Basic (1-Team) Scrum


HSBC
SEVENS

Scrum

Definition and Theory

The Scrum Guide:
“Scrum : A framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value. “

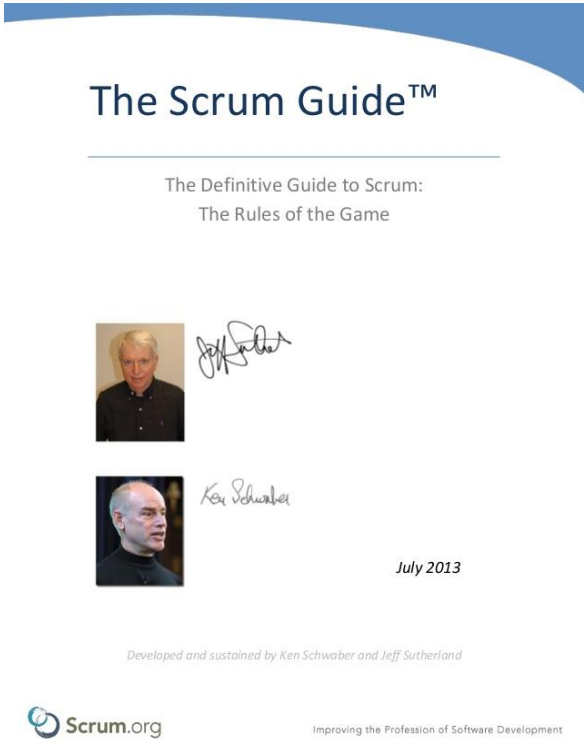
- Characteristics:
  - Lightweight
  - Simple to understand
  - Difficult to master

- Historically, Has been in use since early 90s

- Co-found by: Ken Schwaber and Jeff Sutherland

- Consists of Teams, roles, events, artifacts, bound by rules

- Three (3) pillars of Scrum:
  - transparency
  - inspection
  - adaptation



Agile Overview

"Scrum isn't designed for method tailoring. Ken Schwaber notes that "Scrum is not a methodology that needs enhancing. That is how we got into trouble in the first place, thinking that the problem was not having a perfect methodology. Effort centers on the changes in the enterprise that is needed."[43]

Bas Vodde reinforces this statement, suggesting that Scrum isn't like traditional, large methodologies that require you to "pick and choose" elements. It is the basics on top of which you add additional elements to localize and contextualize its use.[44]"

Source: https://en.wikipedia.org/wiki/Agile_software_development

Scrum

Overview of Scrum Roles

Product Owner

Development

ScrumMaster

- Scrum Team consists of a Product Owner, the Development Team, and a Scrum Master
- Scrum Teams are self-managing and cross-functional and know how best to accomplish their work
- Scrum Teams have all competencies needed to accomplish the work without depending on others
- Scrum team model in Scrum is designed to optimize flexibility, creativity, and productivity
- Scrum Teams deliver products iteratively and incrementally, maximizing opportunities for feedback
- Incremental deliveries of "Done" product ensure a potentially shippable product increment (PSPI) at the end of each sprint

