AGILE
SCRUM + KANBAN

Learn, Play, Network

WHAT IS AGILE?

Agile Manifesto

"We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

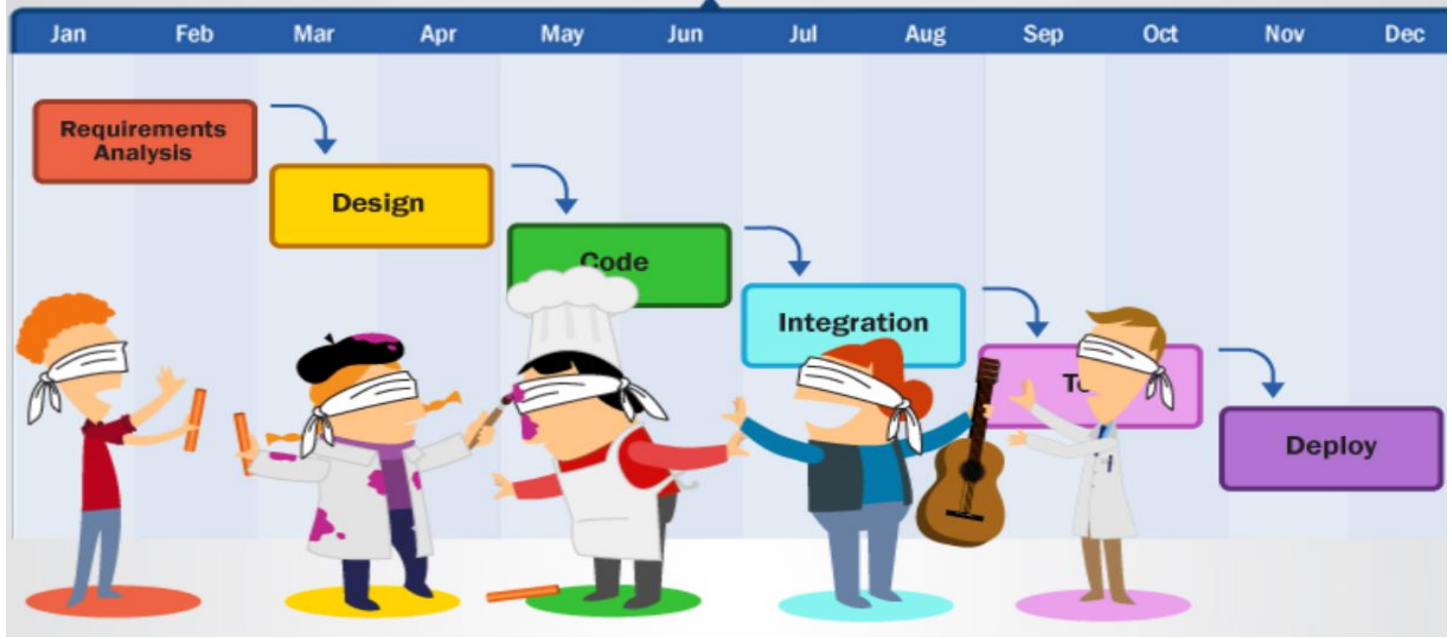
Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

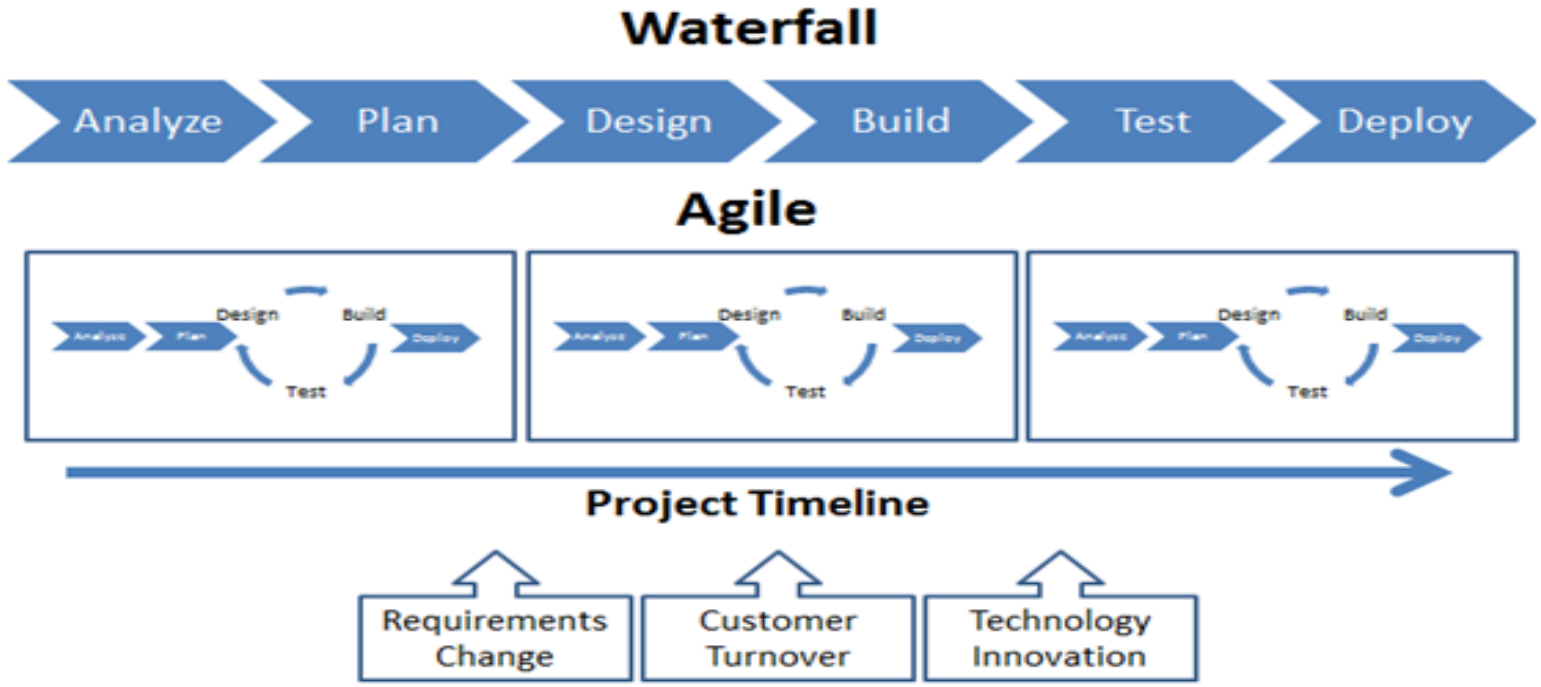
That is, while there is value in the items on the right, we value the items on the left more."

Agile is a framework and there are a number of specific methods within the Agile movement.

WHY?

- ✓ Adaptability to changing market / customer needs
- ✓ Better cost efficiencies and fastest time to market
- ✓ Improved quality, satisfaction, and project success





AGILE METHODS

Scrum:

Scrum is one of the most popular ways to implement Agile. It is an iterative software model that follows a set of roles, responsibilities, and meetings that never change. Sprints, usually lasting one to two weeks, allow the team to deliver software on a regular basis

Kanban:

Kanban, meaning "visual sign" or "card" in Japanese, is a visual framework to implement Agile. It promotes small, continuous changes to your current system. Its principles include: visualize the workflow, limit work in progress, manage and enhance the flow, make policies explicit, and continuously improve.

Extreme Programming (XP): Also known as XP, Extreme. The principles of XP include feedback, assuming simplicity, and embracing change.

Feature-driven development (FDD): . There are five basic activities in FDD: develop overall model, build feature list, plan by feature, design by feature, and build by feature.

