College of Western Idaho

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Introduction to Scrum

Accentient

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Microsoft Regional Director

PSD

MVP Microsoft Most Valuable Professional

PST

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Team Formation

10 MIN

- Identify yourself by competency:
  - Knows QA/testing
  - Knows architecture/design
  - Knows database development
  - Knows programming
  - Knows Scrum/Agile
- Form into cross-functional teams
- Co-locate your team
- Name your team

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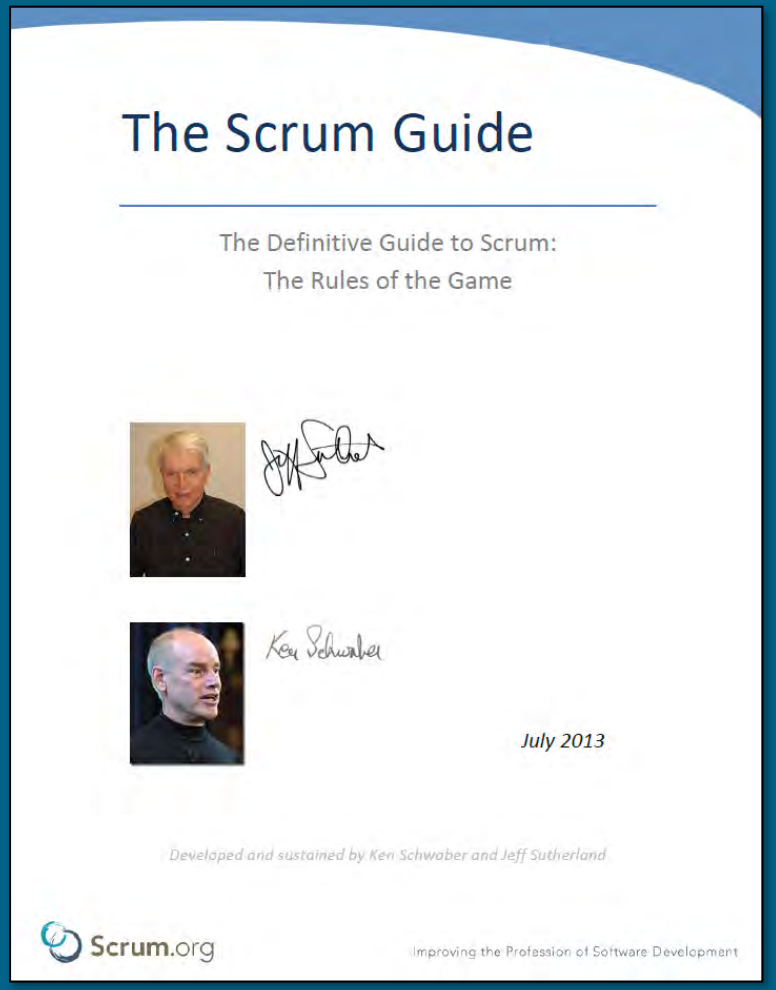
Prerequisites

- Familiar with software development lifecycle
- Familiar with team based development
  - Product Owner, Scrum Master, or member of the Development Team
- Familiar with the Scrum framework
- Familiar with distributed application design

The Scrum Guide

- Documents the Scrum framework
  - Official rules of Scrum
- Maintained by Ken Schwaber and Jeff Sutherland
- http://www.scrumguides.org



