

Agile Transformation

Scrum in Detail

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Note: *Class notes/presentation prepared with due credit to all the references.*

Agenda

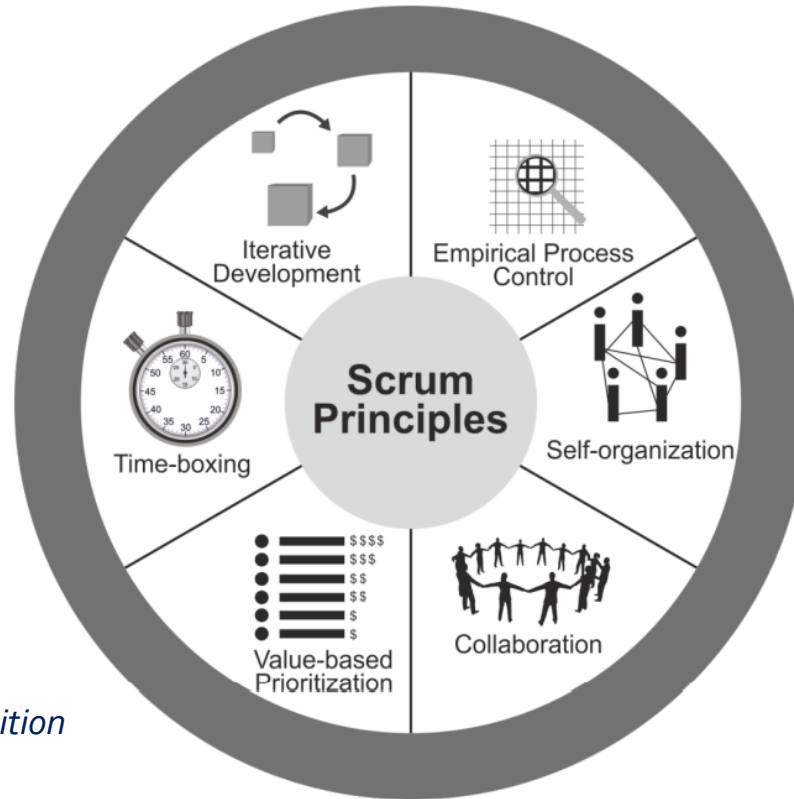
- Scrum Introduction
- SCRUM Principles
- Scrum Framework
- Scrum Roles - Organization of SCRUM
- Scrum Ceremonies
- Scrum Artifacts
- Detailed SCRUM Processes
- Scrum vs Traditional Project Management
- Desirable Traits
- User Stories
- Questions & Answers

SCRUM



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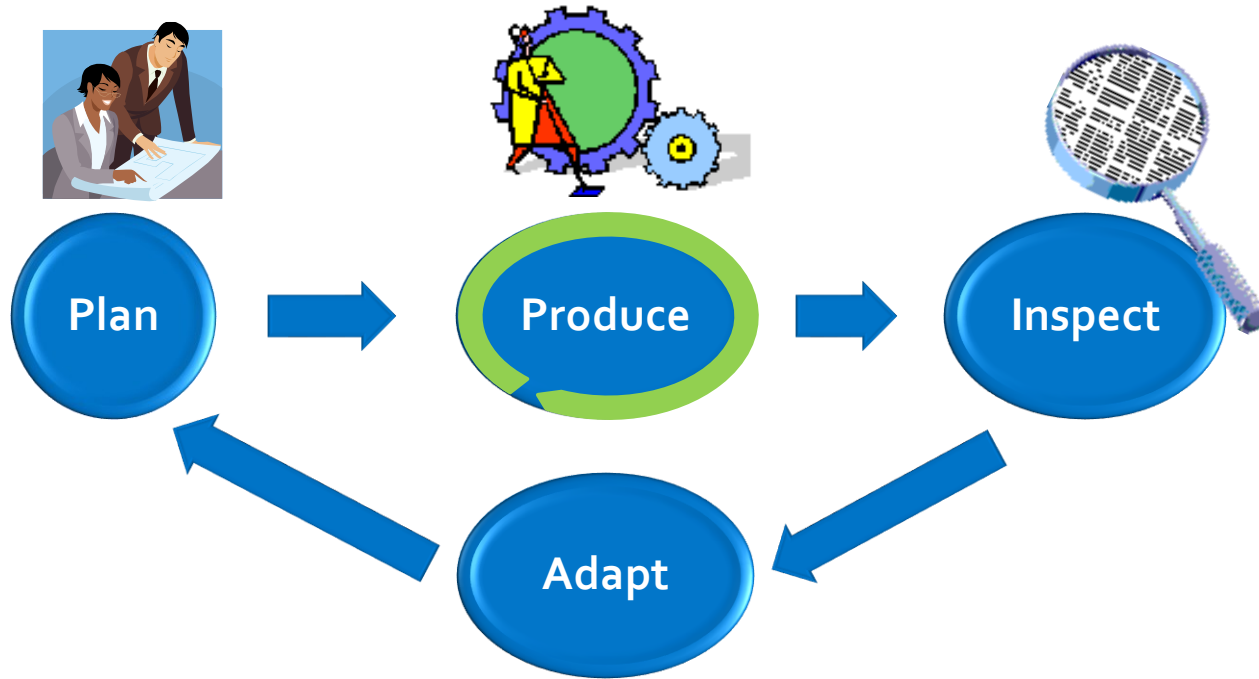
SCRUM Principles