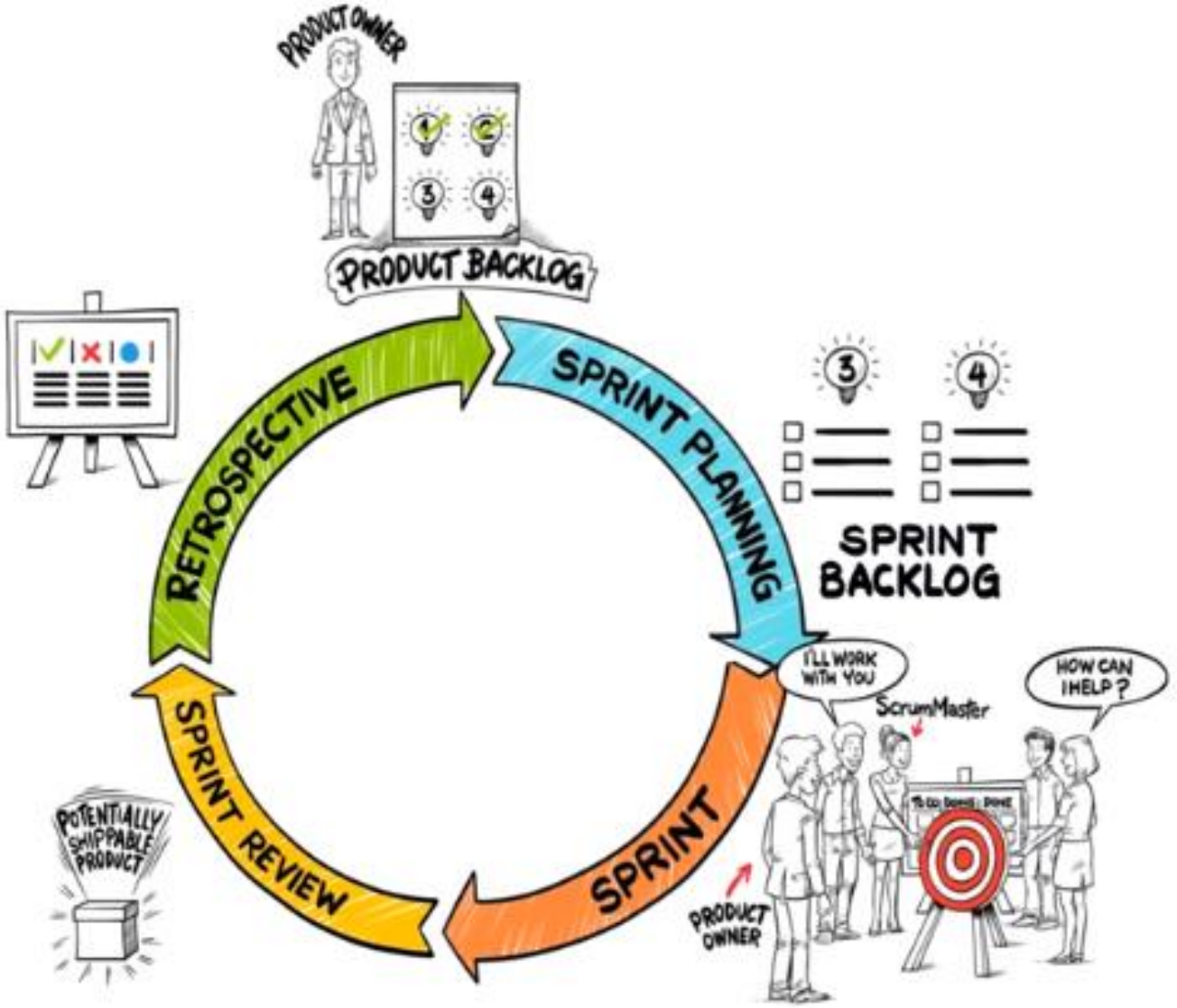
Adaptive system development (ASD): ASD has a cycle of three repeating series: speculate, collaborate, and learn.

Dynamic Systems Development Method (DSDM): The eight principles of DSDM are: focus on the business need, deliver on time, collaborate, never compromise quality, build incrementally from firm foundations, develop iteratively, communicate continuously and clearly, and demonstrate control.

Lean Software Development (LSD): It can be characterized by seven principles: eliminate waste, amplify learning, decide as late as possible, deliver as fast as possible, empower the team, build integrity in, and see the whole.

Crystal Clear: Crystal Clear requires the following: frequent delivery of usable code to users, reflective improvement, and osmotic communication preferably by being co-located.

SCRUM



Sprints – Fixed length iterations.
Working, tested, potentially shippable product during every sprint.
Teams should work together vs big handoffs.

Scrum Framework consists of scrum teams and their associated roles, events, artifacts, and rules.

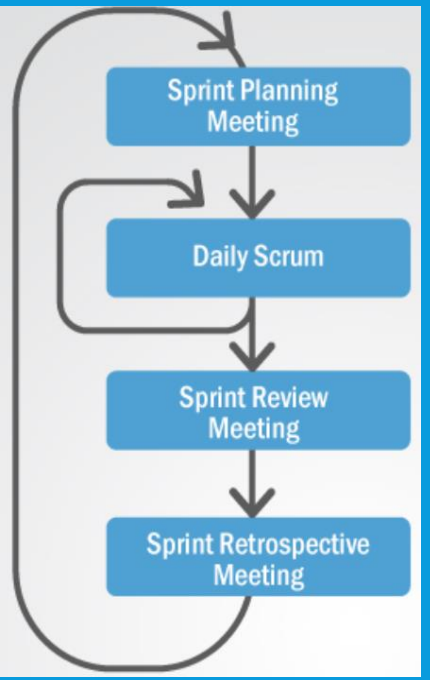
- 3 roles
- 4 artifacts
- 4 events within each sprint
- Definitions of Done

SCRUM ROLES

Waterfall	Agile / Scrum		Role
Project Owner Business Owner Project Sponsor	Product Owner		VISION - Responsible for ROI Final arbiter of requirements questions Focus: WHAT vs HOW Describes the Highest Priority stories
Project Manager	ScrumMaster		Facilitates ceremonies Removes roadblocks Protects the team
Team	Team *Usually 7 (+/- 2) people, Co-located, small teams, collaborates, self organized, cross functional, dedicated*		Does the work With the Product Owner, drives clarity to decide which stories they can commit to in a given sprint.

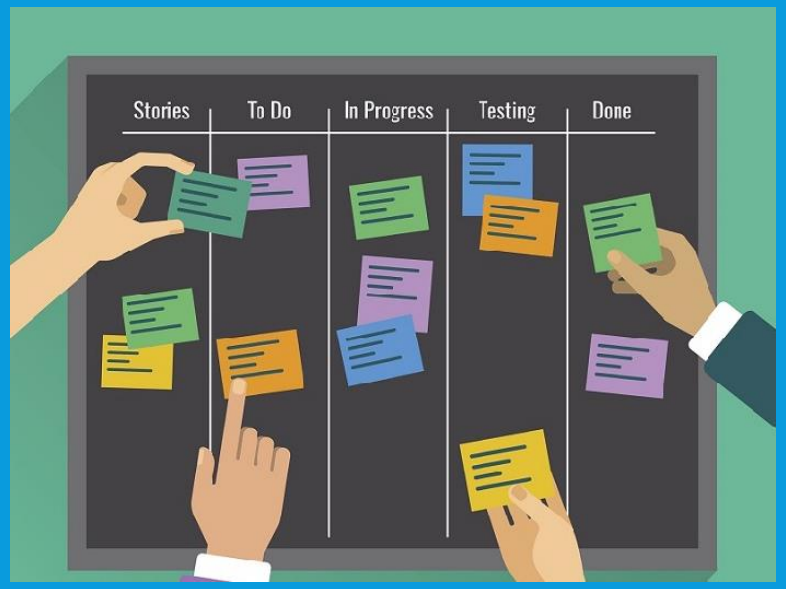
SCRUM EVENTS

Sprint = 2-4 weeks
Plan – Do – Check - Act



Event	Purpose	Frequency	Comments
Product Backlog Grooming	Prioritization What is next?	During / Before Sprint 2-4 hours	Need to have backlog prioritized for next Sprint Planning Session
Sprint Planning	Plan sprint goals, Estimate	Beginning of the Sprint 2-8 hours	Identify what User Stories will be included in Sprint, break down User Stories to tasks and estimate. Commit to the User Stories
Daily Standup	Keep each other accountable	Everyday 15 min	What happened yesterday, what will be done today, any impediments?
Sprint Review	Customer involvement	During Sprint 2-4 hours	Demo to customer, get feedback Show team accomplishments
Sprint Retrospective	Continuous Improvements	End of Sprint 1-3 hours	Review what went well, what is not working, what should we start doing

