



Product Backlog(I)

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Product backlog

- Is a prioritized list of desired product functionality.
- It provides a centralized and shared understanding of what to build and the order in which to build it.
- It is a highly visible artifact **at the heart of the Scrum framework** that is accessible to all project participants.
- As long as there is a product or system being built, enhanced, or supported, there is a product backlog.



Product Backlog Items

- The product backlog is composed of backlog items, PBIs.
- Most PBIs are features, items of functionality that will have tangible value to the user or customer. These are often written as user stories (although Scrum does not specify the format of PBIs).
- Examples of features include something brand-new (a login screen for a new website), or a change to an existing feature (a more user-friendly login screen for an existing website). Other PBIs include defects needing repair, technical improvements, knowledge-acquisition work, and any other work the product owner deems valuable.



Example Product Backlog Items

PBI Type	Example
Feature	As a customer service representative I want to create a ticket for a customer support issue so that I can record and manage a customer's request for support.
Change	As a customer service representative I want the default ordering of search results to be by last name instead of ticket number so that it's easier to find a support ticket.
Defect	Fix defect #256 in the defect-tracking system so that special characters in search terms won't make customer searches crash.
Technical improvement	Move to the latest version of the Oracle DBMS.
Knowledge acquisition	Create a prototype or proof of concept of two architectures and run three tests to determine which would be a better approach for our product.

Good Product Backlog Characteristics

- **DEEP** criteria are useful for determining if a product backlog has been structured in a good way.
- D*etailed appropriately,*
- E*mergent,*
- E*stimated,*
- P*rioritized.*

Detailed Appropriately

- Not all items in a product backlog will be at the same level of detail at the same time.
- PBIs that we **plan to work on soon** should be near the top of the backlog, small in size, and very detailed so that they can be worked on in a near-term sprint.
- PBIs that we won't work on for some time should be toward the bottom of the backlog, larger in size, and less detailed. We don't plan to work on those PBIs anytime soon.

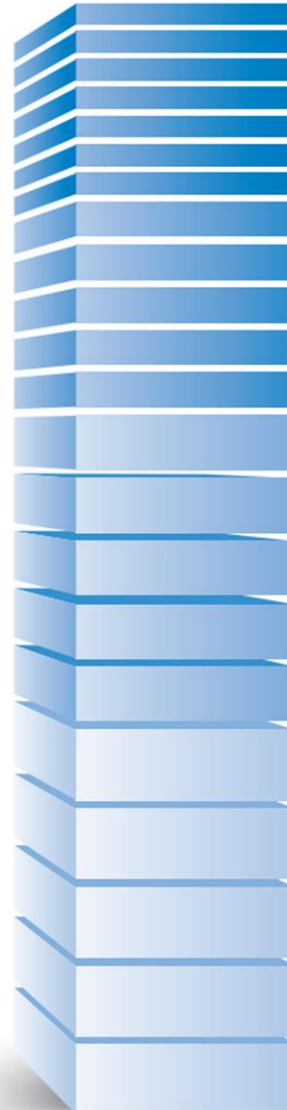
Product backlog
items

Small size
Lots of details

Worked on soon

Large size
Few details

Not worked on soon



Detailed Appropriately (Cnt'd)

