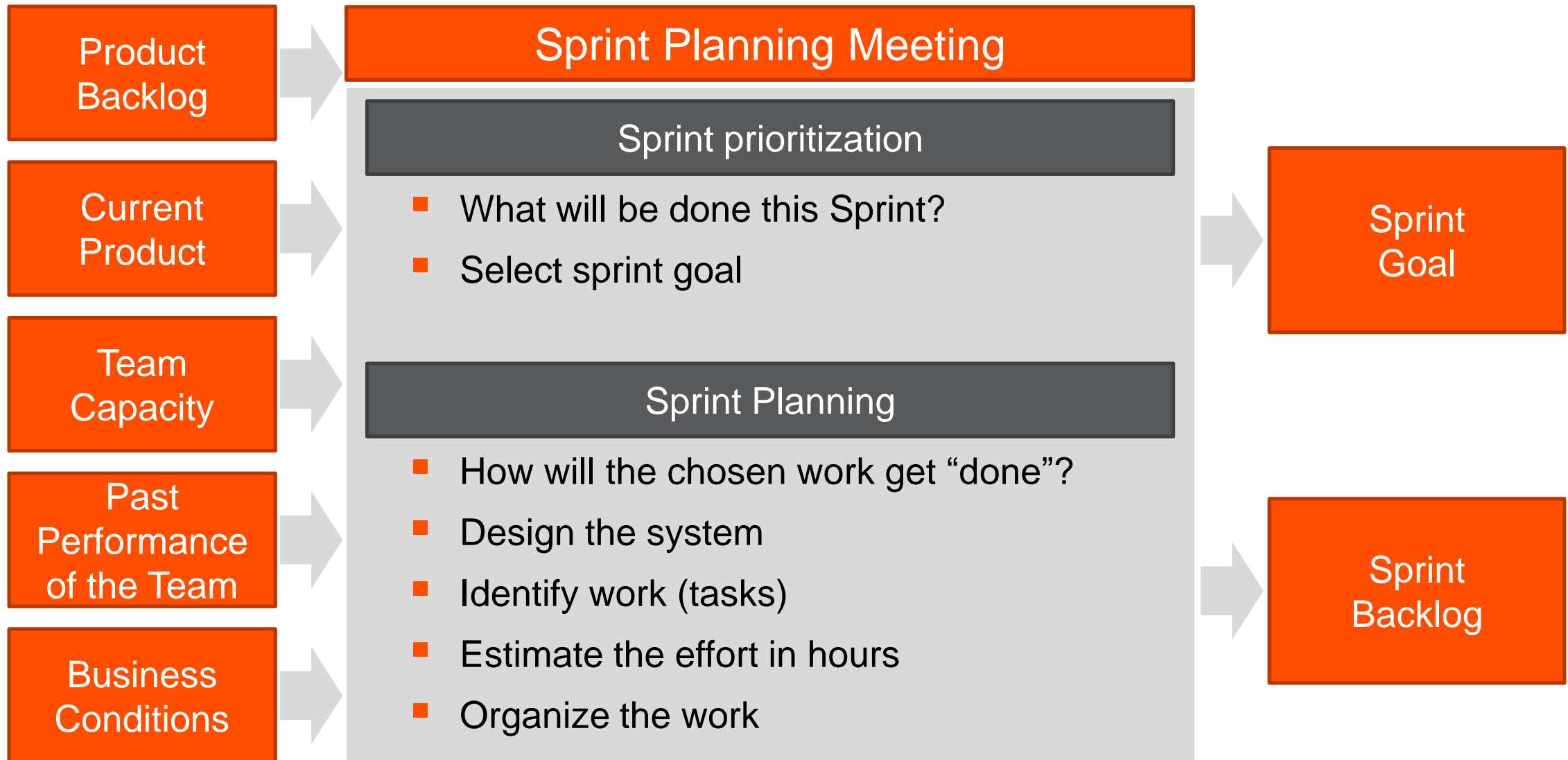
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The Sprint Planning Meeting



The Sprint Goal

- The objective of a Sprint is to deliver value to the stakeholders. However, simply following a list of tasks (e.g. SBIs) does not necessarily result in the creation of the greatest value possible