KANBAN BOARD



Team members pull from the board one task at a time

Stories	To Do	In Progress	Testing	Done
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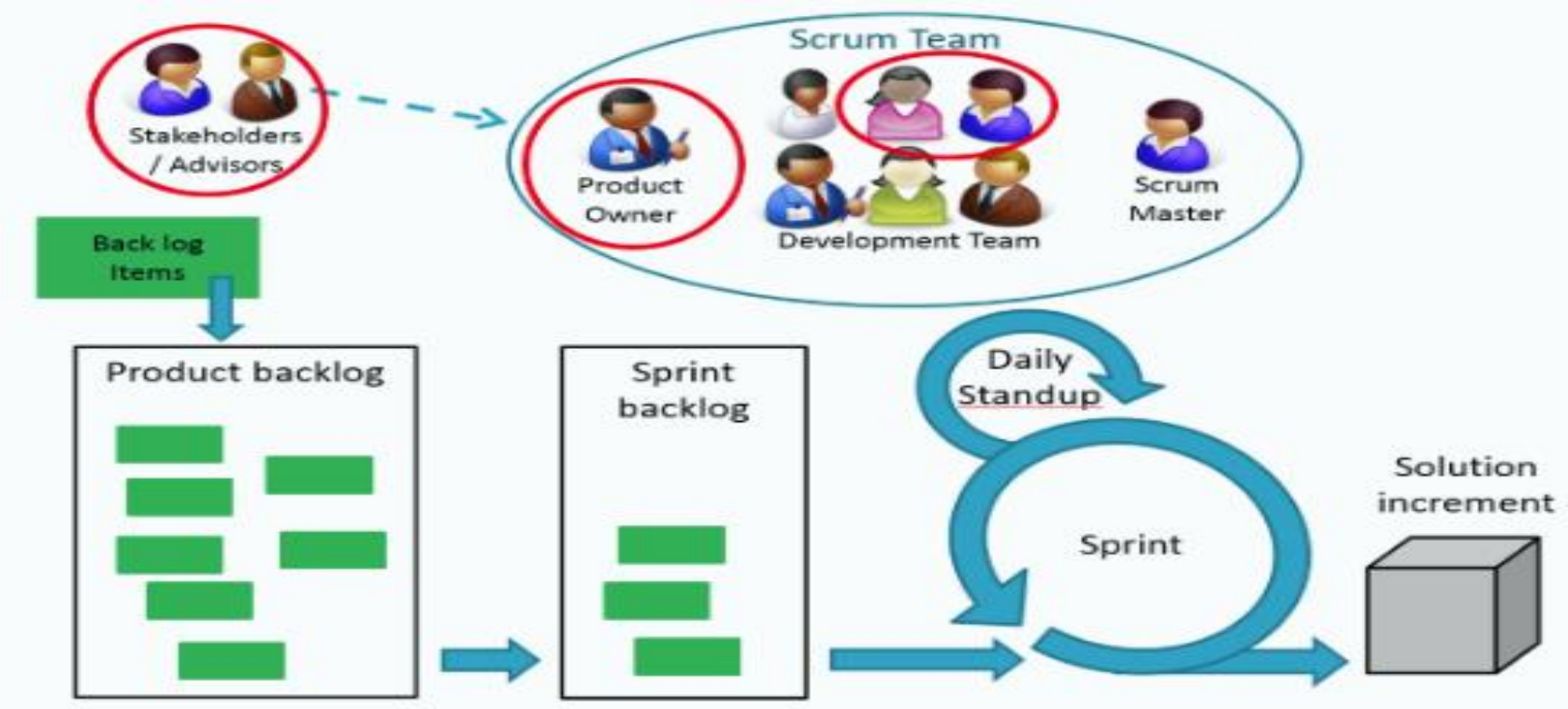
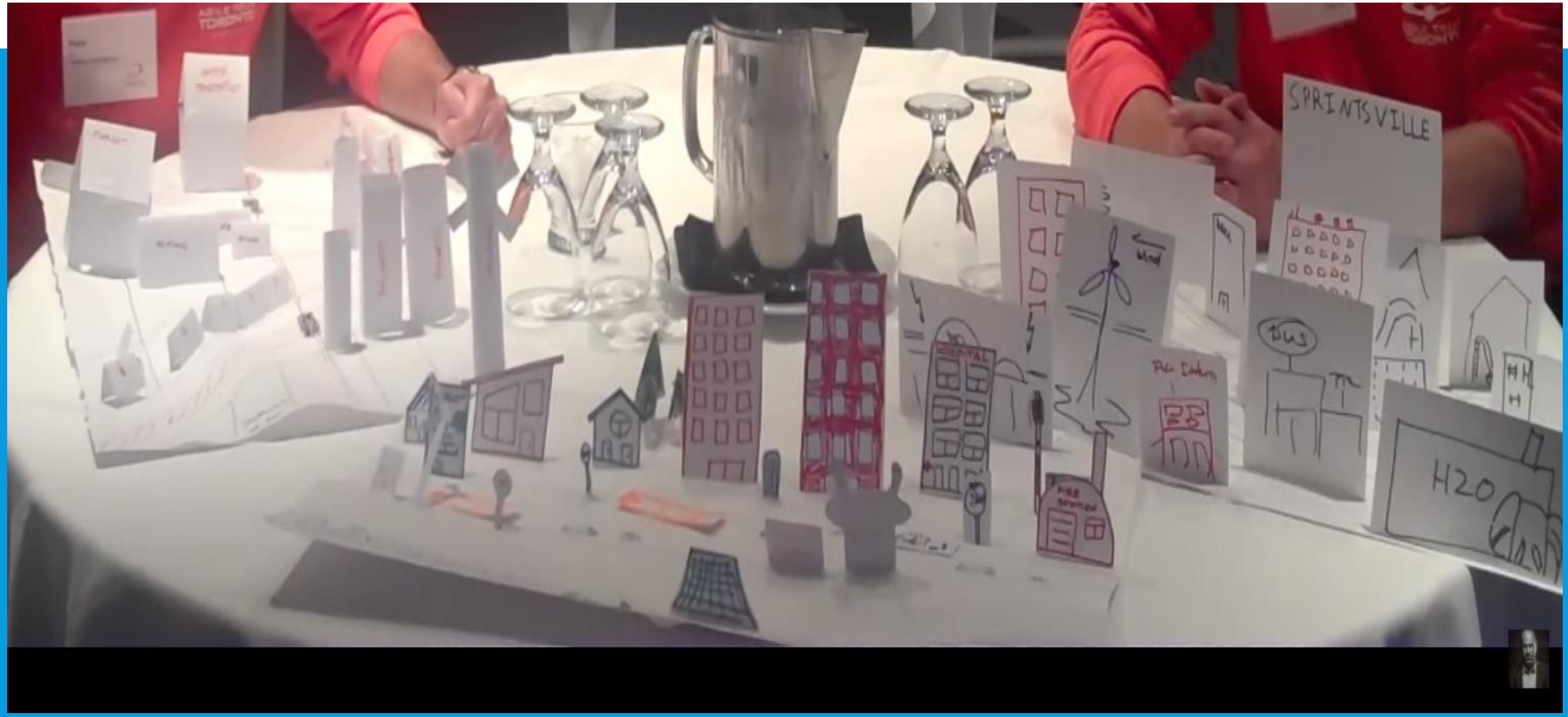
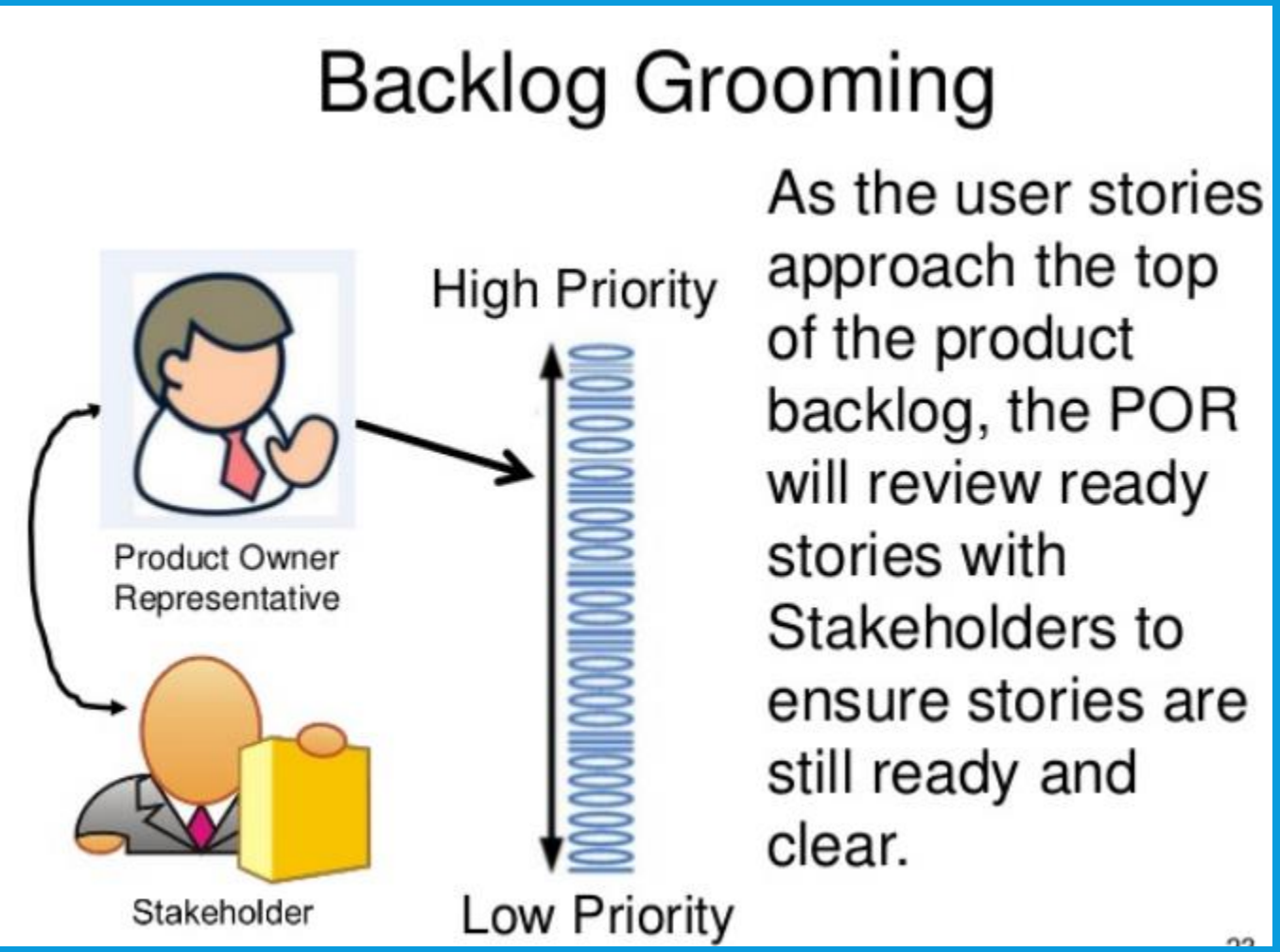


