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Successful Scrum Adoption

Guidance for Organization – Scaling Scrum

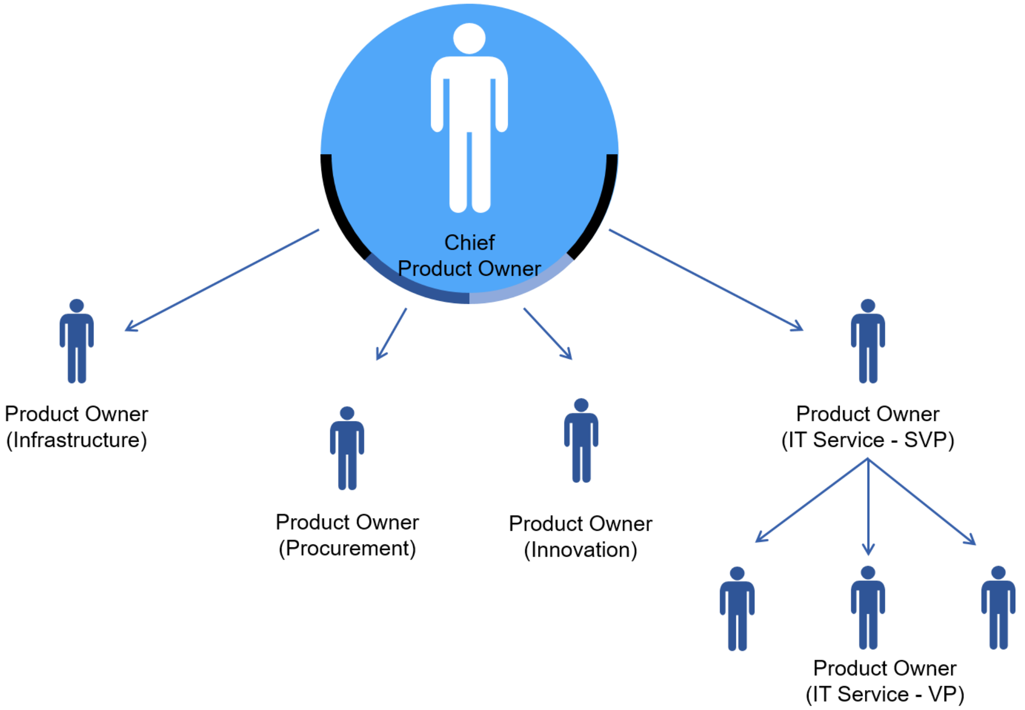
- Let us explore how we can use Scrum successfully on a large, multi-team project and the challenges that may arise.

Scaling the Product Owner

- On a large project with multiple teams, the Product Owner role is too big for one person.
- As the project grows and multiple teams are added, each team should ideally have its own Product Owner.

Chief Product Owner

- When multiple teams are involved, a hierarchy of Product Owners can be used as indicated below.
- One Product Owner can act as Chief Product Owner. He or she oversees the Product Vision and operates on top.
- This Chief Product Owner guides the other Product Owners. The Chief Product Owner communicates with other teams and works at optimizing project-wide progress.



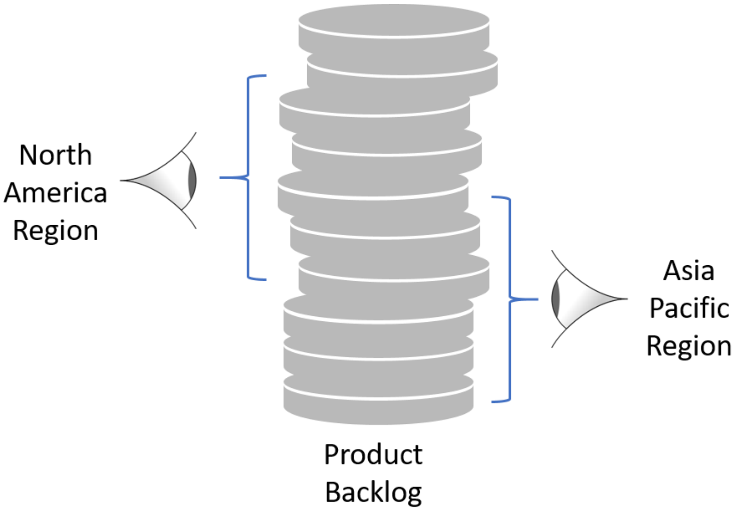
- In this diagram, the 2nd level Product Owners can be called Product Line Owners.
- The 3rd level Product Owners will be called Product Owners.

Working with Large Product Backlog

- When multiple teams are working on a large project, teams may be in a dilemma over Product Backlog, such as number of Product Backlogs required and the size of Product Backlog.

One Product, one Backlog

- If all these multiple teams are developing ***one product***, then there should be ***one Product Backlog***.
- When multiple Product Backlogs exist, the prioritization of these items may create confusion.
- The Chief Product Owner will focus on this one Product Backlog.
- When multiple Product Owners are working on a single Product Backlog, views can be created for each Product Owner. A view groups related features together to correspond to a Product Owner's perspective.