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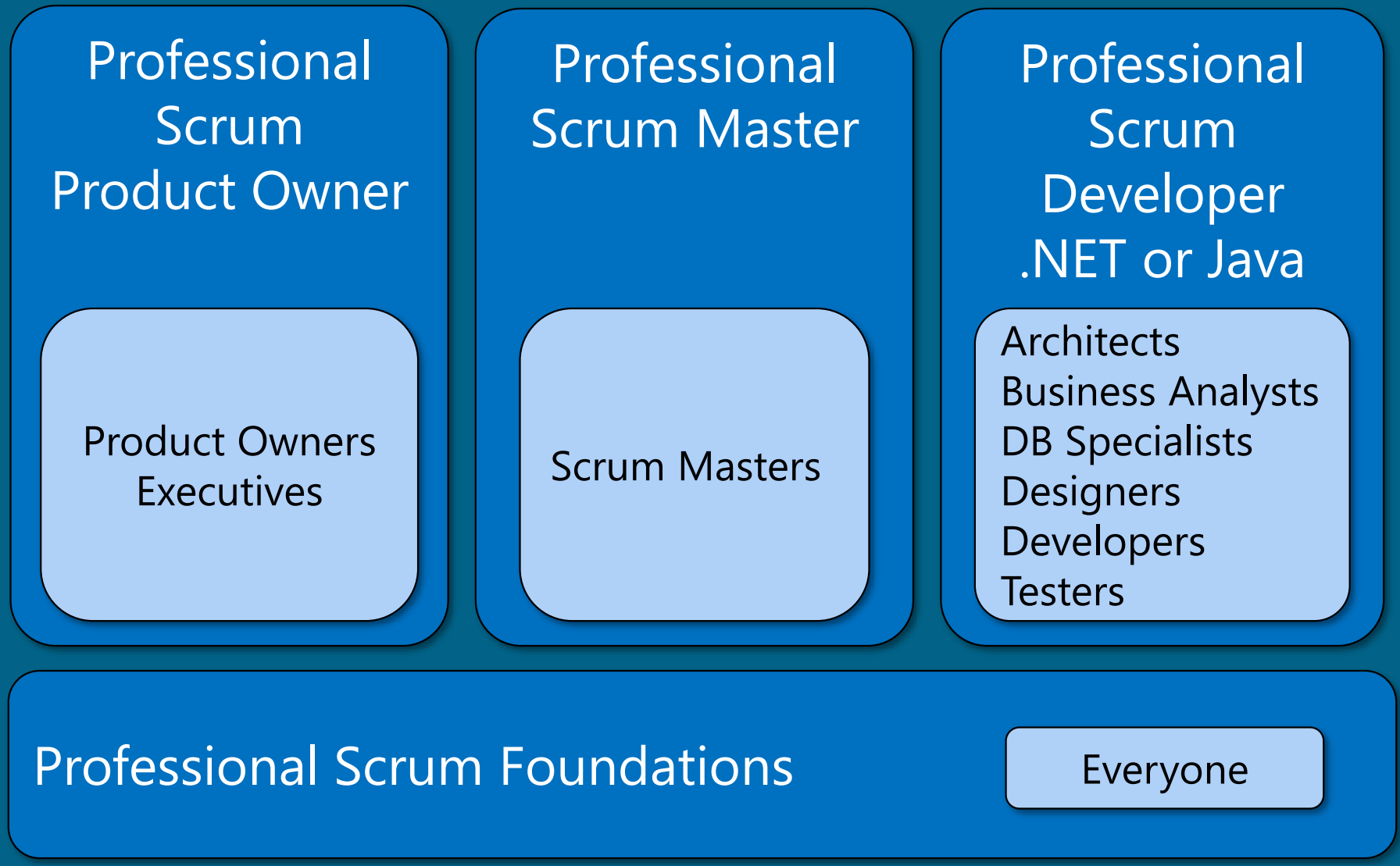
Professional Scrum at Scrum.org



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The Agile Manifesto Says it All …

- Successful Scrum teams embrace the Agile values upon which Scrum is based:
  - Individuals and interactions over processes and tools
  - Working software over comprehensive documentation
  - Customer collaboration over contract negotiation
  - Responding to change over following a plan

  - http://agilemanifesto.org

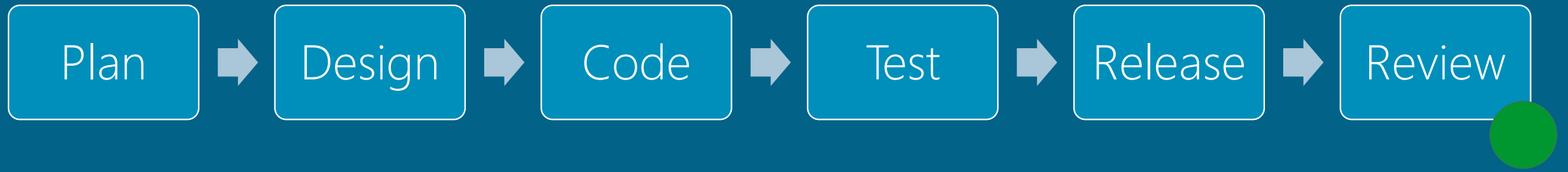
Scrum is …

- A framework for developing and sustaining complex products
  - Example: software development
- Lightweight
- Simple to understand
- Extremely difficult to master