1 Product Backlog: Organize Team - Build list of Items, prioritize
2. Sprint Planning Estimate tasks for top priority items
3. Day in the Life - Day 1 - Start your sprint
4. Day in the Life Day 2 – Continue through your sprint
5. Day in the Life Day 3 – Continue through your sprint
6. Sprint Retrospective Inspect & Adapt Team Processes

TEAM PROJECT - BUILD "SPRINTSVILLE"



PRODUCT BACKLOG GROOMING



- Usually a separate meeting, approx. 2 hours
- Decomposition of large PBI's into smaller ones
- Estimate effort (Story Points)
- Clarification of requirements
- Prioritize

PRODUCT BACKLOG GROOMING USER STORY

- Independent
- Negotiable
- Valuable
- Estimable
- Small
- Testable

As a < type of user >, I want < some goal > so that < some reason >.

Apartment Building:

As a resident of Sprintsville, I want to live in an apartment building close to my office so that I can walk to work.

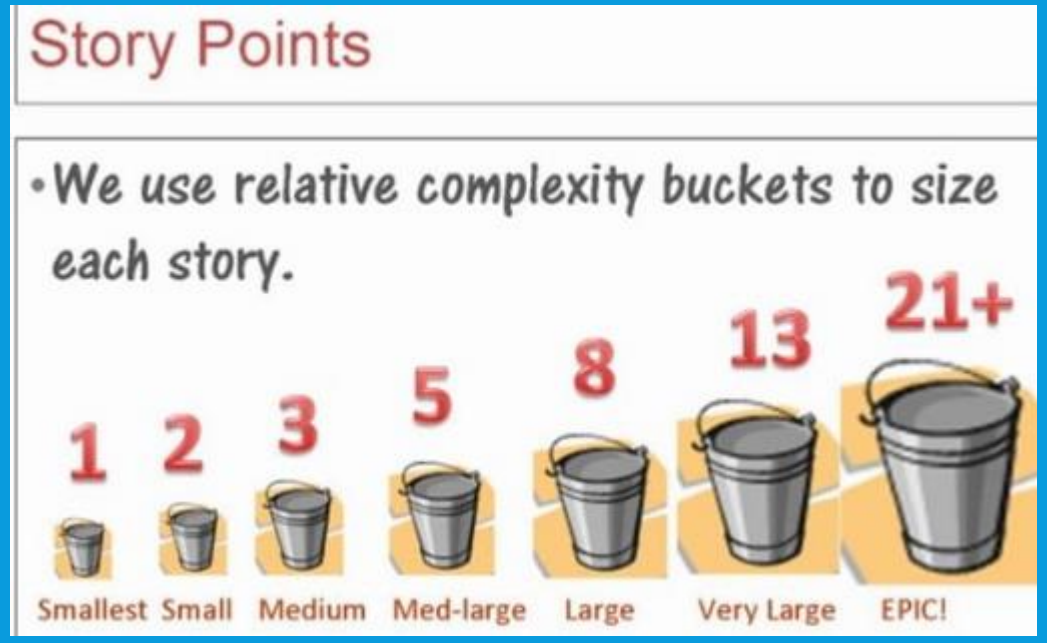
Acceptance Criteria:

- Building is at least 5 floors
- Apartments have small decks off patio door

PRODUCT BACKLOG GROOMING
USER STORY POINTS

- User Stories – estimated in Story Points (Product Backlog Grooming)
- Tasks – estimated in hours (Sprint Planning)

Start estimation with T-Shirt sizes and later transfer to points.



Fibonacci Sequence = Each number is 60% increase

PRODUCT BACKLOG GROOMING
PROJECT TIME – 3 MINUTES

1. Organize team: Product Owner, ScrumMaster, and working team
2. Brainstorm user stories to add to Product Backlog
3. Product Owner – Prioritizes backlog
4. Team estimates (S,M.L) top user stories and figures out how much they can commit to.
5. Identify the line – What stories will you complete in Sprint 1?