Transparency
Inspection
Adaptation

Source: SBOK™ GUIDE, 3rd edition

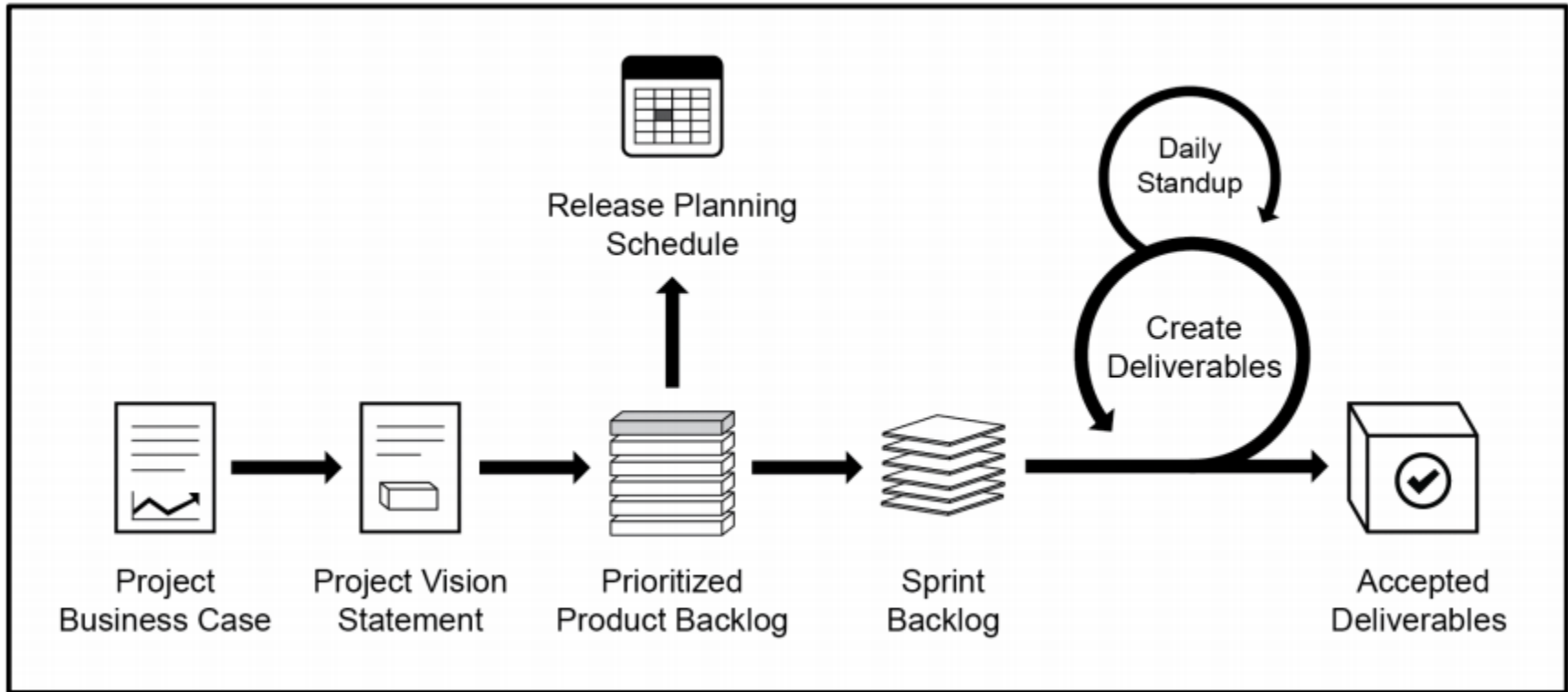
Scrum Cycle



Called as Sprint

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Scrum Framework



Source: SBOK™ GUIDE, 3rd edition

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Scrum Framework

Roles

- Product owner
- ScrumMaster
- Team

Ceremonies

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

Artifacts

- Product backlog
- Sprint backlog
- Burndown charts

Sprint Roles

Product Owner