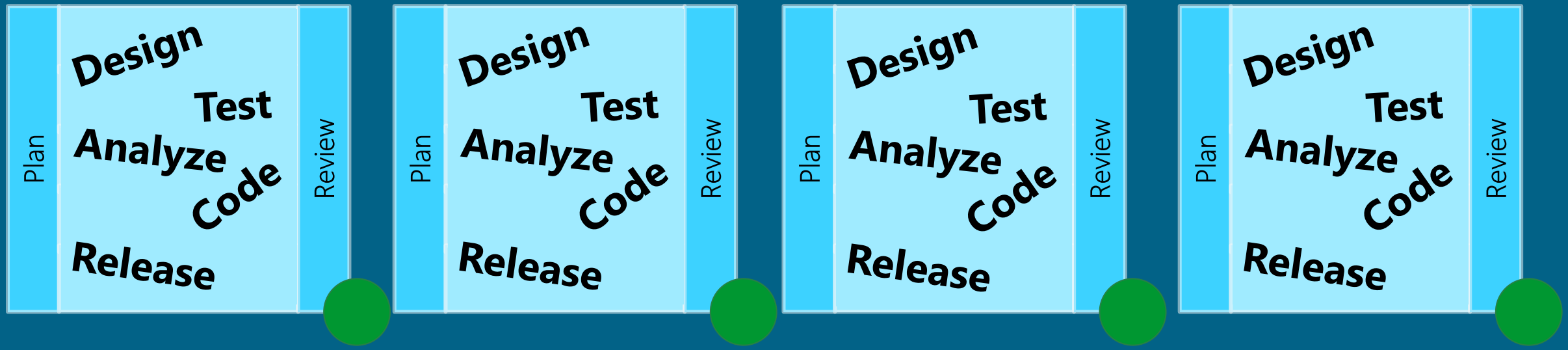
Scrum vs. Waterfall

Working software is available.

Waterfall



Scrum



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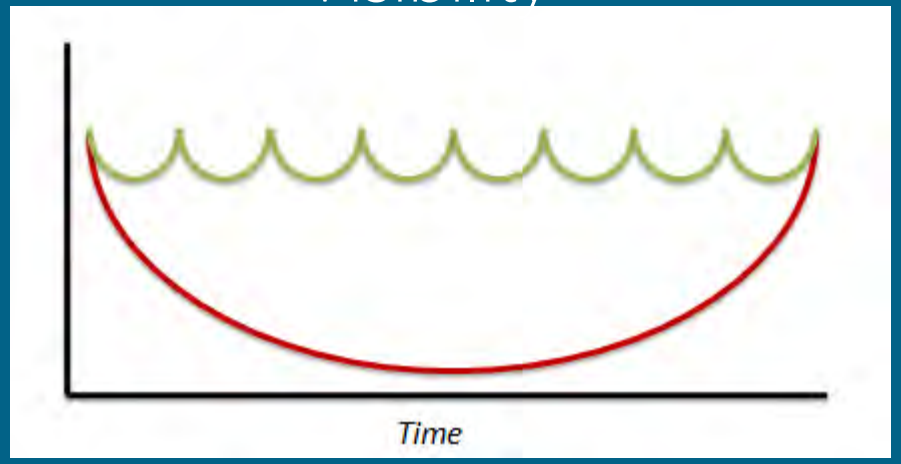
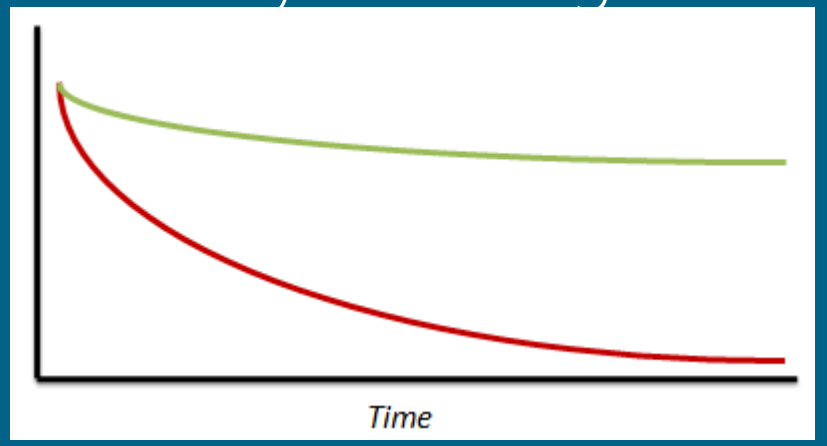
Comparing Scrum And Plan-Driven