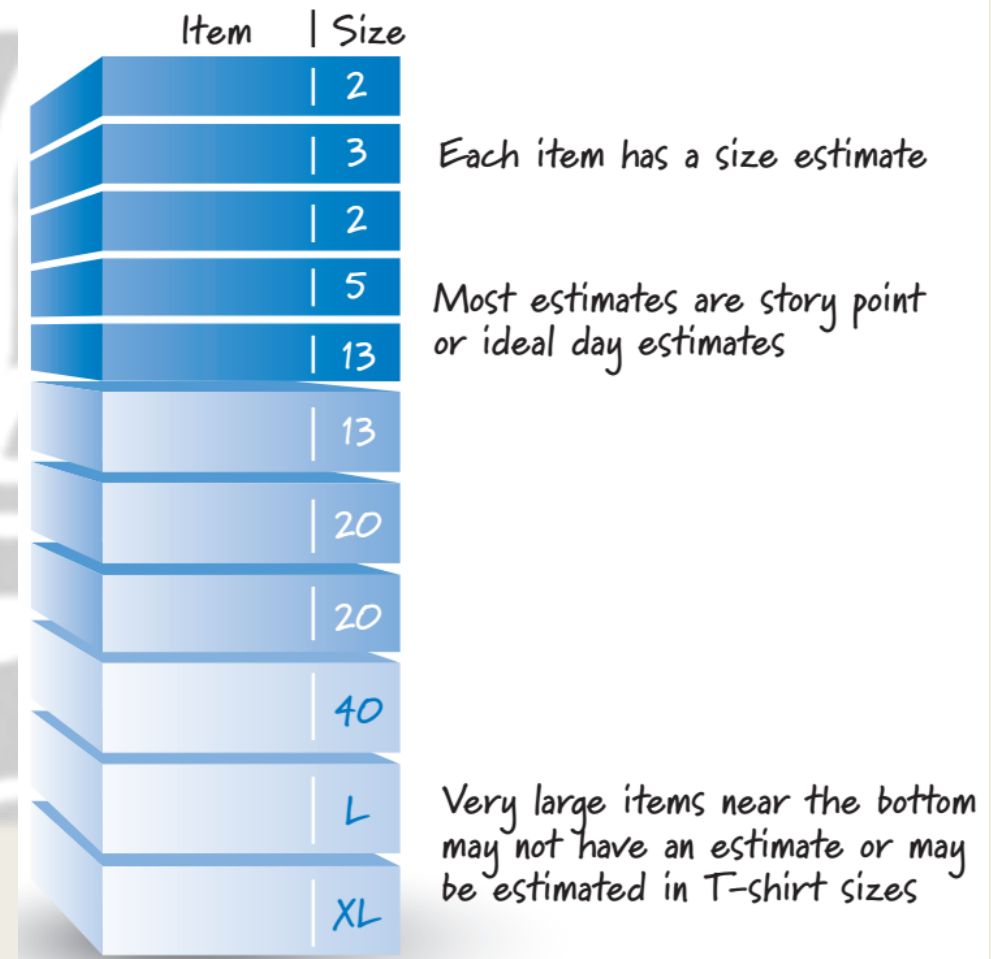
- As we get closer to working on a larger PBI, such as an epic, we will break that story down into a collection of smaller, sprint-ready stories. This should happen in a just-in-time fashion.
- If we refine too early, we might spend a good deal of time figuring out the details, only to end up never implementing the story.
- If we wait too long, we will impede the flow of PBIs into the sprint and slow the team down.
- We need to find the proper balance of just enough and just in time.

Emergent

- As long as there is a product being developed or maintained, the product backlog is never complete or frozen.
- It is **continuously updated** based on a stream of economically valuable information that is constantly arriving.
- The product backlog is designed to adapt to the occurrences.
- **The structure of the product backlog is therefore constantly emerging over time.**
- As new items are added or existing items are refined, the product owner must rebalance and reprioritize the product backlog, taking the new information into account.

Estimated

- Each product backlog item has a **size** estimate corresponding to the **effort required to develop the item**.



Estimated (Cnt'd)

- The product owner uses these estimates as one of several inputs to help determine a PBI's priority (and therefore position) in the product backlog.
- Also, a high-priority, large PBI (near the top of the backlog) signals to the product owner that additional refinement of that item is necessary before it can be moved into a near-term sprint.
- most PBIs are estimated in either story points or ideal days.
- These size estimates need to be reasonably accurate without being overly precise.
- Because items near the top of the backlog are smaller and more detailed, they will have smaller, more accurate size estimates.