- ✓ Define the features of the product
- ✓ 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



Product Owner

Sprint Roles

The ScrumMaster

- ✓ 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



Scrum Master

Sprint Roles

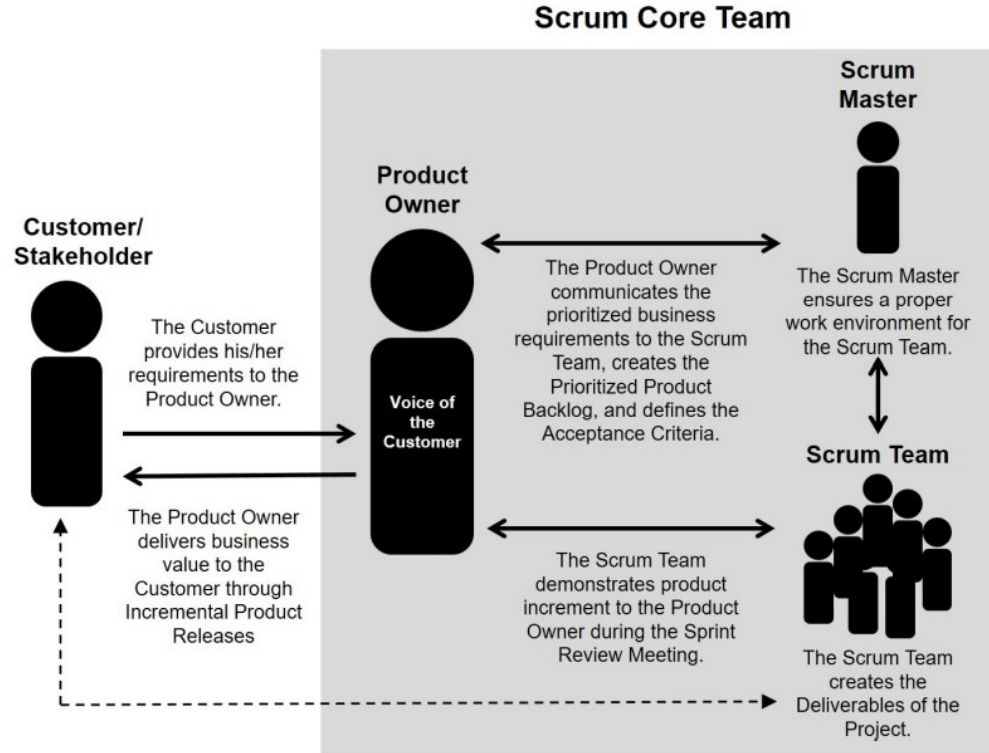
The Team

- ✓ Typically 5-9 people:
 - Cross-functional
 - Self Organizing
- ✓ Team Consists of
 - Programmers,
 - Testers,
 - User experience designers, etc.
- ✓ Members should be full-time with very few exceptions
 - like database administrator etc.,