You will have (3) Days in your Sprint Day=4 minutes

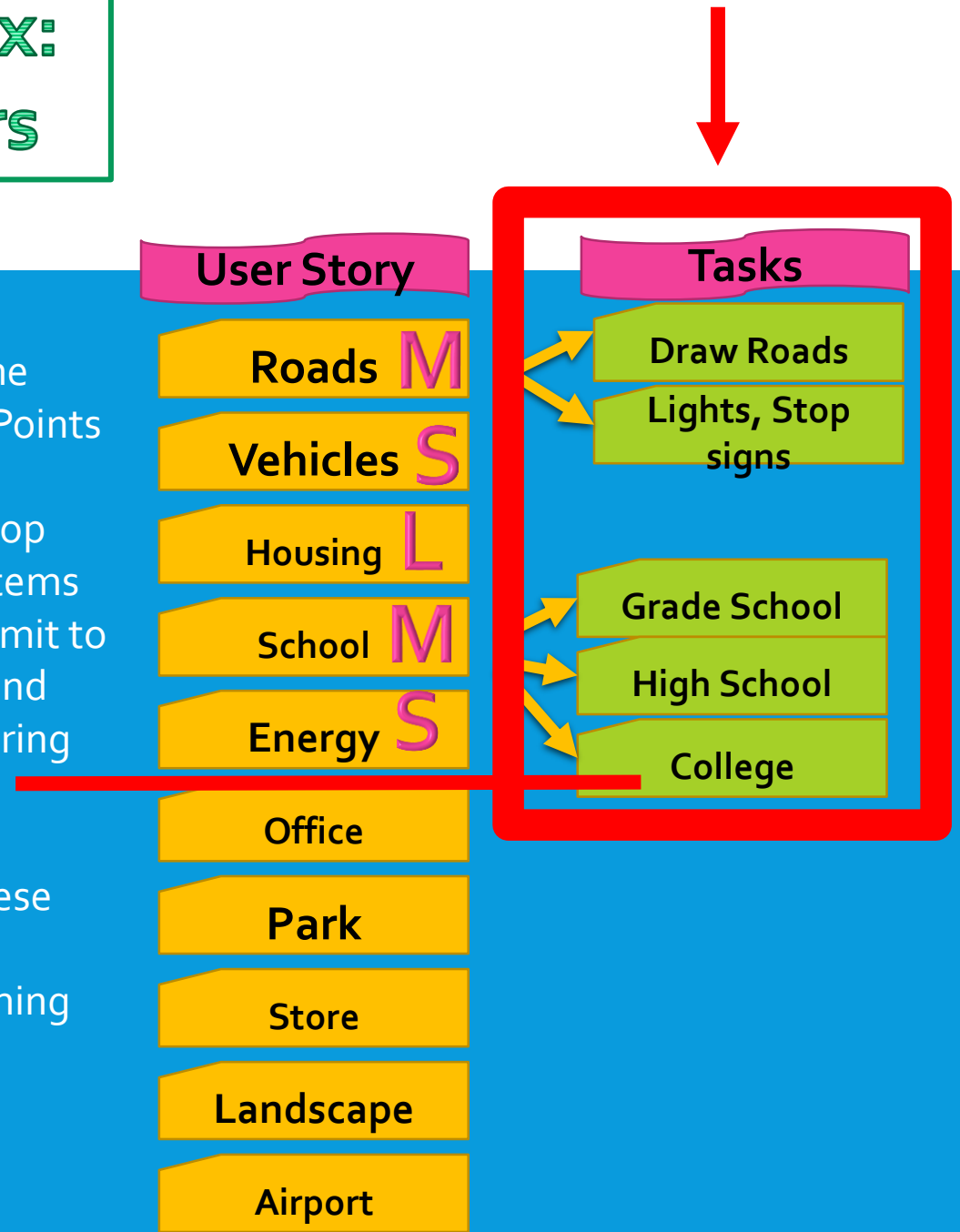
Move your stories to "NEW" column in your KANBAN board

SPRINT BACKLOG

SPRINT PLANNING

Timebox: 4 hours

- Team estimates the PBI's using Story Points
- Team selects the top Product Backlog items that they can commit to during the sprint and moves them to Spring Backlog.
- During Sprint – these items are the commitment, nothing gets added.



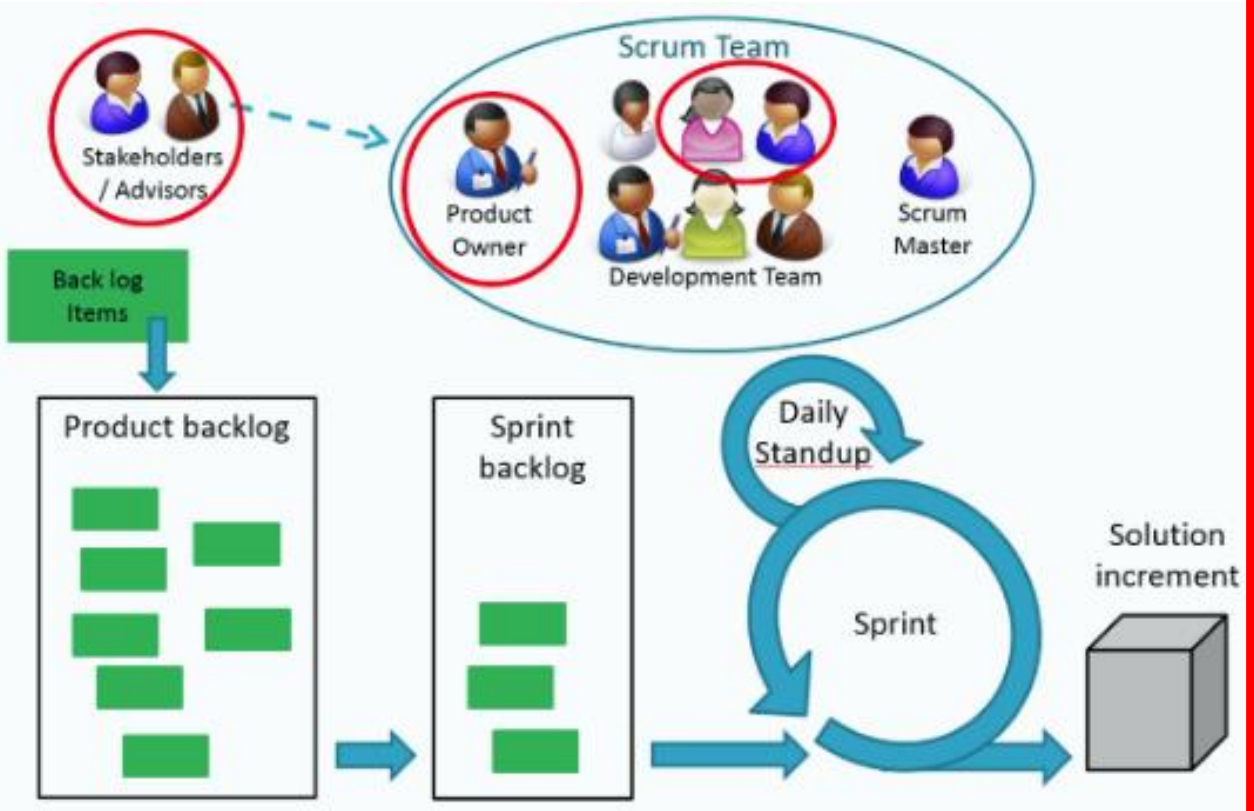
SPRINT PLANNING
PROJECT TIME – 3 MINUTES

Using Committed User Stories for the sprint –

- Create Tasks
- Estimate tasks in time

Commit to the Sprint

- 3 days – 4 min/day



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TIME TO START YOUR SPRINT

SPRINT (DAILY STANDUP, ACTIVITIES)
PROJECT TIME – 4 MINUTES DAY 1

Daily Scrum: 1) What to do today

Work Time: Each team member takes a task and moves it to "In Progress"
Too much WIP is not efficient. Tasks should be pulled by team member when they are ready to work on it

- **ScrumMaster** protects team from Product Owner asking for more work, remove roadblocks
- **Product Owner** – available during Sprint to make final call about requirements / questions.