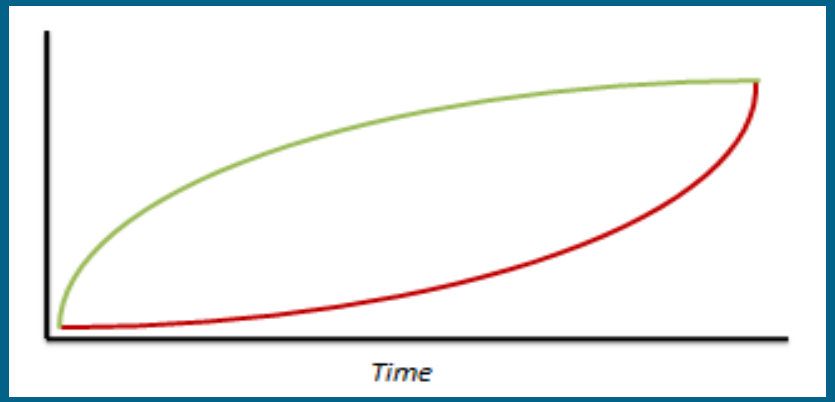
Visibility



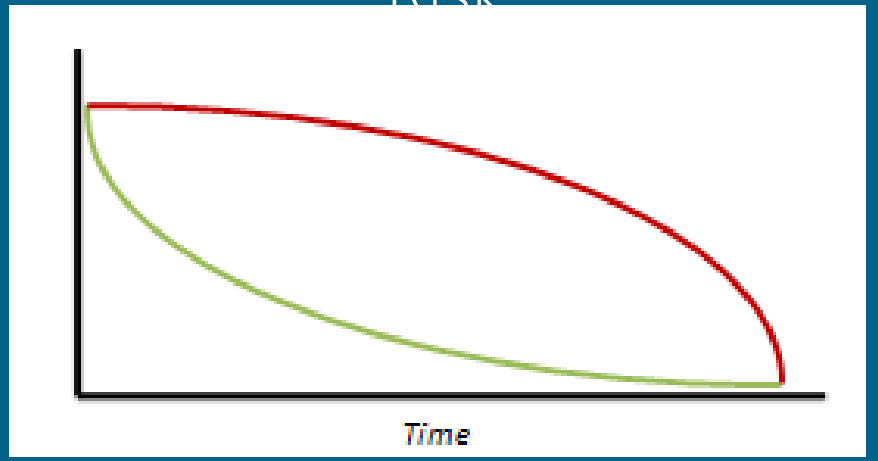
Ability to Change



Business Value