Development Team

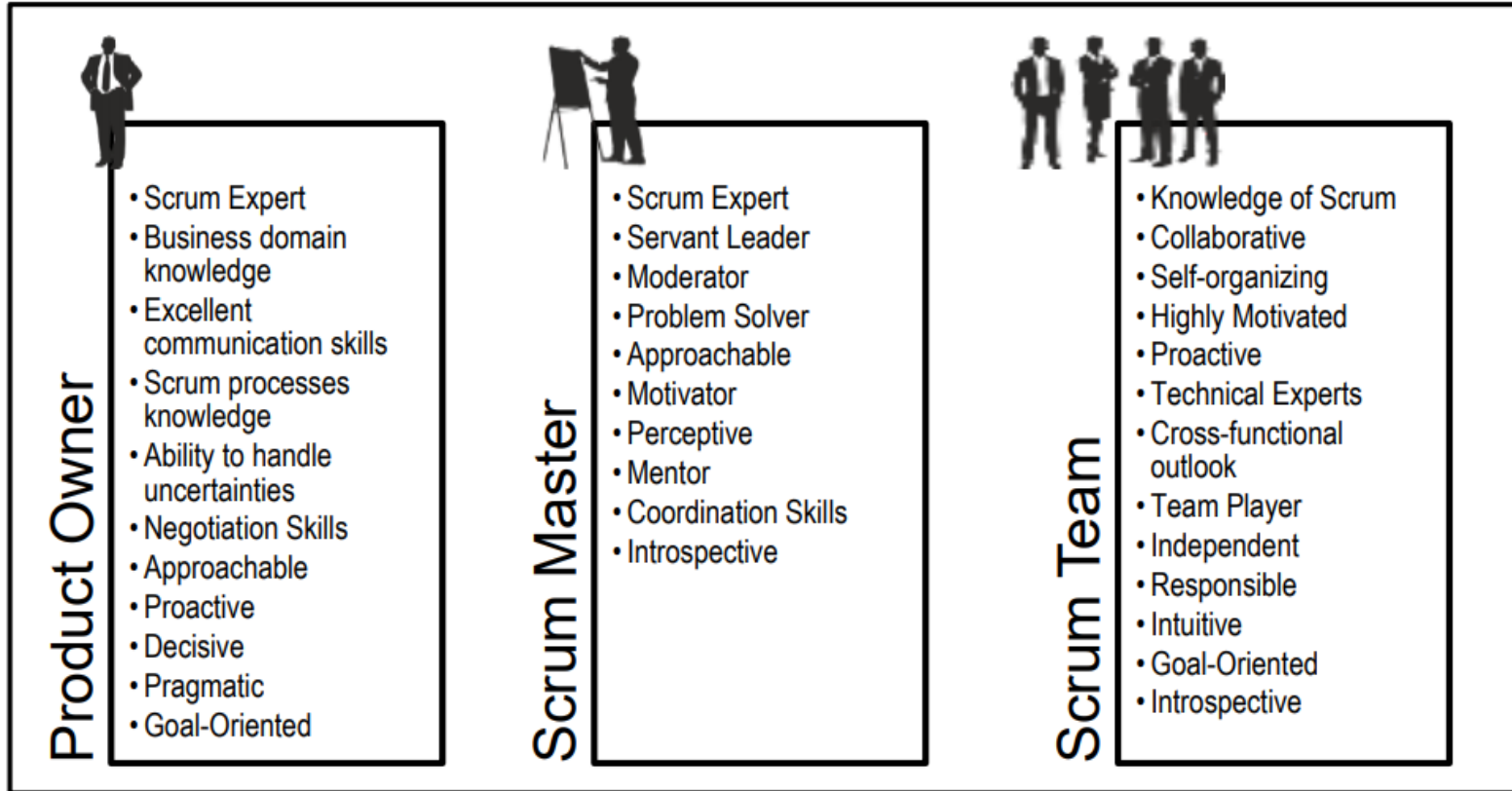
Organization of SCRUM



Source: SBOK™ GUIDE, 3rd edition

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Desirable Traits



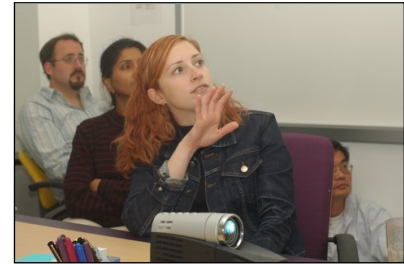
Detailed SCRUM Processes

Phase	Fundamental Scrum Processes
Initiate	<ol style="list-style-type: none">1. Create Project Vision2. Identify Scrum Master and Stakeholder(s)3. Form Scrum Team4. Develop Epic(s)5. Create Prioritized Product Backlog6. Conduct Release Planning
Plan and Estimate	<ol style="list-style-type: none">7. Create User Stories8. Estimate User Stories9. Commit User Stories10. Identify Tasks11. Estimate Tasks12. Create Sprint Backlog
Implement	<ol style="list-style-type: none">13. Create Deliverables14. Conduct Daily Standup15. Groom Prioritized Product Backlog
Review and Retrospect	<ol style="list-style-type: none">16. Demonstrate and Validate Sprint17. Retrospect Sprint
Release	<ol style="list-style-type: none">18. Ship Deliverables19. Retrospect Project