Estimated (Cnt'd)

- It may not be possible to provide numerically accurate estimates for larger items (like epics) located near the bottom of the backlog, so some teams might choose to not estimate them at all, or to use T-shirt-size estimates (L, XL, XXL, etc.).
- As these larger items are refined into a set of smaller items, each of the smaller items would then be estimated with numbers.

Prioritized

- Although the product backlog is a prioritized list of PBIs, it is unlikely that *all* of the items in the backlog will be prioritized.
- It is useful to prioritize the near-term items that are destined for the next few sprints.
- Perhaps it is valuable to prioritize as far down in the backlog as we think we can get in Release 1.
- Going beyond that point at anything other than a gross level of prioritization is likely not worth our time.

Prioritized (Cnt'd)

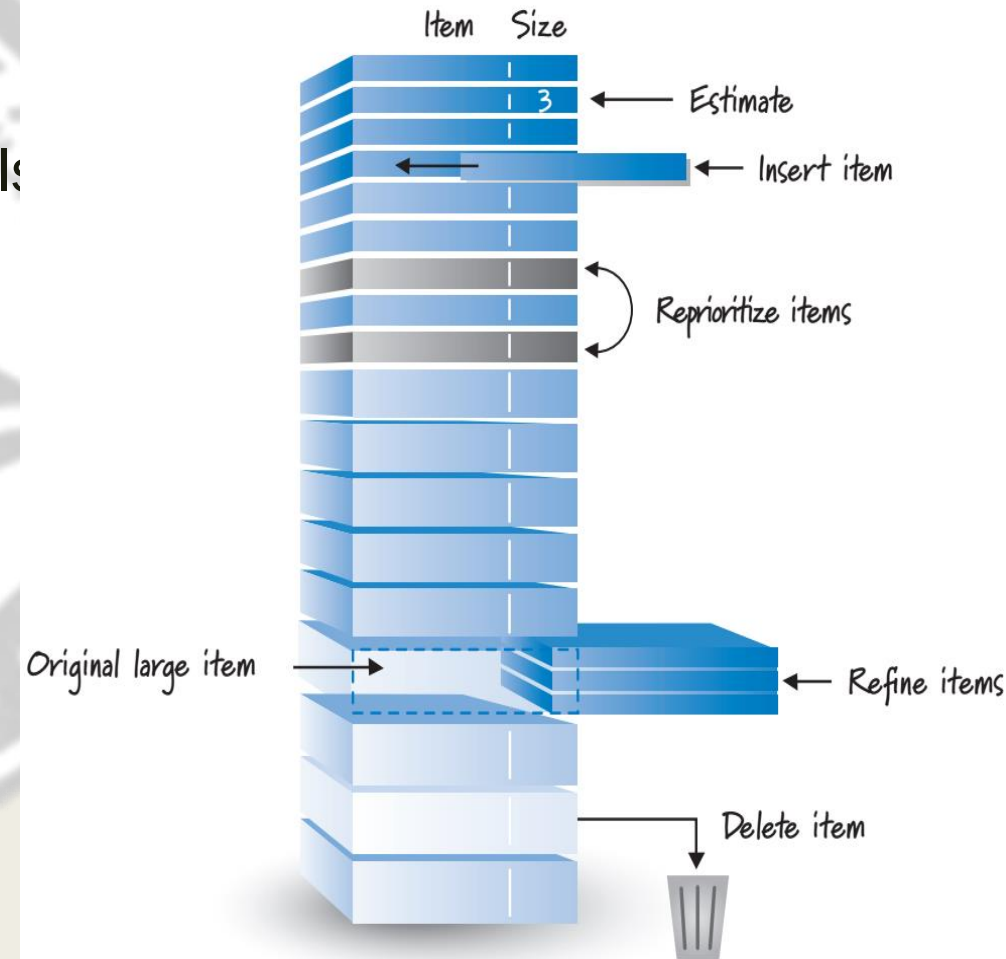
- For example, we might declare that an item is destined for Release 2 or Release 3 according to our product roadmap.
- However, if we are early in the development of Release 1 features, spending any of our valuable time worrying about how to prioritize features that we might work on someday in Release 2 or Release 3 is likely not a good investment.
- We might never end up actually doing a Release 2 or Release 3, or our ideas surrounding those releases might change significantly during the development of Release 1.
- So time spent prioritizing that far out has a high probability of being wasted.