- Imagine development of a software system that will be used across the globe.
- All teams will use the single Product Backlog.
- Multiple views can be created, as given in diagram above, for specific regions.

Reasonable size of the Product Backlog

- A single Product Backlog for a large project will contain a huge number of User Stories, making it unmanageable.
- As per Robin Dunbar, the human brain can only remember 150 members in a social relationship (source: https://en.wikipedia.org/wiki/Dunbar%27s_number)

- From this suggestion, a large Product Backlog with **100 to 150** items is manageable.
- The following two ways can be used to keep the backlog manageable.

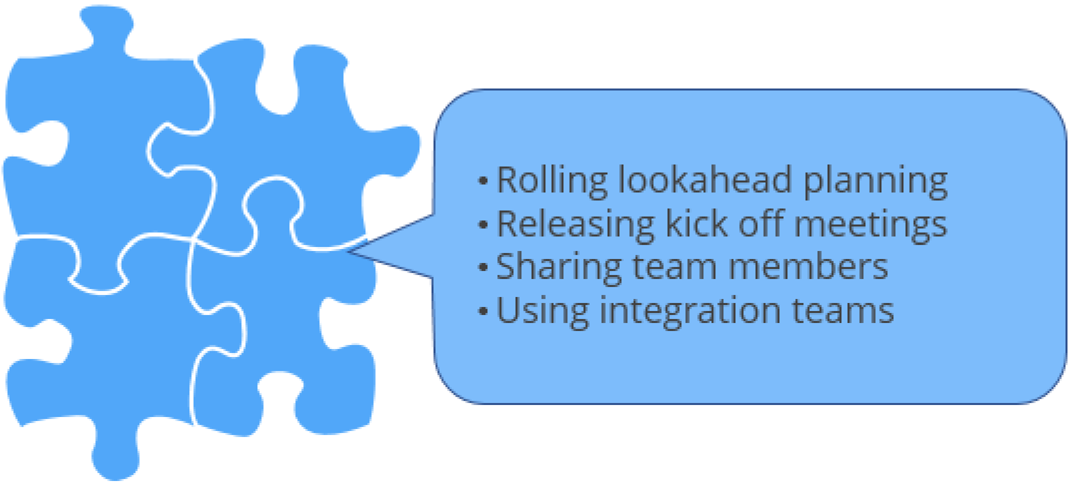
Using Epics and Themes

- Higher-level requirements such as Modules can be stored as Epics in Product Backlog.
- Themes group several small related User Stories together. For example, in an online product management system, User Stories related to Image processing, such as displaying the image, allowing the user to zoom in and zoom out, etc., can be grouped together into a theme called Image processing.

Provide views into Product Backlog

- As outlined in "one product, one backlog" section above, views can be created.

Proactive dependency management

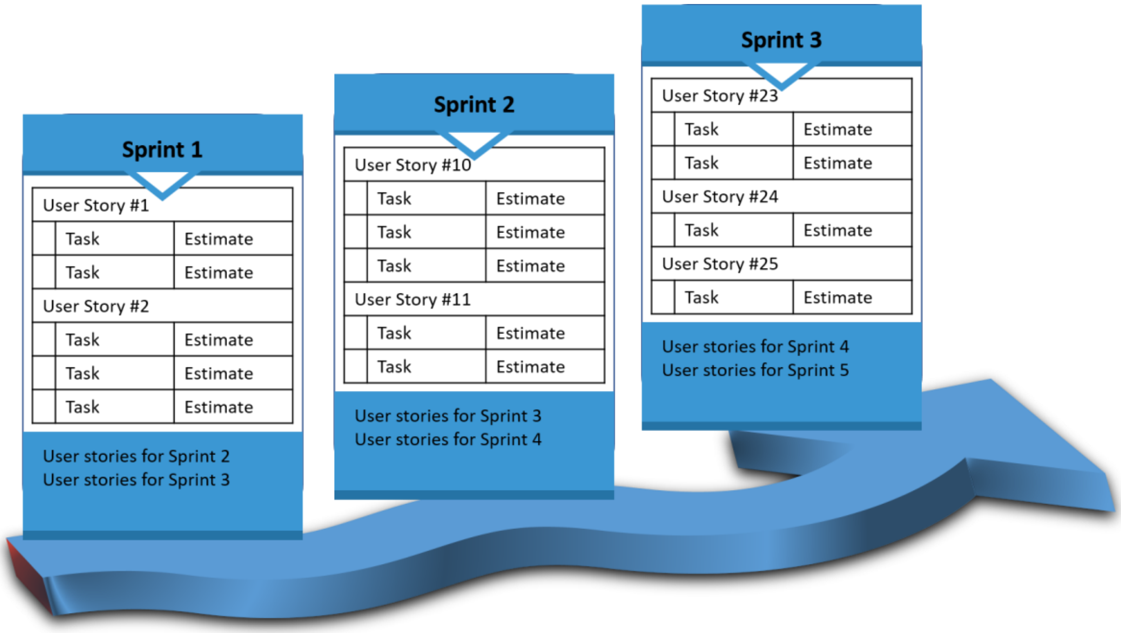


- Rolling lookahead planning
- Releasing kick off meetings
- Sharing team members
- Using integration teams

Rolling lookahead planning

- In multi-team projects, each team can spend a few minutes in each Sprint thinking about what they will do in the next couple of Sprints.
- The ideal time to do this is during Sprint Planning meeting with Product Owner.
- For current Sprint items, teams will do estimation and identify tasks as usual.
- But for few items to be planned ahead for upcoming Sprints, teams ***won't*** have to identify tasks nor estimate them.