- Create a short statement of the value that the team intends to create during the Sprint
- **This becomes the focus of all work in the Sprint**

The Daily Scrum

- Parameters
 - Daily
 - 15-minutes
 - Stand-up
- Not for problem solving
 - Whole world can be invited
- Helps avoid other unnecessary meetings
- Facilitated by Scrum Master
- Only team members, Scrum Master, product owner, can talk



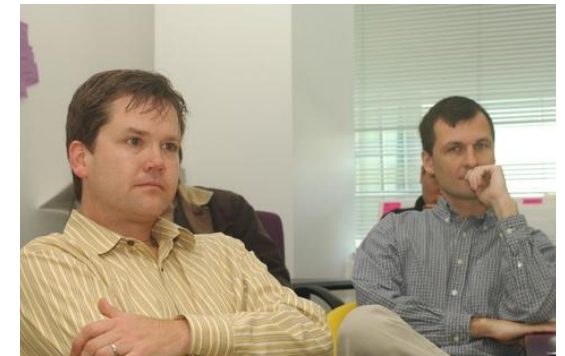
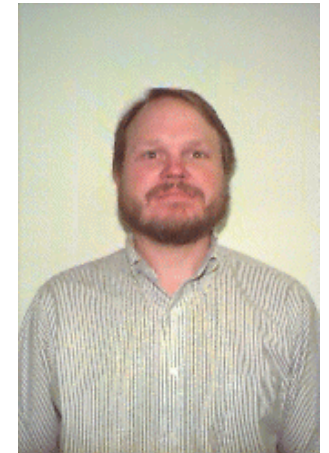
Everyone Answers the “3 Questions”

1	What did you do yesterday?
2	What will you do today?
3	Is anything in your way?

- These are **not** status for the Scrum Master
 - They are commitments in front of peers

Sprint Review

- Team presents what it accomplished during the sprint
- Typically takes the form of a demo of new features or underlying architecture
- Informal
 - 2-hour prep time rule
 - No slides
- Whole team participates
- Invite the world



Sprint Retrospective

- Periodically take a look at what is and is not working
- Typically 15–30 minutes
- Done after every sprint
- Whole team participates
 - Scrum Master
 - Product owner
 - Team
 - Possibly others



Inspect and Adapt!