Meet with Product Owner – Sprint Review – PO declares "DONE"

Update KANBAN Board

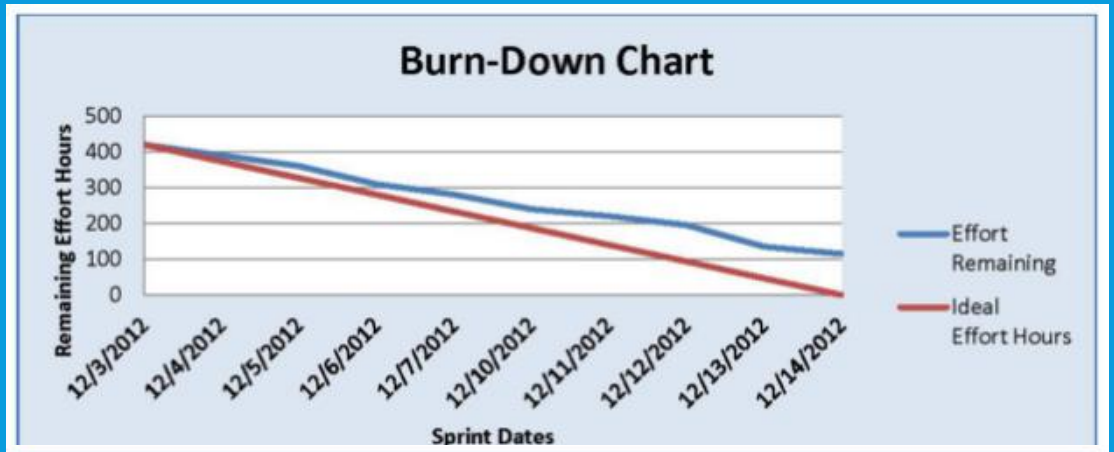
Daily Standup	Work Time
• <1 min	• 3 minutes

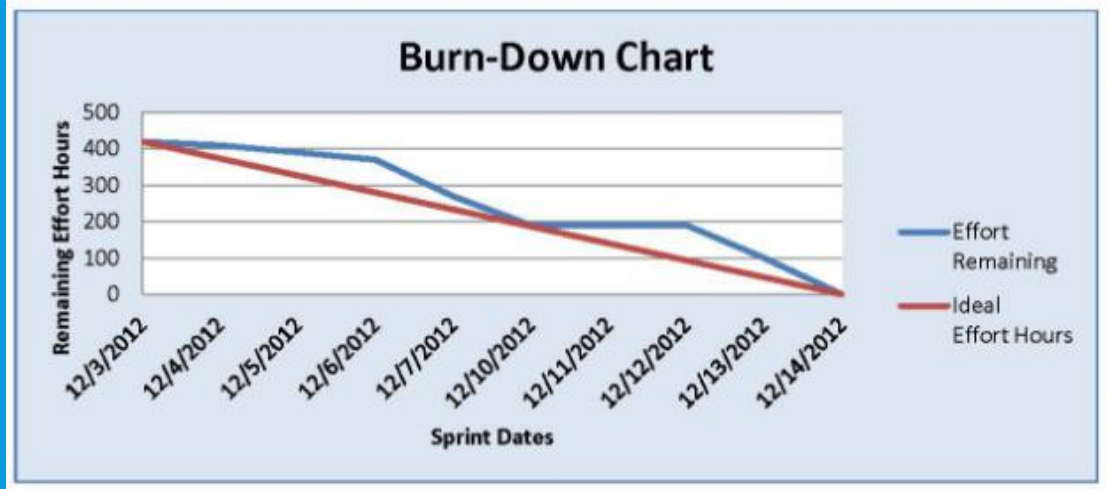
STOP – DAY 1 OVER

BurnDown Charts – How much work is left in Sprint?

Story Name	Task No	Task Description	Status	Owner	Estimated Effort (in Hours)	Effort Remaining (in Hours)
Story 1	1	POC for Story 1	In Progress	Developer 1	10	6
	2	Requirement Clarification with PO	Closed	BA	8	0
	3	Develop modules	Open	Developer2	12	12

Sprint Duration – 2 weeks
Team Size - 7
Hours/Day – 6
Total Capacity – 420 hours





SPRINT (DAILY STANDUP, ACTIVITIES)
PROJECT TIME – 4 MINUTES DAY 2

Daily Scrum: 1) What did I do yesterday 2) What will I do today 3) Any issues?

Work Time: Each team member takes a task and moves it to "In Progress"
Too much WIP is not efficient. Tasks should be pulled by team member when they are ready to work on it

- **ScrumMaster** protects team from Product Owner asking for more work, remove roadblocks
- **Product Owner** – available during Sprint to make final call about requirements / questions.

Meet with Product Owner – Sprint Review – PO declares "DONE"

Update KANBAN Board

Daily Standup

- <1 min

Work Time

- 3 minutes

SPRINT (DAILY STANDUP, ACTIVITIES)
PROJECT TIME – 4 MINUTES DAY 3

Daily Scrum: 1) What did I do yesterday 2) What will I do today 3) Any issues?

Work Time: Each team member takes a task and moves it to "In Progress"
Too much WIP is not efficient. Tasks should be pulled by team member when they are ready to work on it

- **ScrumMaster** protects team from Product Owner asking for more work, remove roadblocks
- **Product Owner** – available during Sprint to make final call about requirements / questions.

Meet with Product Owner – Sprint Review – PO declares "DONE"