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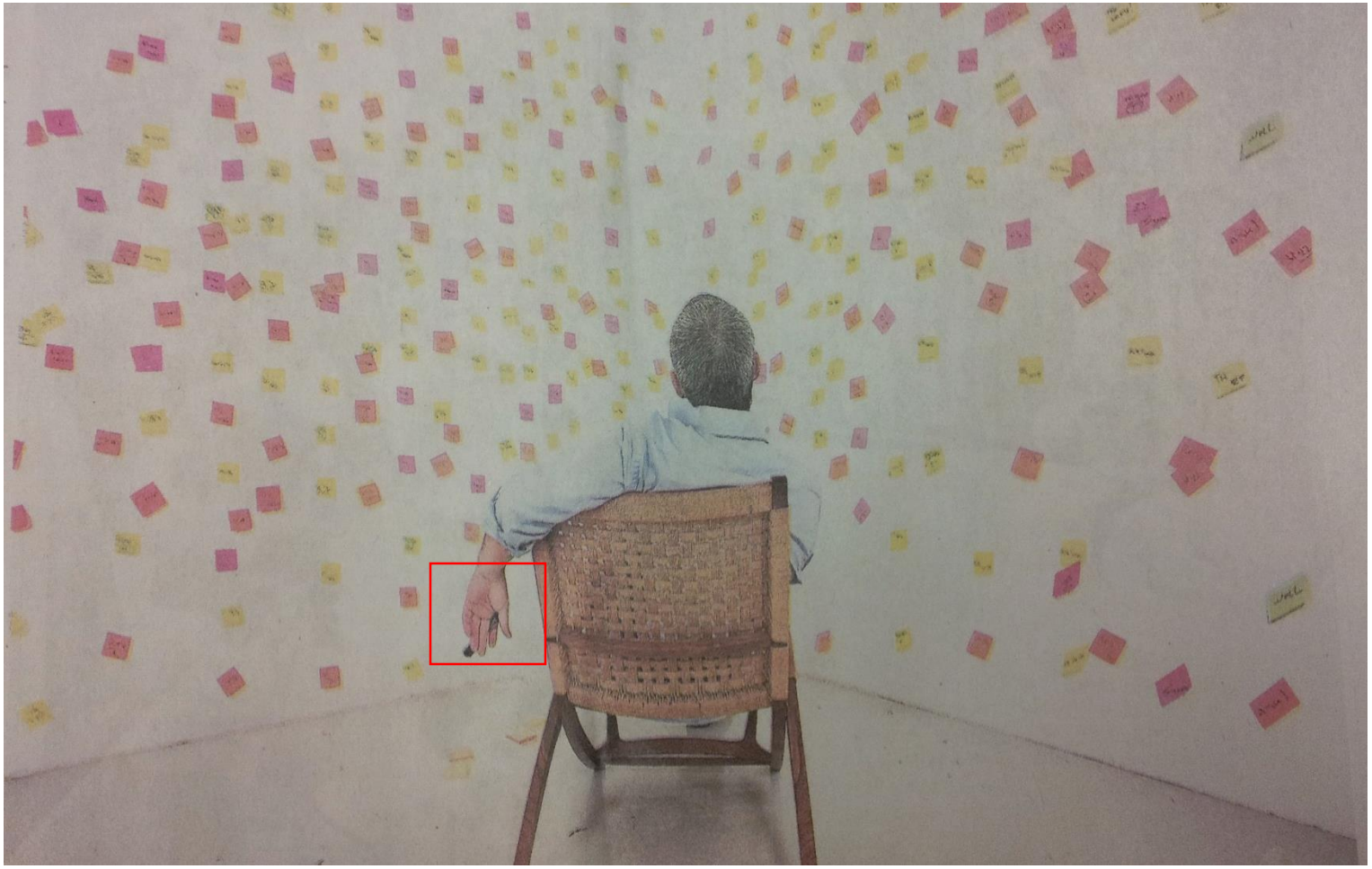
Product Owner



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Product Owner

Responsibility

- Maximizing the value of the product and the work of the Development Team
- Managing Product Backlog and communicating to Development Team
- Ordering Product Backlog items to best achieve strategic goals and missions
- Optimizing the value of work by Development Team
- Making decisions visible in the content and ordering of the Product Backlog

Authority & Empowerment

- Making final decisions on strategy
- Changing priorities, based on circumstances
- Protecting Development Team from external distractions

Anti-Patterns

- Instructing Dev. Team on “how” to do work
- Micro-managing Dev. Team or exhibiting Command & Control behaviors
- Lack of Authority/Empowerment
- Lack of Engagement
- “Death by committee”

Scrum

Product Owner

Challenges with Product Ownership

The Product Owner Committee

A product owner committee is a group of product owners without anyone in charge of the overall product. There is no one person guiding the group, helping to create a common goal, and facilitating decision making. A product owner committee is in danger of getting caught in endless meetings with conflicting interests and politics—something also referred to as "death by committee." No real progress is achieved; people stop collaborating and start fighting each other. Always ensure