- Product Owner should keep the Product Backlog prioritized for current sprint and two Sprints in advance.



Sprint 1

User Story #1
Task | Estimate
Task | Estimate
User Story #2
Task | Estimate
Task | Estimate
Task | Estimate

User stories for Sprint 2
User stories for Sprint 3

Sprint 2

User Story #10
Task | Estimate
Task | Estimate
Task | Estimate
User Story #11
Task | Estimate
Task | Estimate

User stories for Sprint 3
User stories for Sprint 4

Sprint 3

User Story #23
Task | Estimate
Task | Estimate
User Story #24
Task | Estimate
User Story #25
Task | Estimate

User stories for Sprint 4
User stories for Sprint 5

Release kick-off meeting

- At the start of a new project or release cycle, a Release kick-off meeting should be held.
- Release kick-off meeting will help different teams to not pull in different or wrong directions.
- Prior to the Release kick-off meeting, each team, along with its Product Owner, must arrive at a rough release plan for the backlog view.
- These release plans from each team must be shared with everyone involved in the project.

Share team members

- Teams may sometimes find it difficult to identify dependencies and those must be addressed quickly.
- In such situations, team members can be shared across two teams concurrently and can work on a known or likely dependency.

Use an Integration Team

- On large projects, dedicated integration teams can be formed. Full-time team members can work on:
  - **Unidentified Interfaces** that exist but have not yet been found in the project

  - **Unattended Interfaces**, that is, interfaces that team members are aware of but are not working on
- They identify issues with integration after each build and work with corresponding teams to resolve those issues.

Teamwork Co-ordination

Scrum of Scrum Meeting

- Scrum of Scrums is a universal practice for coordinating the work among several teams and allowing teams to discuss their work, focusing on overlap areas and integration.

Attendees

- Decision on who should attend this meeting is taken by team.
- Any team member can attend this meeting.
- A different team member attends the meeting each time.
- If there are very few teams, each team may send two representatives.

Facilitation

- Scrum of Scrum meeting ***doesn't need*** a dedicated Scrum Master.
- Since the teams are already self-organizing, dedicated Scrum Master role is not required.
- However, if required, someone can volunteer to facilitate this meeting.

Frequency

- Two or three times a week.
- Not limited to 15 minutes timebox as Daily Scrum.
- Team can decide both the frequency and duration.

Issues Backlog

- In a multi-team project, a dedicated Issue Backlog can be setup to capture and track all issues that arise out of Scrum of Scrum meetings.
- Just as the Product Backlog is prioritized, this Issue Backlog can be prioritized and acted on accordingly.

Agenda

- Each participating member answers these three questions:
  - What has my team done since we last met that could affect other teams?
  - What will my team do before we meet again that could affect other teams?

  - What problems is my team facing and how can we use help from other teams?

Synchronized Sprints

- It is advisable to have synchronized Sprints, Sprints that start and stop on the same day, across multiple teams in a single project.
- An overlapping Sprint closure of 2 to 3 days between teams (one team's Sprint closes on Monday, another team's Sprint ends on Wednesday, etc.) can also be tried as it provides a few advantages:
  - Members can attend all reviews and retrospectives
  - Remote team members can travel to the location where events are held
- Sprint length across teams can vary according to requirements of the teams and their development work. For example, in the same project, one team can have 2 week Sprints and another team can have 4 week Sprints.

Sprint Planning meeting scaling

- When multiple teams are working on the same project, three common problems can be seen with Sprint Planning meeting:
  - When all Sprints share the same start date, a few people might be needed in two places at the same time
  - When there are dependencies with other teams, one team may not be able to get the other team's commitment if that other team finishes planning first
  - Teams may contest for same Product Backlog item – making some pre-allocation necessary
- Two common approaches can be used to work with these problems.

Stagger by a day

- As we saw in Synchronized Sprints above, we can stagger the start dates of Sprints.
- One team can start their Sprint Planning on Monday, another can start planning on Tuesday, etc.
- This eliminates the need for Product Owner to be present in two meetings at the same time.

Big Room

- All teams assemble for Sprint Planning meeting at the same time in a big room.
- The Chief Product Owner kicks off the meeting.

- Teams move toward different portions of the room where they will be able to work together for a few hours.
- As teams undertake planning, dependencies are uncovered and teams will start working with other teams that are involved in the dependencies.
- This approach works for critical shared resources such as Product Owner.
- For big room approach to work, Product Owner must be prepared before the meeting.