Risk



Waterfall

Scrum

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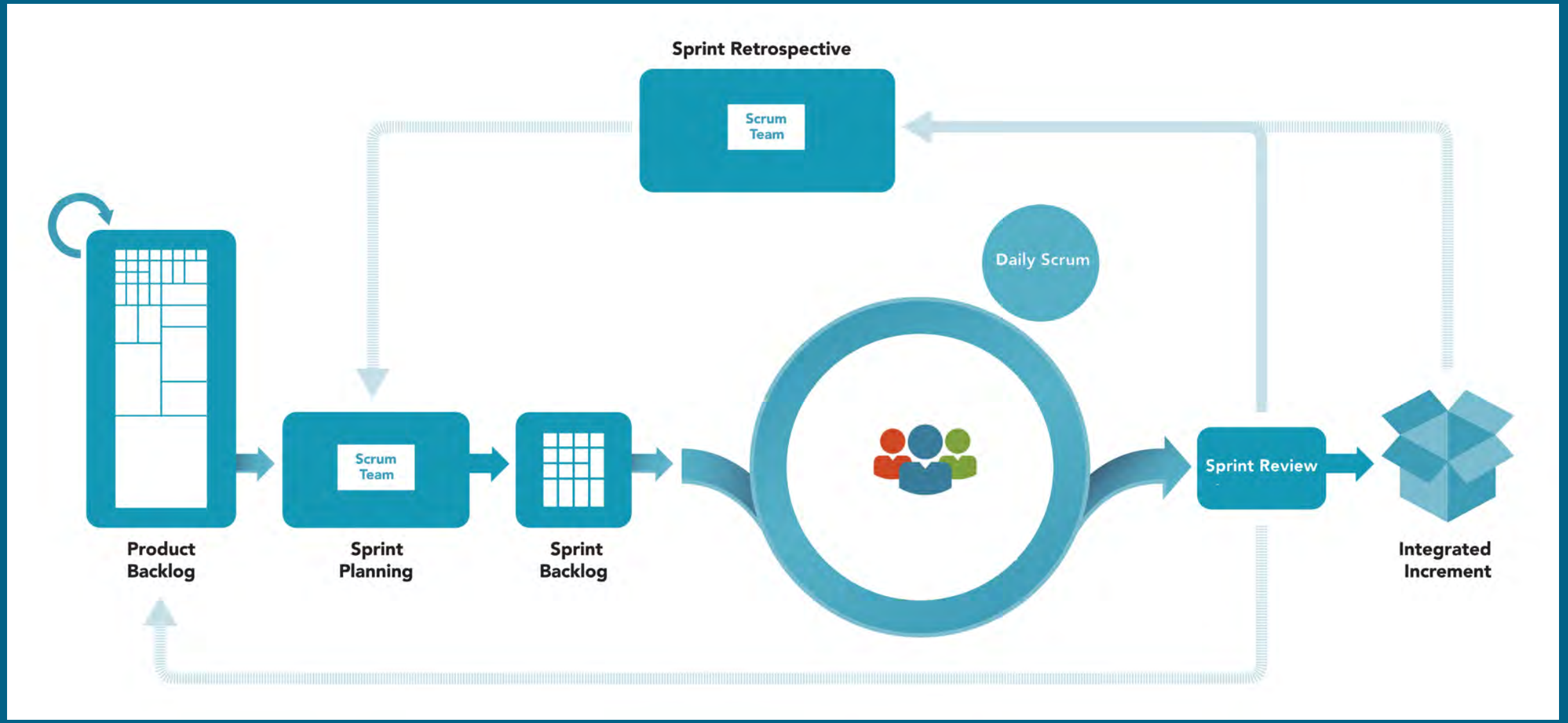
The Scrum Process