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Product Owner

Agile Product Ownership in a Nutshell, by Henrik Kniberg

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Scrum Master

Responsibility

- Ensuring that Scrum is understood and implemented
- Ensuring that Scrum Team adheres to scrum theory, norms, values, principles
- Acting as servant-leader for the Scrum Team
- Servicing to the Product Owner
  - Suggesting ways to manage Backlog more effectively
  - Facilitating Scrum events
- Servicing to the Development Team
  - Coaching the Development Team in self-organization and cross-functionality
  - Coaching the Development Team in organizational environments in which Scrum is not yet fully adopted and understood
  - Helping the Development Team to create shippable products increments at the end of every sprint
  - Removing impediments to the Development Team's; escalating as needed
  - Facilitating Scrum events
- Servicing to the Organization
  - Leading and coaching the organization in its Scrum adoption
  - Implementing Scrum across an organization
  - Helping everyone understand Scrum values
  - Making changes to increase productivity of the Scrum Team
  - Collaborating with other Scrum Masters to widen and deepen Scrum adoption

Scrum

Scrum Master

Authority & Empowerment

- Protecting Development Team from external distractions
- Brokering/arbitrating Team-level impediments and conflicts
- Escalating to senior management impediments and roadblocks that cannot be resolved at team level

Anti-Patterns

- Making final decisions on strategy
- Changing priorities, based on circumstances
- Instructing Dev. Team on “how” to do work
- Micro-managing Dev. Team or exhibiting Command & Control behaviors
- Acting as a line-manager

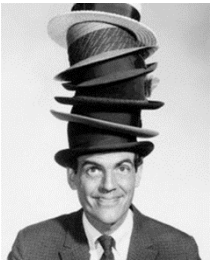
Scrum

Development Team

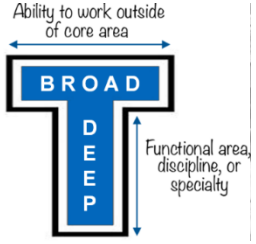
Size
- 3-9 people
- Small teams may present skillset constraints that will prevent producing PSPI
- Large teams may cause excessive, counter-productive communication and lead to process complexity

N(N-1)/2

Composition
- No sub-teams (component teams) inside Scrum/Feature Team
- Cross-functional team of technologists that are able to work independently
- T-shaped individuals that continuously learn from each other



Dynamics
- No titles or ranks, other than Developer
- No sub-teams (component teams) inside Scrum/Feature Team
- May have functional specialties but deliverable belongs to an entire team
- Collective ownership, shared responsibilities, joint delivery



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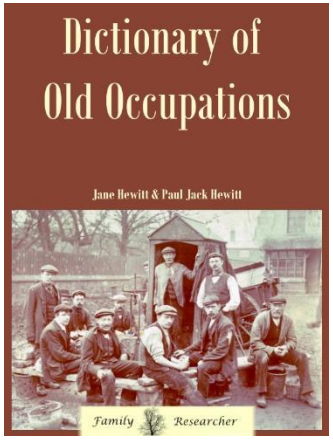
Impact on Traditional Roles



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Business Community (SMEs, Stakeholders)

- Channeling information/requests through Product Owner
- Helping Product Owner define on Vision and Strategy
- Providing clarifications to Product Owner and Team(s), as requested
- Refraining from giving priorities directly to Team(s)
- Attending Scrum ceremonies, when invited by Product Owner
  - Product Backlog Refinement (PBR) sessions – to provide clarifications and guidance
  - End-of-sprint Reviews – to review Team deliverables and provide feedback
- Actively participating in UAT, when asked by Product Owner
- Collecting and providing to Product Owner and Team(s) end-customer/market feedback
- Providing sponsorship/funding

Scrum

Scrum Events

- Scrum framework as a set of specific events
- Scrum events are held regularity and minimize the need for other, less useful meetings
- All Scrum events are time-boxed events and limited.
- Sprint's duration is always fixed and cannot be made shorter or longer
- Each Scrum event is an opportunity to inspect and adapt to something new
- Scrum requires full transparency, inspection and adaptation