Sprint Ceremonies

Sprint Planning

- ✓ 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 ScrumMaster
- ✓ High-level design is considered



Sprint Ceremonies

Daily Scrum (Most Critical)

- ✓ 15-minutes standup meeting, Not for problem solving
- ✓ Focus on 3 questions
 - What did you do yesterday?
 - What will you do today?
 - What is stopping me?

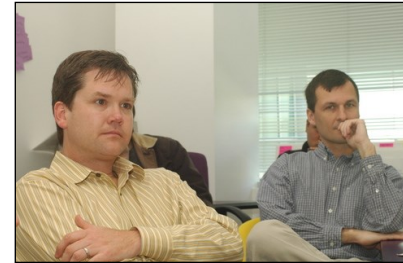


Sprint Ceremonies

Review / Retrospective (Whole team including PO)

✓Review

- Demo,
- Output/Quality Focus,
- Entire team participates,
- No PPT's



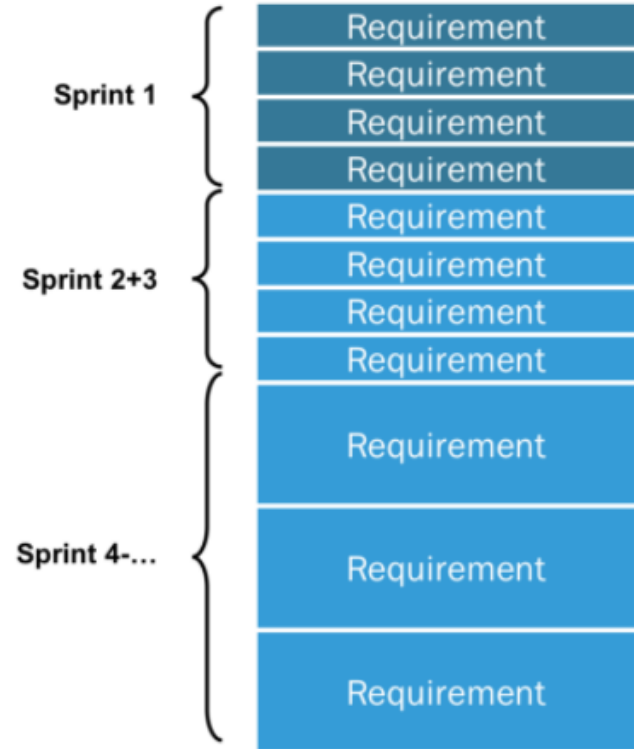
✓Retrospective

- Look at what's not-working and what is working (process focus)
- Start Doing / Stop Doing / Continue Doing

Sprint Artifacts - Product Backlog

Product Backlog

- ✓ The requirements in terms of user stories (expressed such that each item has value to the users or customers)
- ✓ Prioritized by the product owner
- ✓ Reprioritized at the start of each sprint (as needed)