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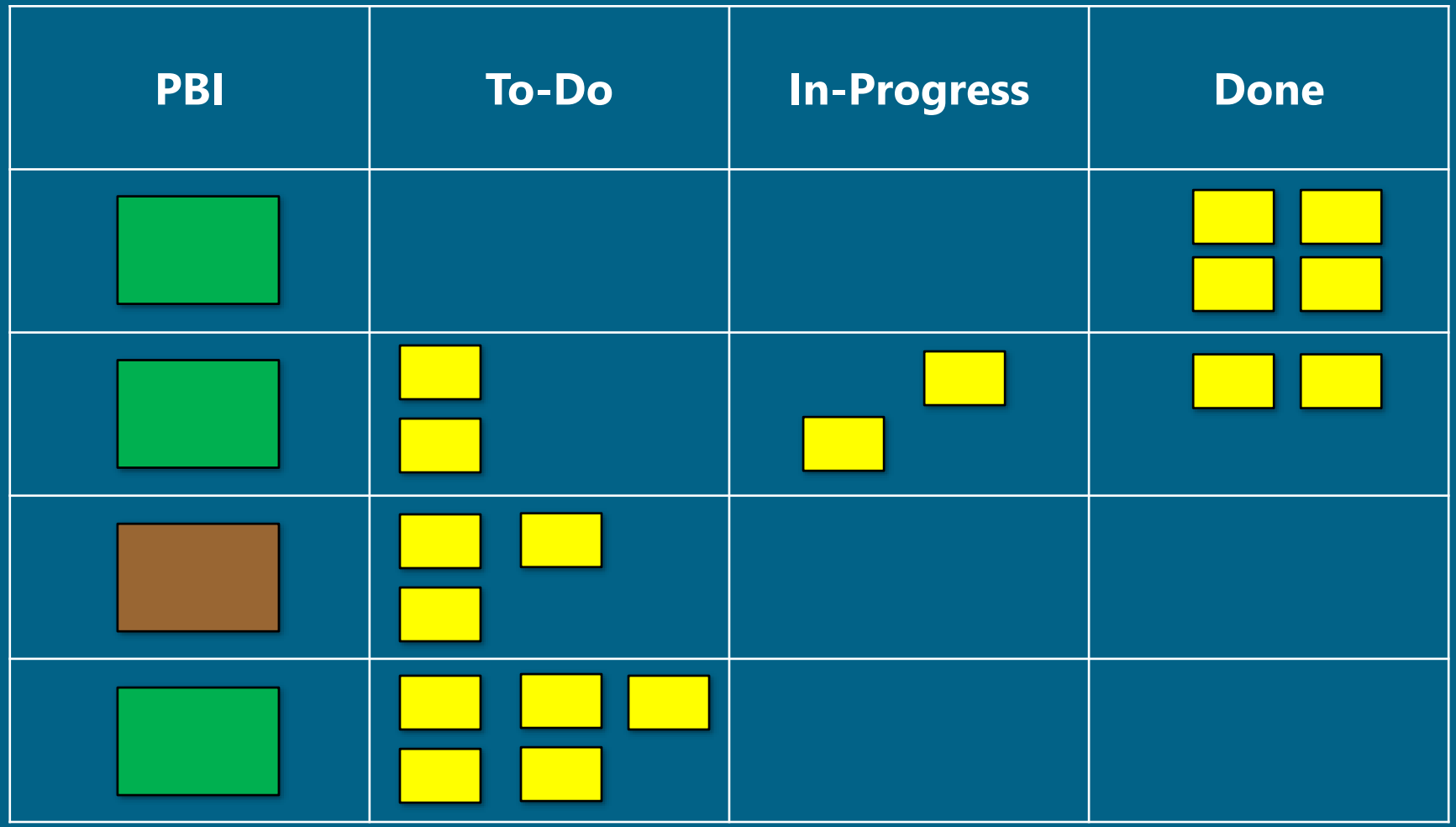
Sample Task Board



Create a Task Board

5 MIN

- Use a nearby whiteboard or sheet of paper to create a simple task board
  - Make a column for the PBIs
  - Make columns for associated tasks in at least three states (to-do, in-progress, and done)
  - Make sure the task board is large and visible

The Product Owner is Key

- The Product Owner role
  - Has the most responsibility
  - Is the hardest role to fill
  - Is the most demanding role

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The Product Owner Ensures the Product Backlog …

- Contains clearly expressed items
- Lists the business value of each item
- Contains the “what” and not the “how”
- Is ordered to best achieve goals/missions
- Shows what the team will work on next
- Is visible, transparent, and clear to all

It's a List of "Desirements"

- The Product Backlog contains many things
  - Features
  - Enhancements
  - Behaviors
  - User stories
  - Bugs/defects
  - Use cases
  - Scenarios
- Be careful: Some desirements are actually acceptance criteria or tasks

Use User Story Format …

- A formal way to writing user stories:
  - As a (role) I want (something) so that (benefit)
- Examples:
  - As a visitor to the Tailspin Toys website, I want to see a list of recent tweets so that I know that Tailspin and it's products are alive and well
- Note: The user story format will work for most PBIs, but not all

INVEST in Good PBIs

Independent	One PBI should be independent of another
Negotiable	A PBI is negotiable; a title and short description up front and more details during conversation
Valuable	Each PBI has to be of value to the customer
Estimate-able	The team needs to be able to estimate a PBI to enable prioritization and planning
Small	A PBI should be small in effort, achievable in one Sprint
Testable	A PBI needs to be testable for the acceptance to occur

Example Product Backlog

ID	Title	Description	Area	Value	Effort	Priority
1	Customer Login	As a returning …	Admin	45	8	2
2	Product return	As an unhappy …	Products	75	13	4
3	Twitter feed	As a visitor to …	Marketing	25	5	3
4	Wrong sales tax	As a purchaser …	Orders	90	3	1
…						