Update KANBAN Board

Daily Standup

- <1 min

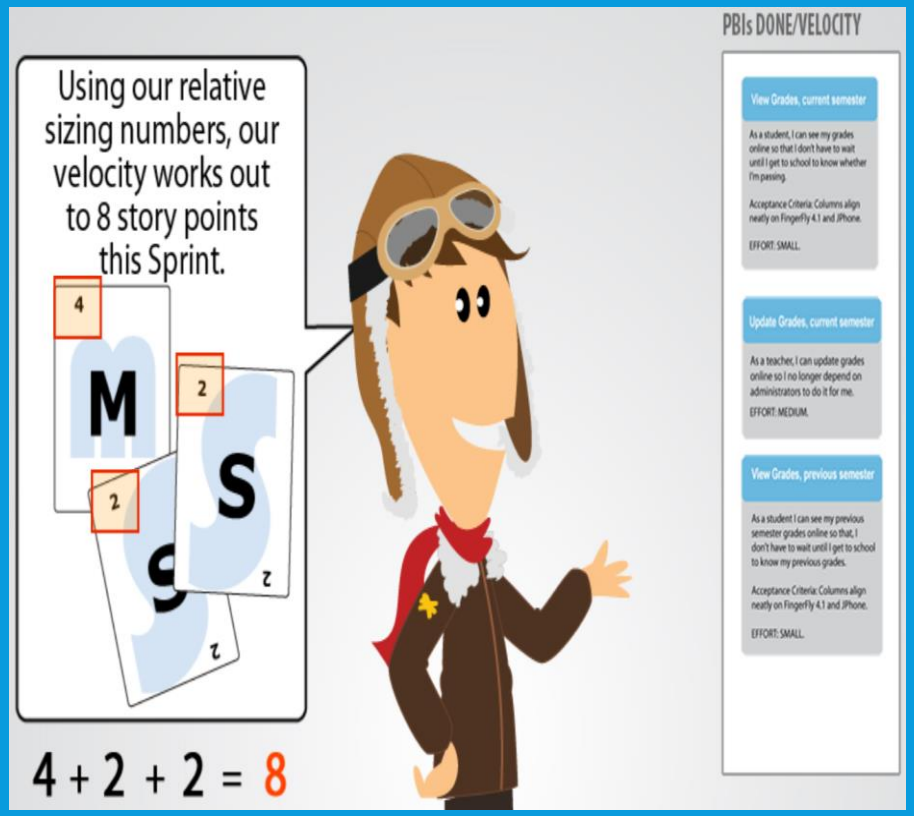
Work Time

- 3 minutes

STOP – DAY 3 OVER

Sprint is over

MEASUREMENTS - VELOCITY

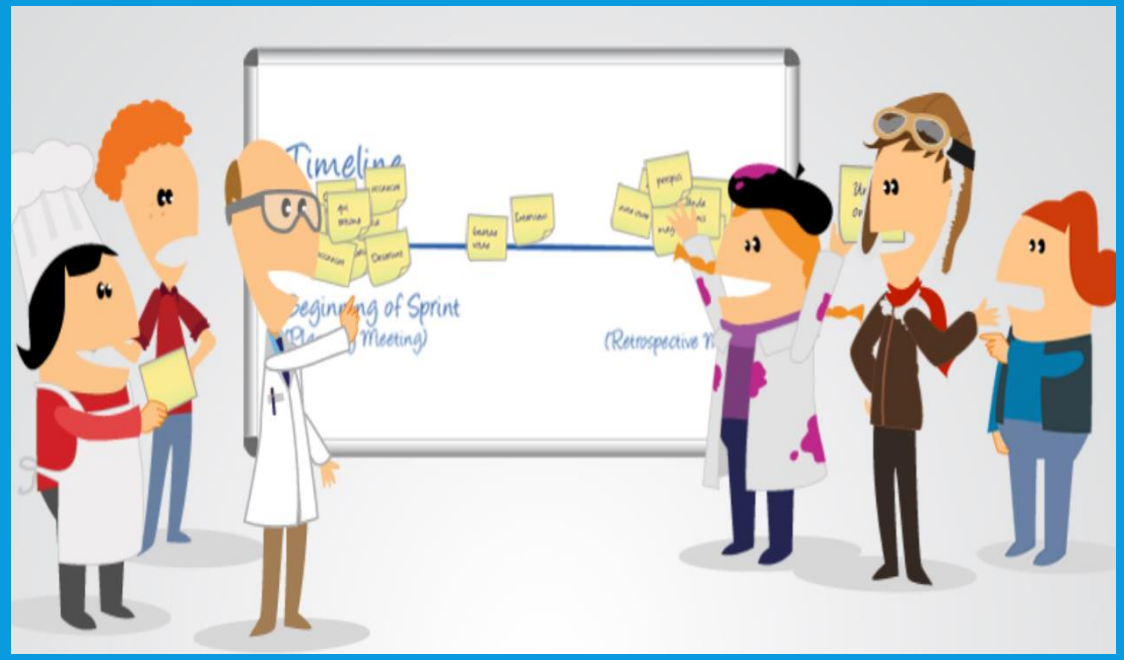


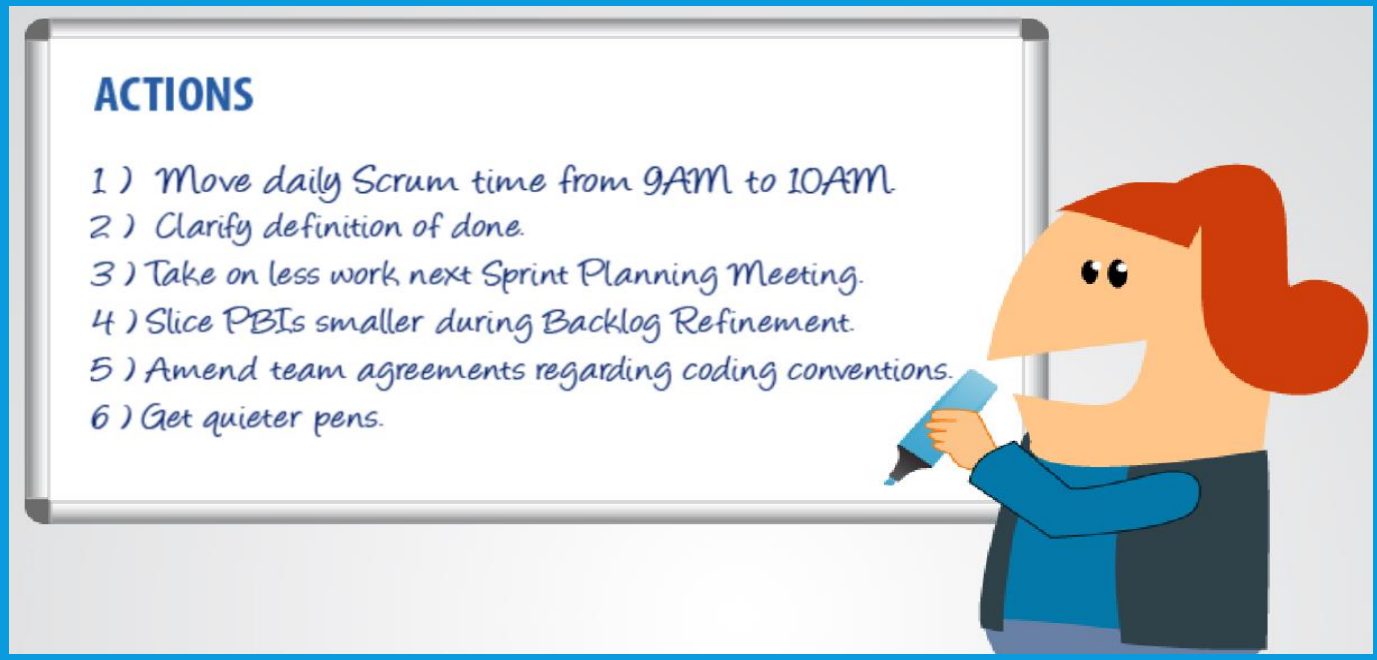
- Unfinished work – returned to Product Backlog (even almost done)
- Velocity: How many Story Points were completed in Sprint?
- Only DONE work gets counted as "Velocity" for Sprint

If Velocity stays stable over several sprints; Product Owner can use Velocity to forecast how much can be done in a Sprint

SPRINT RETROSPECTIVE

- Team to Inspect and Adapt on the PROCESS
- START, STOP, CONTINUE
- During the Sprint Reviews with the Product Owner; Inspect & Adapt was on the Product

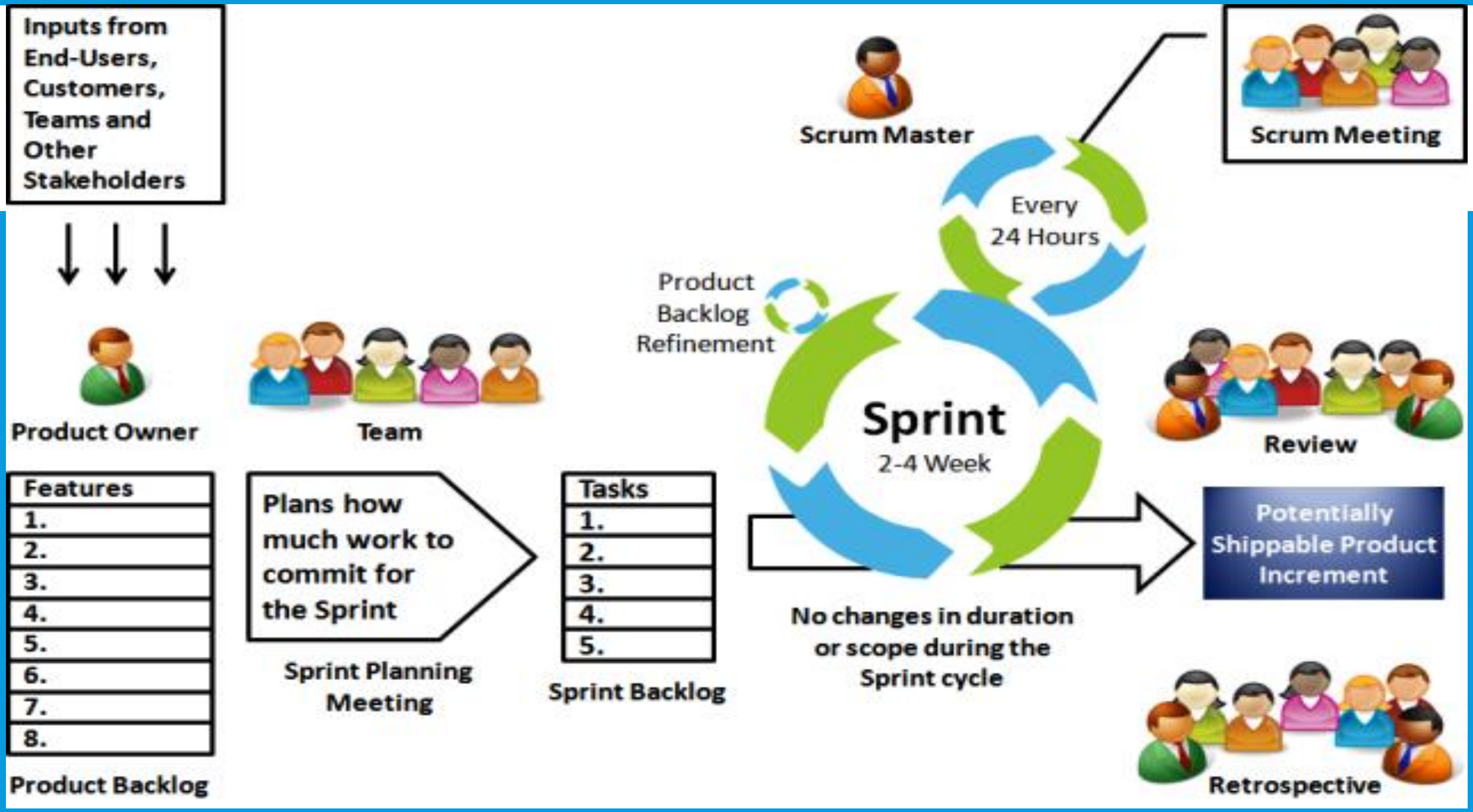




SPRINT RETROSPECTIVE
PROJECT TIME – 3 MINUTES

- Talk amongst your team
- Remember it's about improving the process

- **Start - Stop - Continue**
- 1. What should we start doing?
- 2. What need to stop doing or improving?
- 3. What went well, make sure to continue?