Sprint Artifacts - Product Backlog

				New Estimates Remaining at end of Sprint...					
Priority	Item	Details (wiki URL)	Initial Size Estimate	1	2	3	4	5	6
1	As a buyer, I want to place a book in a shopping cart (see UI sketches on wiki page)	...	5						
2	As a buyer, I want to remove a book in a shopping cart	...	2						
3	Improve transaction processing performance (see target performance metrics on wiki)	...	13						
4	Investigate solutions for speeding up credit card validation (see target performance metrics on wiki)	...	20						
5	Upgrade all servers to Apache 2.2.3	...	13						
6	Diagnose and fix the order processing script errors (bugzilla ID 14823)	...	3						
7	As a shopper, I want to create and save a wish list	...	40						
8	As a shopper, I want to to add or delete items on my wish list	...	20						

User Story Estimation

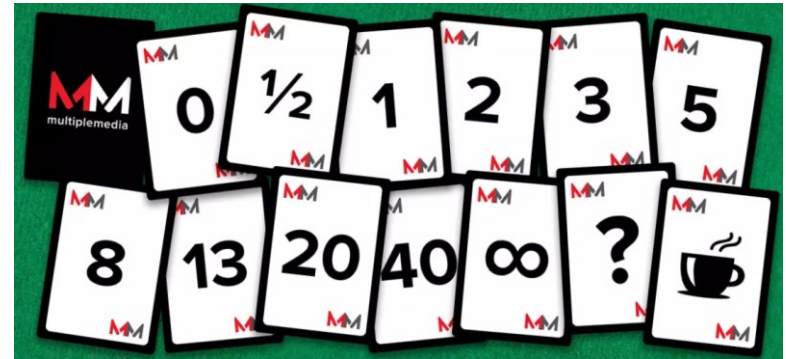
Planning Poker

As you refine your requirements, you need to refine your estimates as well. *Planning Poker* is a technique to determine user story size and to build consensus with the development team members. Planning poker is a popular and straightforward approach to estimating story size.

To play planning poker, you need a deck of cards with point values on them. There are free online planning poker tools and mobile apps, or you

can make your own with index cards and markers. The numbers on the cards are usually from the Fibonacci sequence.

Only the development team plays estimation poker. The team lead and product owner don't get a deck and don't provide estimates. However, the team lead can act as a facilitator, and the product owner reads the user stories and provides details on user stories as needed.



User Story Estimation

Wideband Delphi

Individuals within a team anonymously provide estimations

The team then discusses the factors that influenced their estimates and proceed to a second round of estimation

Fist of Five

One finger: I disagree with the group's conclusion and have major concerns.

Two fingers: I disagree with the group's conclusion and would like to discuss some minor issues.

Three fingers: I am not sure and would like to go with the group's consensus conclusion.

Four fingers: I agree with the group's conclusion and would like to discuss some minor issues.

Five fingers: I wholeheartedly agree with the group's conclusion.