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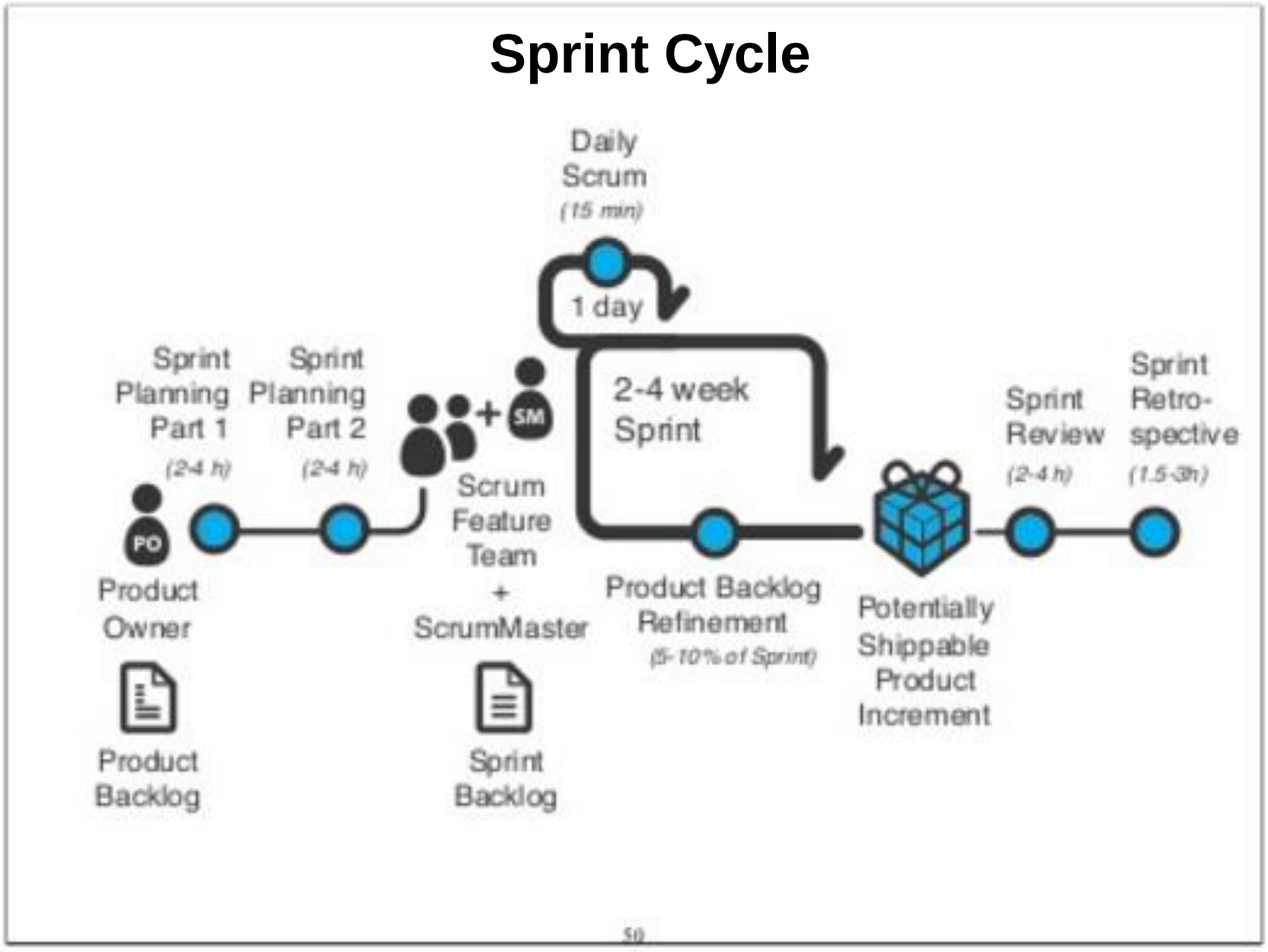

Source: http://www.slideshare.net/ValtechGroup/scaling-lean-agile-scrum-large-multisite-offshore-craig-larman

Scrum

Sprint

- Sprint is a start and end of a full-term development life cycle
- Not longer than a 4 weeks
- Consistent in duration; scheduled back-to-front with next sprint
- Includes all other Scrum Events
  - Sprint Planning
  - Daily Scrums
  - Product Backlog Refinements (PBRs)
  - Sprint Review
  - Retrospective
- Has a goal/business purpose
- Has fixed scope that should not be changed with exception of critical circumstances and at Product Owner's discretion only
- Can be cancelled only if authorized by Product Owner. This is highly discouraged.
- If any work is incomplete at the end of sprint, Product Owner decides what to do with it