Inputs from End-Users, Customers, Teams and Other Stakeholders
Scrum Master
Scrum Meeting
Every 24 Hours
Product Backlog Refinement
Sprint
2-4 Week
Product Owner
Team
Review
Features
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2.
3.
4.
5.
6.
7.
8.
Product Backlog
Plans how much work to commit for the Sprint
Sprint Planning Meeting
Tasks
1.
2.
3.
4.
5.
Sprint Backlog
No changes in duration or scope during the Sprint cycle
Potentially Shippable Product Increment
Retrospective

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www.scrumstudy.com *Global Accreditation Body for Scrum and Agile Certifications*)

ScrumStudy Body of Knowledge

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https://www.scrumstudy.com/certification/scrum-fundamentals-certified

Scrum Master Certified (SMC)
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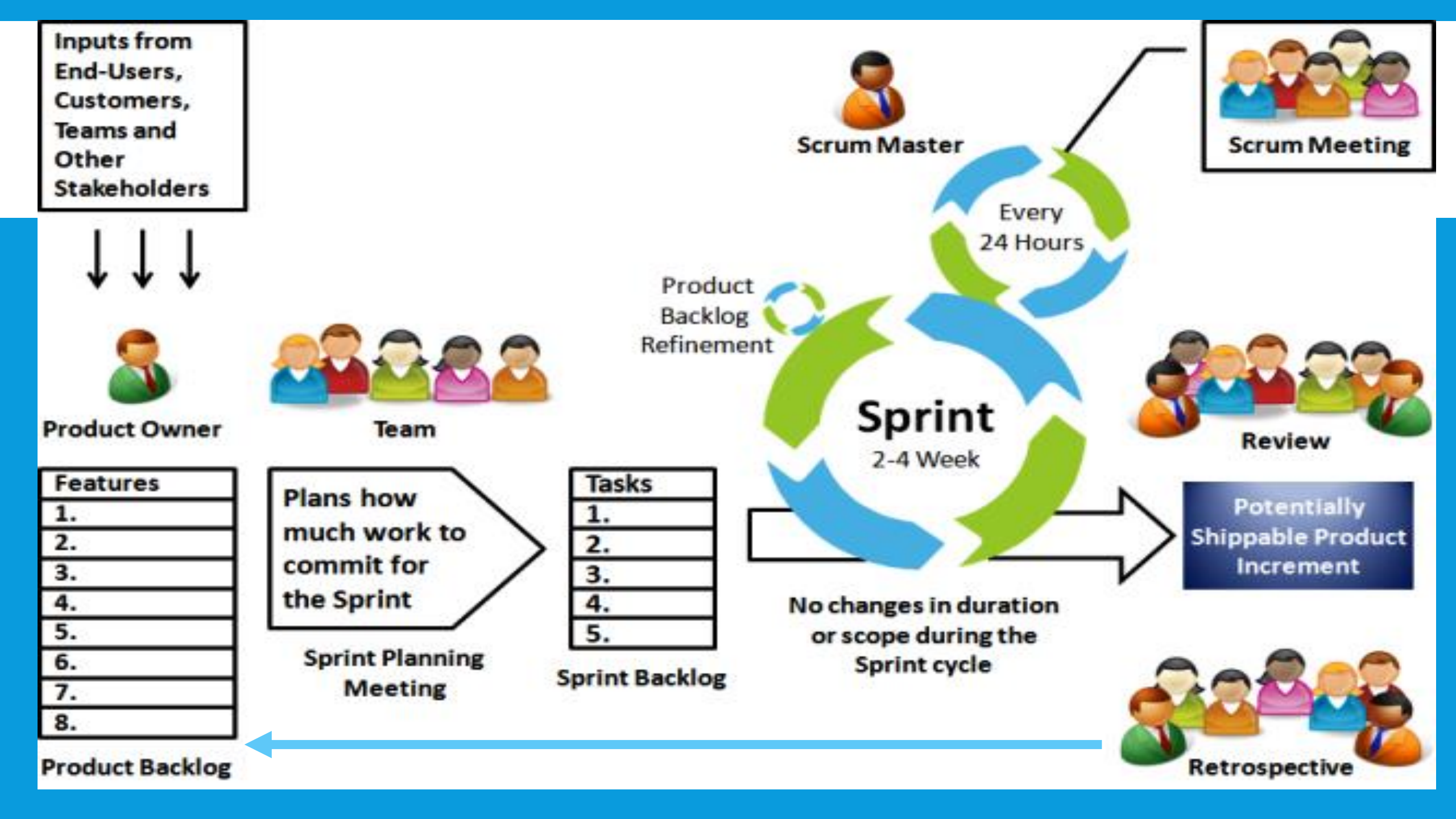
www.scrumalliance.org Certified ScrumMaster® (CSM)

Scrum Guide

Agile Online training:
https://www.collab.net/services/training/agile_e-learning

Agile Online Training
https://www.mountaingoatsoftware.com/agile/scrum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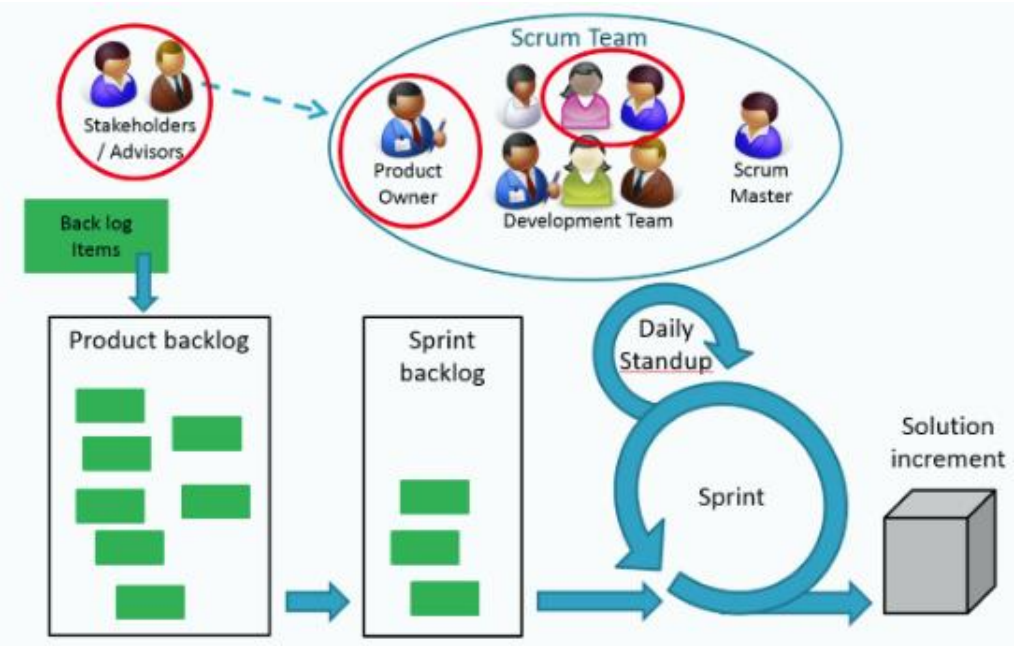

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TIMELINES

24 MINUTES PROJECT TIME

10	**Start – Kickoff**	
3	Product Backlog – Add, Prioritize	Project Time
10	Sprint Planning – User Stories, Estimating	
3	Break down 6 Features into User Stories, Estimate	Project Time
5	Sprint Ceremonies	
4	1st Sprint	Project Time
2	Reset – Stop, what's next	
4	2nd Sprint	Project Time
2	Reset – Stop, what's next	
4	3rd sprint	Project Time
3	Retrospective	
5	Group Retrospective	Project Time
5	All – Roundtable	