Product Backlog management

- To get a good, DEEP product backlog, we must proactively manage, organize, administer, or, as it has commonly come to be referred to, **groom** the product backlog.

What Is Grooming?

- Creating and refining (adding details to) PBIs
- Deleting PBIs,
- Estimating PBIs,
- Prioritizing PBIs.

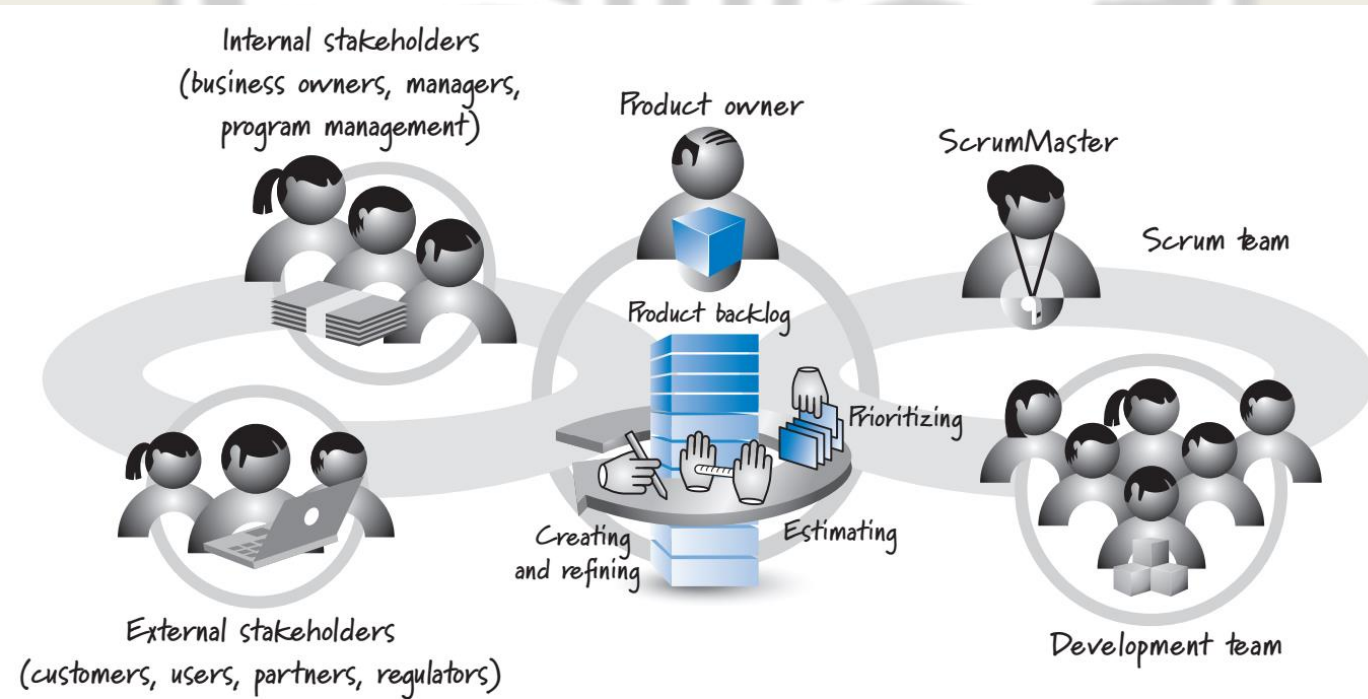


What Is Grooming? (Cnt'd)

- At the appropriate time, all PBIs need to be estimated to help determine their order in the backlog and to help decide whether additional refinement work is warranted.
- Also, as important information becomes available, new items are created and inserted into the backlog in the correct order. Of course, if priorities shift, we'll want to reorder items in the backlog.
- And as we get closer to working on a larger item, we'll want to refine it into a collection of smaller items. We also might decide that a particular backlog item is just not needed, in which case we'll delete it.