Scrum Framework

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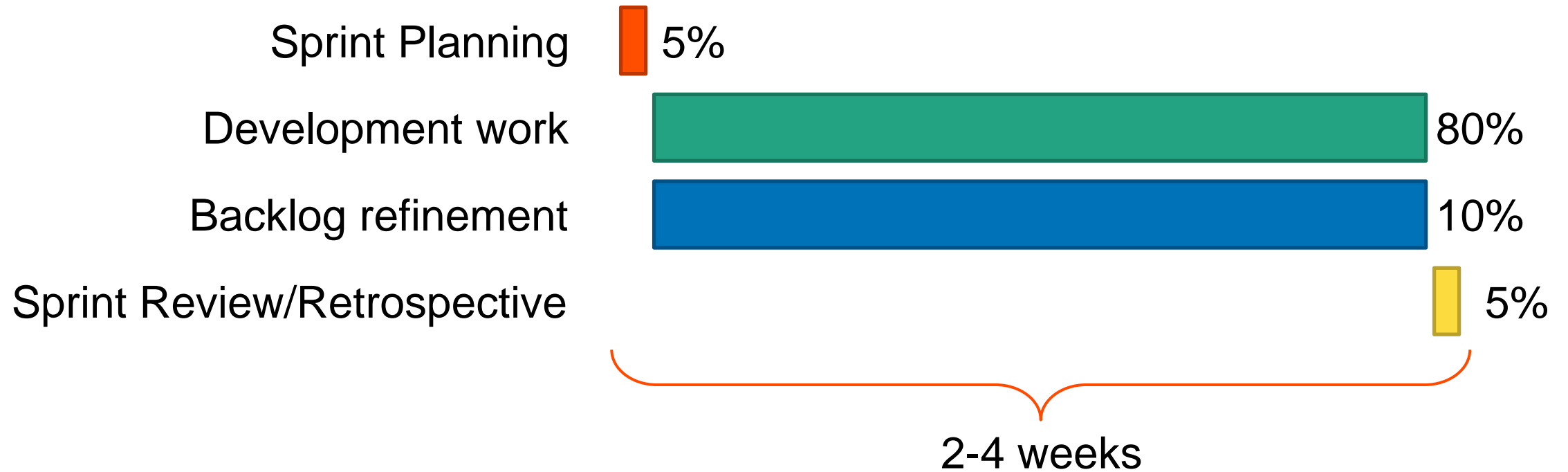
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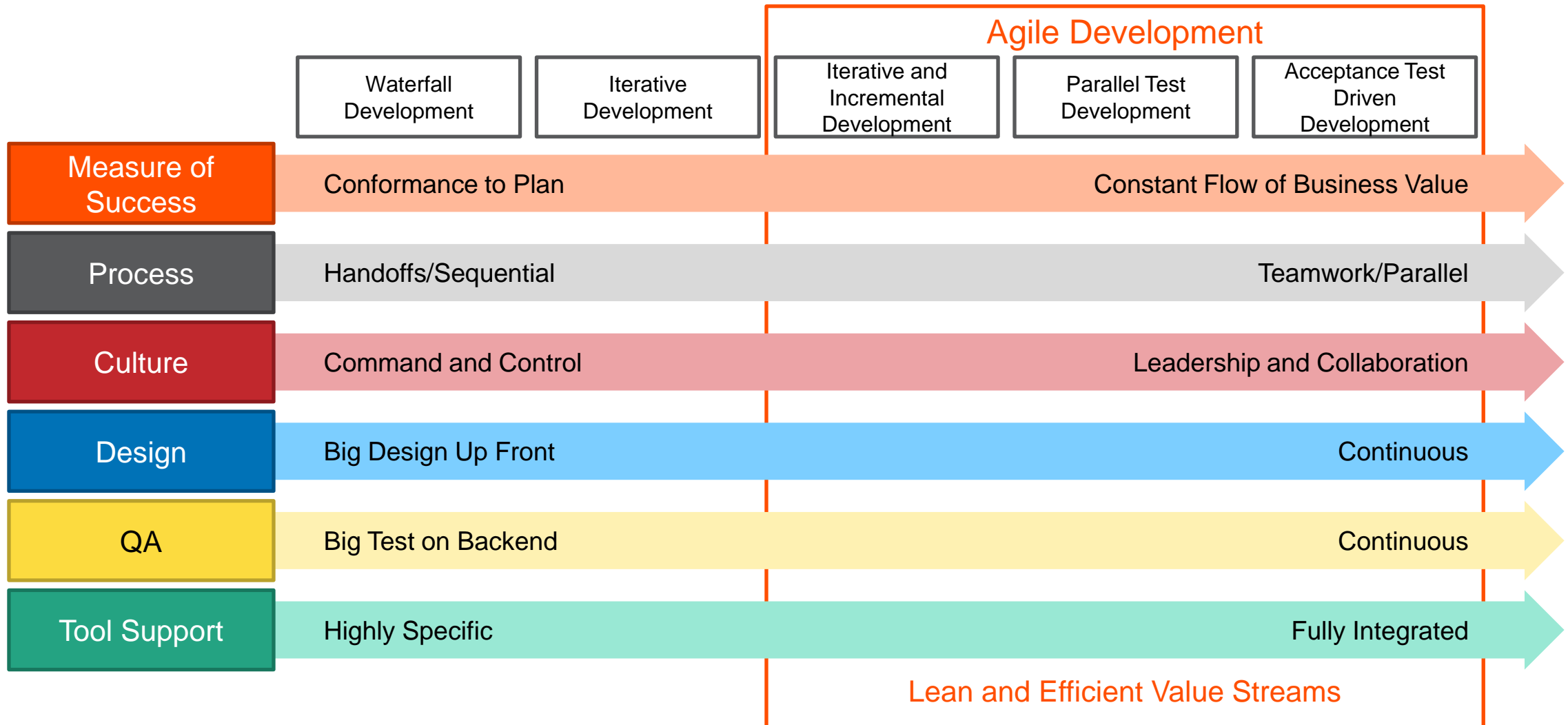
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Typical Sprint



Review





PROGRESS