Scrum

Sprint Planning

- Time-boxed to 4 hours of a bi-weekly Sprint
- Should be always initiated by stating Sprint goal (coming from PO)
- For less mature teams, Scrum Master is a facilitator; for more mature teams - self-organization might be sufficient
- Planning is frequently broken down into two sessions:
  - Topic One: What can be done this Sprint? - to discuss WHAT can be delivered in Sprint (PO is present)
    - Team collaborates on intended Sprint scope
    - Forecasting/commitment is based on:
      - Team's Historical Velocity
      - Team's projected ability
      - Backlog priorities
  - Topic Two: How will the chosen work get done?- to discuss HOW work will get done (PO is not required)
    - Team further collaborates, by breaking down “WHAT” work into work smaller items
    - Team ensures that decomposed work does not exceed Team’s Capacity
    - Team decides if “WHAT” decision was reasonable and/if renegotiation with PO is necessary – and then shares their forecast with PO

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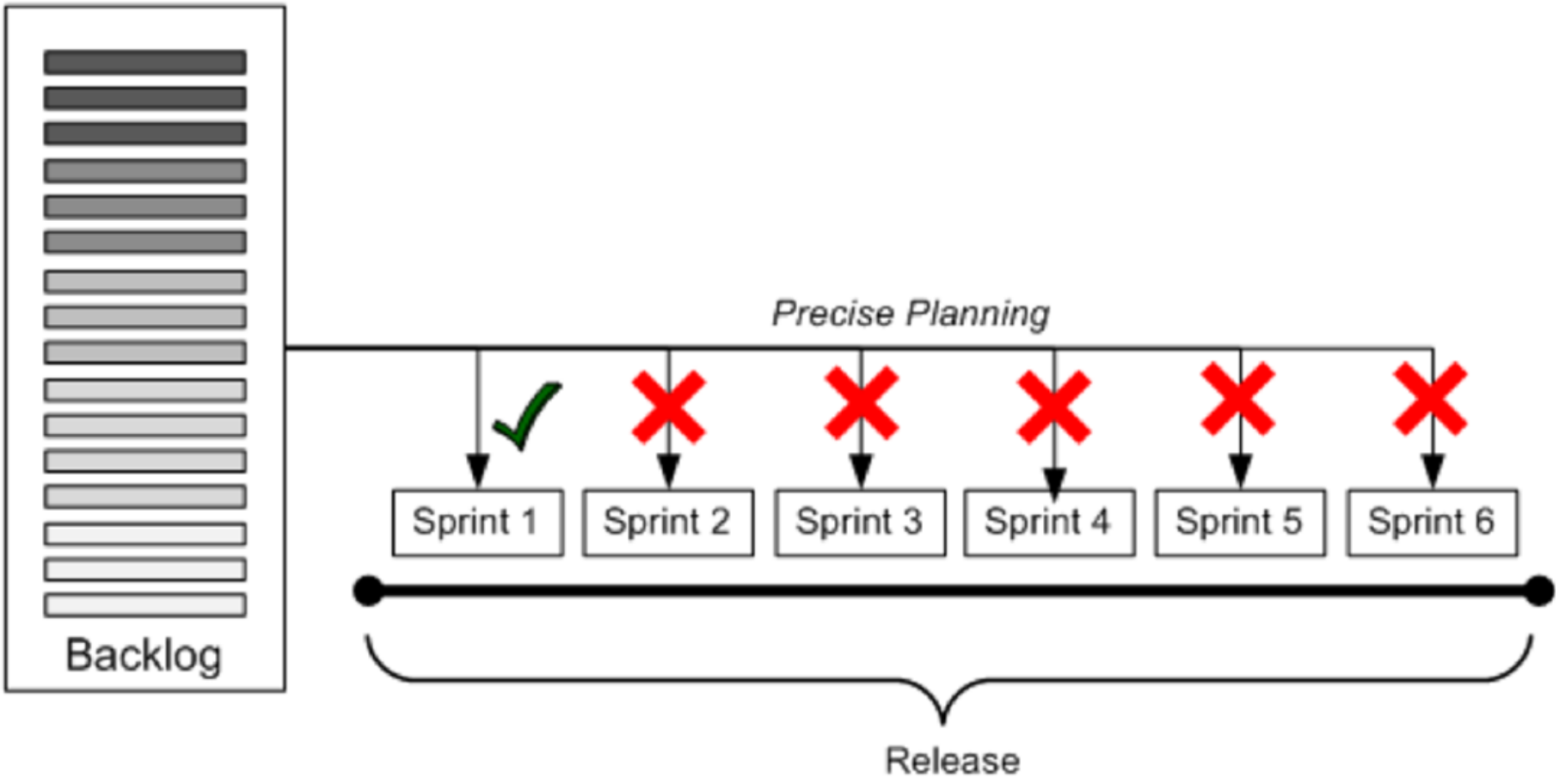
Sprint Planning