Who Does the Grooming?

- Grooming the product backlog is an ongoing collaborative effort led by the product owner and including significant participation from internal and external stakeholders as well as the ScrumMaster and development team



Who Does the Grooming? (Cnt'd)

- Ultimately there is one grooming decision maker: the product owner.
- However, good product owners understand that collaborative grooming fosters an important dialogue among all participants and leverages the collective intelligence and perspectives of a diverse group of individuals, thereby revealing important information that might otherwise be missed.

Who Does the Grooming? (Cnt'd)

- Good product owners also know that by involving the diverse team members in the grooming, they ensure that everyone will have a clearer, shared understanding of the product backlog, so less time will be wasted in miscommunications and handoffs.
- Such collaborative efforts also go a long way toward bridging the historical gap between the business people and the technical people.

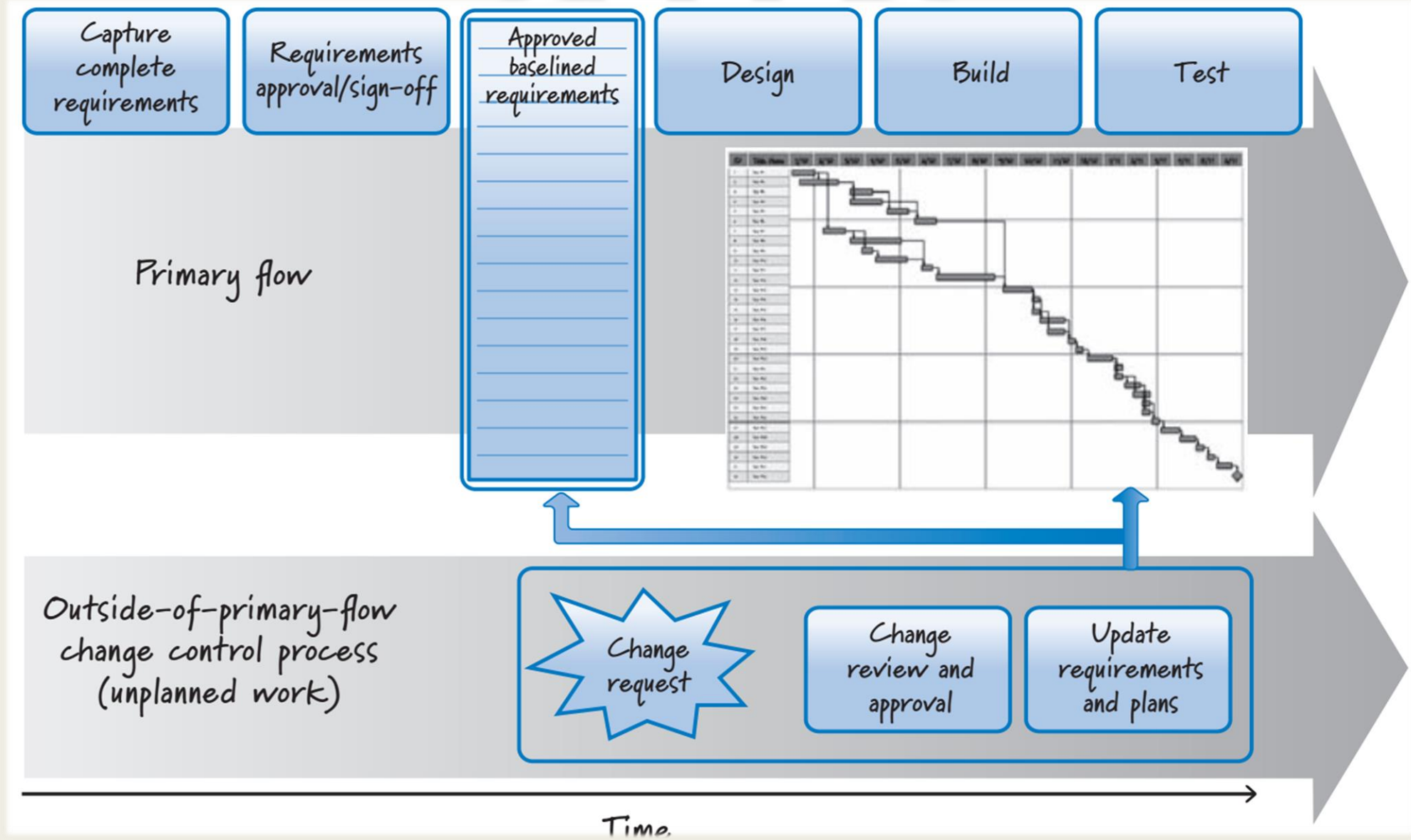
Who Does the Grooming? (Cnt'd)