Create a Product Backlog

15 MIN

Given a variety of "desirements" identify and order the PBIs into a meaningful product backlog

- Elect a Product Owner
- Go through the provided list of desirements
- Determine which should be PBIs
- Record those PBIs on sticky notes
  - Identify area: admin, marketing, products, orders, etc.
  - Product owner should provide a business value and order to the PBIs – and be ready to defend these decisions
- Post the sticky notes on your task board

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Backlog Creation is Hard

- Creating an effective Product Backlog can take a long time
  - This can be very difficult
  - This can become political
- But once you have it, you'll wonder how you ever got by without one!

Everyone Can Contribute …

- While the Product Owner is the sole person responsible for managing the Product Backlog, he or she doesn't have to do the actual work of creating/managing it
  - The Product Owner remains accountable though

Acceptance Criteria

- In Scrum, Acceptance Criteria are the requirements
  - They enumerate what the Product Owner expects and what the Development Team needs to accomplish

Create PBIs Incrementally

- Initially, the item can just have a title
- Later, a detailed description can be added
  - User story format is a good choice here
- Later, acceptance criteria can be added
- Later, it can be sized (estimated) and ordered by the Product Owner

The Product Backlog Iceberg

- Items at the top of the Product Backlog should be crystal clear, estimated, and ready to be worked on in the next Sprint
- Items below those should be generally understood and estimated so that a release plan can be assessed
- Items at the bottom may not have any details or chance of making it in the product

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You'll Want to Avoid …

- Too much up-front documentation/design
- Specifying "how" the PBI should be implemented
- Specifying a plan, tasks, test cases, etc.
  - You should wait until the Sprint where you forecasted implementing the PBI

Traditional Estimation

- Each item in the Product Backlog is unique
  - It's difficult to estimate something that is being built for the first time
  - Traditional estimation approaches won't work

Traditional (Absolute) Estimation

5 MIN

As a team, estimate how many hours it will take to implement each of these Product Backlog Items:

- Accept Discover credit cards
- Reports must be downloadable as PDF files
- Convert the Web site to a slick, Metro-style UI

Be as accurate as possible!

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Agile Estimation

- To be more accurate, be less precise
  - Estimate smaller things (tasks) in hours
  - Estimate larger things (PBIs/Bugs) in something less precise
- You should use an abstract unit of measure
  - T-shirt sizes (S, M, L, XL)
  - Fibonacci, story points, acorns, kazoobies, Vicodin

Agile Estimation – Who Estimates?

- The whole development team participates
  - The Product Owner and Scrum Master do not (unless they are also Development Team members)

Agile Estimation – When to Estimate?

- Estimate as late as is responsible
  - Early estimates are less accurate than later ones
- Scrum offers two formal opportunities for estimation: Sprint Planning and Product Backlog refinement
  - Tip: It's better to do the bulk of your estimation during Product Backlog refining so that Sprint Planning can focus on forecasting and building a plan to implement the work

Agile Estimation – What to Estimate?

- Estimating undesirable PBIs is waste
  - Wait until larger (Epic) Product Backlog Items are decomposed
  - Wait until the Product Owner orders (prioritizes) the Product Backlog
  - Note: sometimes the Product Owner needs a rough estimate to help make the prioritization decision

Relative Estimation

5 MIN

Assuming Spain is a 3, estimate the land area of the following countries relative to Spain:

- Luxembourg
- Denmark
- Belize
- Spain (3)
- South Africa
- China

Use Fibonacci sequence: 0, 1, 3, 5, 8, 13, 21, 34, 56, …

Estimation is Not a Silver Bullet

- Agile estimation techniques won't remove uncertainty from early estimates
  - They will improve your accuracy as the project proceeds
  - This is because Agile estimation methods take actual work into account as Sprints are completed

Refining the Product Backlog

- Refining is the act of adding detail, estimates, and order to items in the Product Backlog
  - This is an ongoing process in which the Product Owner and the Development Team collaborate on the details of Product Backlog items
- The Scrum Guide says refining can (should) take up to 10% of the length of Sprint
  - Budget the time, schedule the meeting, and attend