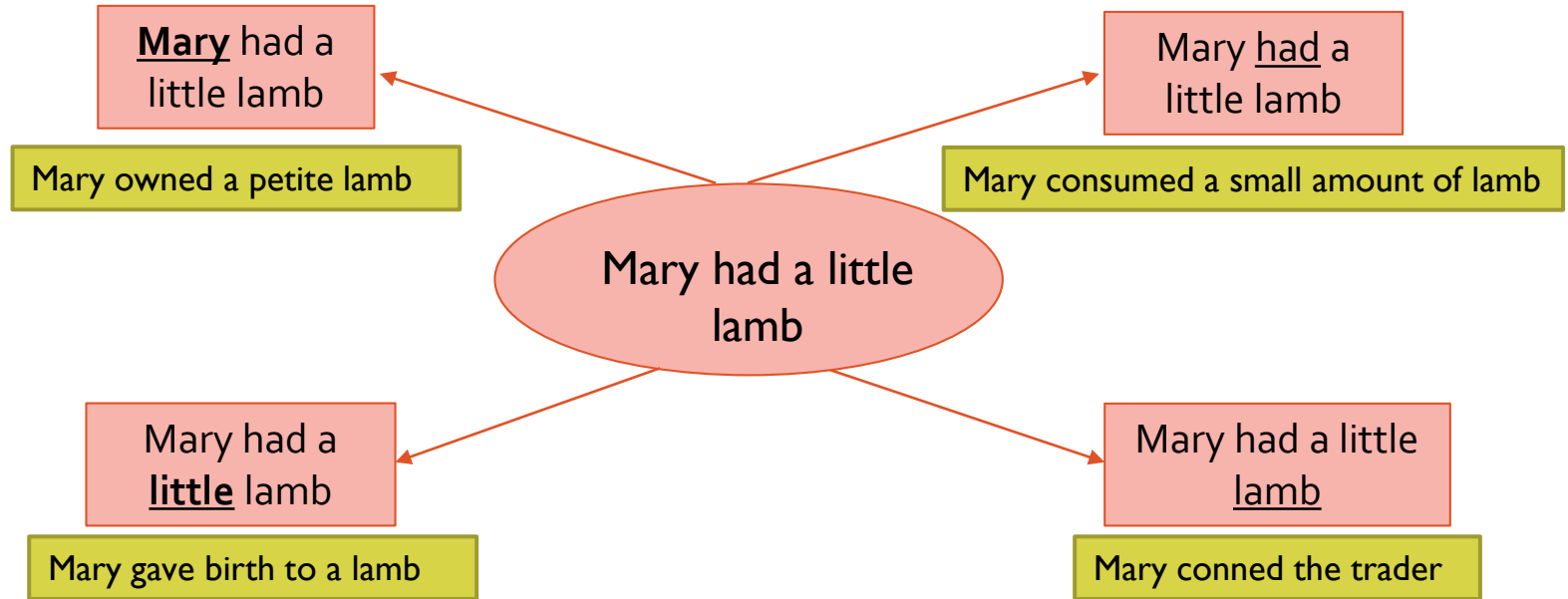
Affinity Estimation

Indicate relative size – T Shirt Size (XS, S, M, L, XL, XXL, XXXL), Dog Breed



Why User Stories?

- Software requirements have communication problems
- Requirements suffer from natural language problems



What is user story?

- ✓ Describes the functionality that is valuable to
 - User of the system
 - Purchaser of the system

- ✓ Suggested Format

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

- ✓ Example

As a online user who has booked a train ticket, I want to cancel my booking, so that I can receive refund

- Simple means of communicating requirements of customers
- Helps get information as early and as often possible

How to write a user story?

✓Form

- Card
- Confirmation(Acceptance criteria)
- Conversation

As a **online user** who has booked a train ticket, I want **to cancel my booking**, so that I can **receive refund**

Acceptance Criteria:

- Verify that ticket price minus applicable cancellation fee is refunded to credit card
- Verify that the cancellation fee percentage is as per the difference between the date of cancellation and date of travel
- Verify that there is no refund in case of Tatkal tickets
- Verify that confirmation email is sent
- Verify that seat reservation is released

User story – Acceptance Criteria

- ✓ Used to express tests that can be used to determine if a story is completely implemented
- ✓ Written as part of the story creation by the product owner
- ✓ Can be converted to full-fledged tests
- ✓ Incomplete acceptance criteria might create problems in clear understanding of the story by developers and may result in developed code not being inline with customer expectation
- ✓ Additional notes may be written at the back of the card

Sample User Story

ID	RoadMap Item	Story points
US-01	Adjust payment amount-Increase	3
As a/an...	I want ...	So that
As an online user	I want to be able to increase the actual payment amount	so that the final amount is listed correctly
Acceptance Criteria		
<ol style="list-style-type: none">1. User can add the appropriate adjustment2. When the adjustment amount updates the actual payment amount and balance due amount on the “view payment” screen3. When Final Amount shows the correct payment amount		

INVEST in User Stories



Related Terminology

- Epic
- Theme
- Feature

Advantages of User Stories

- ✓ Communication conflict between stakeholders to be handled
- ✓ Make things simpler
- ✓ Postpone details till just before implementation
- ✓ Collect requirements early and frequently