- Stakeholders should allocate a sufficient amount of time to grooming based on the nature of the organization and the type of project.
- As a general rule, the development team should allocate up to 10% of its time each sprint to assisting the product owner with grooming activities.
- The team will use this time to help create or review emergent product backlog items as well as progressively refine larger items into smaller items.
- The team will also estimate the size of product backlog items and help the product owner prioritize them based on technical dependencies and resource constraints.

When Does Grooming Take Place?

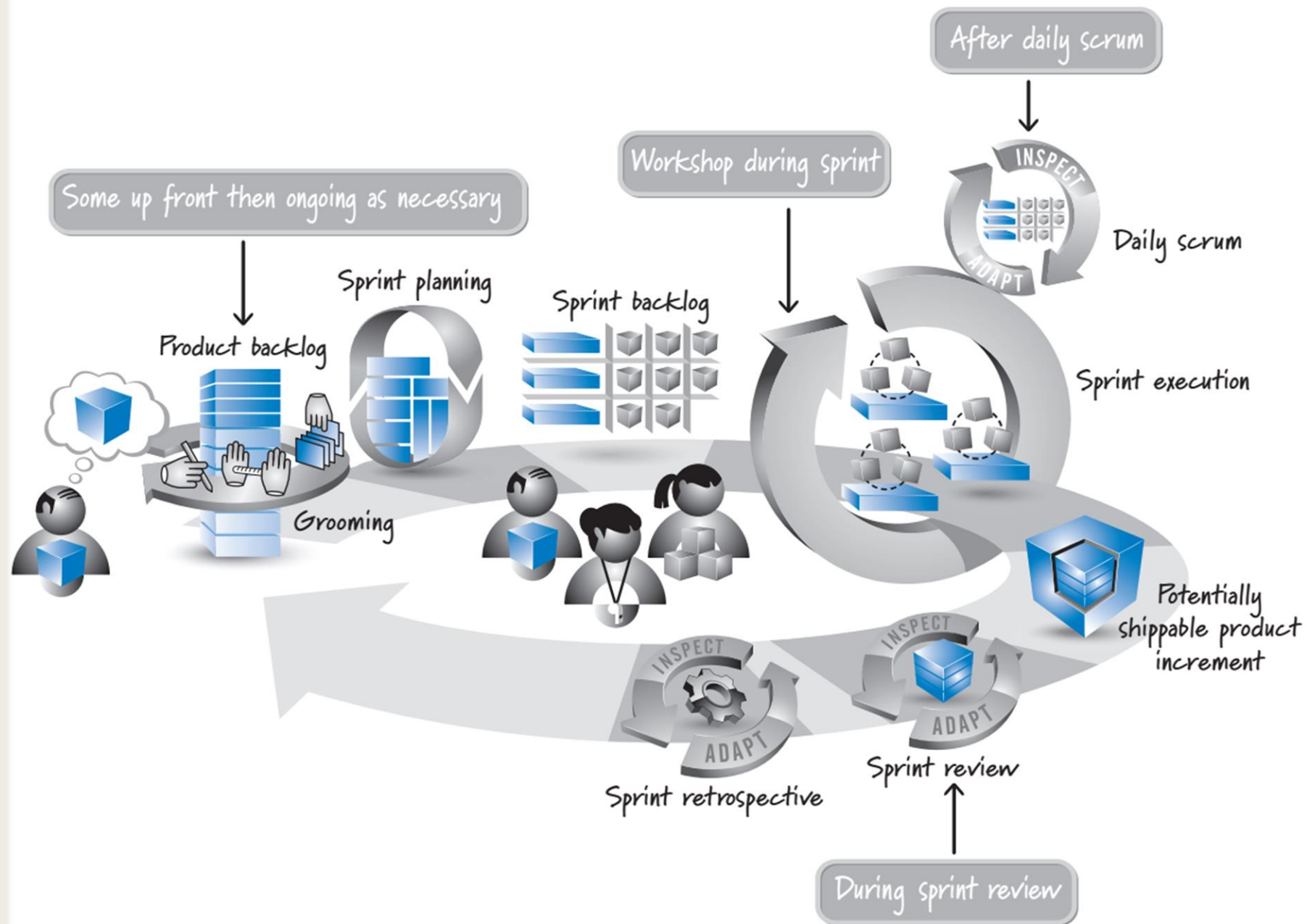
- The Scrum framework only indicates that grooming needs to happen; it doesn't specify *when* it should happen. So when does grooming actually take place?
- Using sequential development, we try to capture a complete and detailed description of the requirements up front, so little or no requirements grooming is scheduled after the requirements have been approved.
- In many organizations these baselined requirements may be changed only via a separate change control process, which is discontinuous to the primary development.

Outside-of-primary-flow grooming with sequential projects



When Does Grooming Take Place? (Cnt'd)

- Grooming during sequential development is an exceptional, unplanned, outside-of-primary-flow activity that we invoke only if we need to, making it disruptive to the fast flow of delivered business value.
- Using Scrum, we assume an uncertain environment and therefore must be prepared to constantly inspect and adapt.
- We expect the product backlog to evolve constantly rather than being locked down early and changed only through a secondary process for handling exceptional, undesirable occurrences.
- As a result, we must ensure that our grooming activities are an essential, intrinsic part of how we manage our work.



When Does Grooming Take Place? (Cnt'd)

- Initial grooming occurs as part of the release-planning activity.
- During product development, the product owner meets with the stakeholders at whatever frequency makes sense to perform ongoing grooming.
- When working with the development team, the product owner might schedule either a weekly or a once-a-sprint grooming workshop during sprint execution.
- Doing so ensures that grooming occurs on a regular schedule and enables the team to account for that time during sprint planning. It also reduces the waste of trying to schedule ad hoc meetings (for example, determining when people are available, finding available space, and so on).

When Does Grooming Take Place? (Cnt'd)

- Sometimes teams prefer to spread out the grooming across the sprint, rather than block out a predetermined period of time.
- They take a bit of time after their daily scrums to do some incremental grooming.
- This grooming doesn't have to include all of the team members. For example, after a daily scrum the product owner might ask for help refining a large story. Team members who are knowledgeable and interested stick around and assist the product owner. The next time, different team members might assist.

When Does Grooming Take Place? (Cnt'd)

- Even if teams have regularly scheduled workshops or take some time each day to look at the backlog, most teams find that they naturally do some grooming as part of the sprint review.
- As everyone involved gains a better understanding of where the product is and where it is going, new PBIs are often created or existing PBIs are reprioritized, or deleted if they are no longer needed.
- When the grooming happens is less important than making sure it is well integrated into the Scrum development flow, to ensure flexible and fast delivery of business value.

Reference

- 1- K. S. Rubin, “Essential Scrum, A Practical guide to the most popular agile process,” 2013.