SWITCH TO USER STORIES

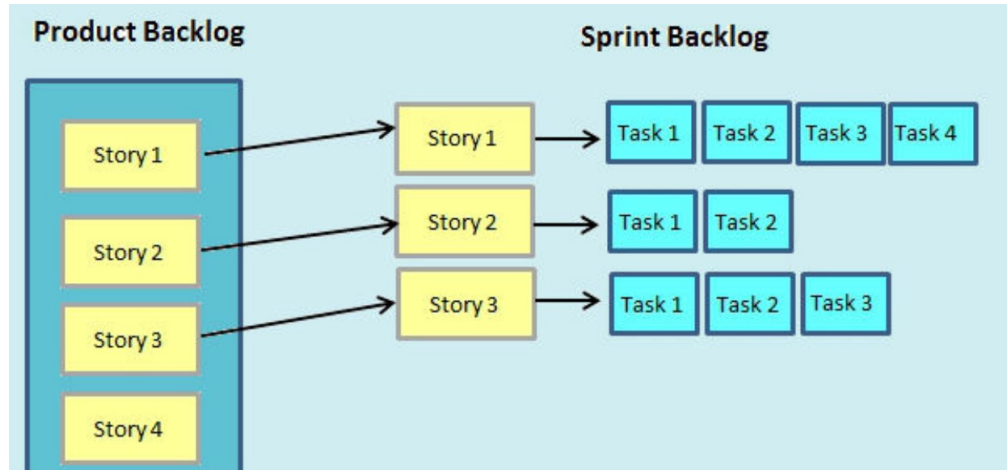
Sprint Artifacts - Product Backlog



Sprint Artifacts - Sprint Backlog

Sprint Backlog

- ✓ Detailed level planning for a Sprint
 - Individuals sign up for work of their own choosing
- ✓ Work is never assigned
- ✓ Work for the sprint emerges



Sprint Duration & Metrics

Factors influencing Sprint duration

- ✓ Risk Appetite and Market viability - Urgency of release
- ✓ Overall length of the release
- ✓ Uncertainty
- ✓ Complexity involved

Metrics used in Sprint

- **Velocity**—represents the number of User Stories or number of functionalities delivered in a single Sprint.
- **Business value delivered**—measures the value of the User Stories delivered from the business perspective.
- **Number of stories**—refers to how many User Stories are delivered as part of a single Sprint. It can be expressed in terms of simple count or weighted count.

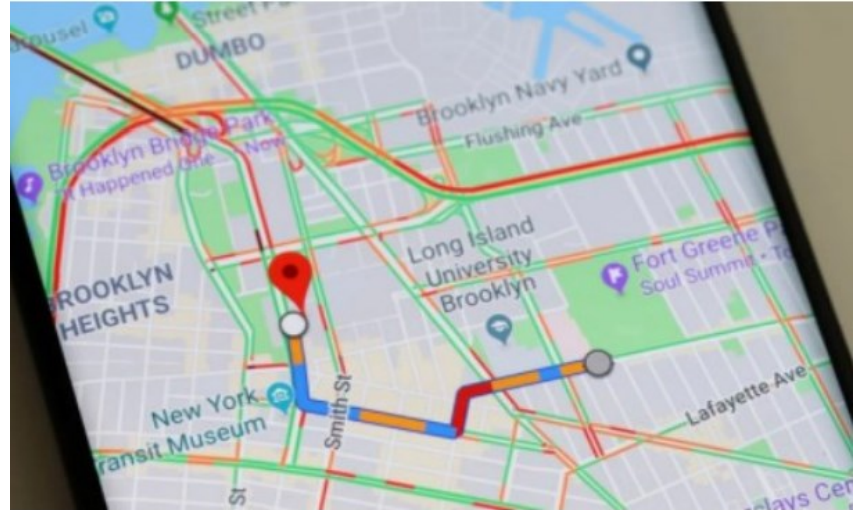
Release Planning & Sprint Planning

Release Planning



- From the velocity
- Re-use velocity ?
 - ✓ When team technology are same

Sprint Planning

- Team Capacity
- Leave Considerations



Sprint Artifacts – Scrum Board

Stories	To Do	In Progress	Testing	Done
1				
2				
3				
4				

References

- ✓ Agile Project Management with Azure DevOps - Concepts, Templates, and Metrics by Joachim Rossberg, Apress Publishing.
- ✓ Agile Product Management with Scrum - Creating Products that customers love by Roman Pichler, Pearson Publishing.
- ✓ A Guide to the SCRUM BODY OF KNOWLEDGE (SBOK™ GUIDE), Third Edition
- ✓ THE SCRUM PRIMER, A Lightweight Guide to the Theory and Practice of Scrum , Ver 2.0

THANK YOU