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Daily Scrum

- Time-boxed to 15-minutes or less
- For Development Team, to discuss work of the last 24 hours
- Is hallmarked for the following 3 key questions, answered by all Team members:
  - What did I do yesterday that helped the Development Team meet the Sprint Goal?
  - What will I do today to help the Development Team meet the Sprint Goal?
  - Do I see any impediment that prevents me or Team from doing work?
- "Is the time of discovery, not the time of resolution“
- Usually, is followed immediately by more detailed discussions
- Usually, is facilitated by Scrum Master, but for more mature teams could be self-driven
- Product Owner presence is optional and at Team's discretion

Scrum

Daily Scrum

Daily Standup from Hell, by Philippe Kruchten

Scrum

Sprint Review

- When: Held at the end of the Sprint
- Duration: 1-2 hours for 2-weeks sprint
- Goal: to inspect the Increment and adapt the Product Backlog, if needed
- Attended by: Scrum Team, Product Owner and stakeholders (invited by PO)
- Details:
  - Changes to Product Backlog to optimize value are made
  - Dev. Team shares its experiences (good, bad) and how issues were resolved
  - Dev. Team explains what items met definition of 'done‘
  - PO discusses Product Backlog, forecasts completion dates
  - Timeline and budgets are discussed
  - Product Backlog is reassessed, updated (if needed) in preparations for next sprint planning

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Sprint Retrospective

- Usually held right after Sprint Review
- Time-boxed to no more than 2 hours (for 2 weeks sprint)
- Team's private meeting; others (e.g. PO) can be invited only at Team's discretion
- Usually, facilitated by Scrum Master if he/she can be completely impartial. If SM has to participate as a team member, another facilitator is recommended
- Purpose of event, to discuss:
  - What went well in the past Sprint?
  - What did not go well in the past Sprint?
  - What can be improved in future Sprints and how to implement it?
- Team decides how to improve Definition of Done (DoD) for next Sprint

Scrum

Sprint Retrospective

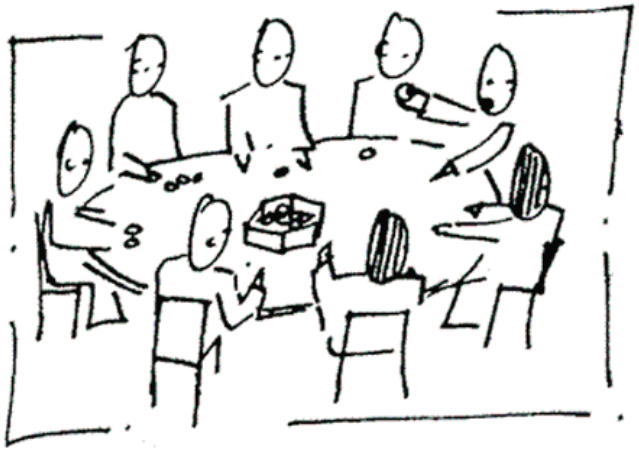
The Wrong way to do Agile: Retrospectives

Scrum

Product Backlog Refinement (PBR)

Highlights:

- A.K.A.: BL Refactoring, BL Maintenance, BL Grooming (be careful with this one!)
- Objective: to prepare backlog items for future Sprints
- Usually 5-10% of each sprint (8 hours for a 2-weeks Sprint)
- Product Owner may invite SMEs/Stakeholders to participate and provide clarifications
  - Prioritization – by PO
  - Clarification – by PO / Stakeholders
- Estimation & re-estimation of work items



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Product Backlog Refinement (PBR)

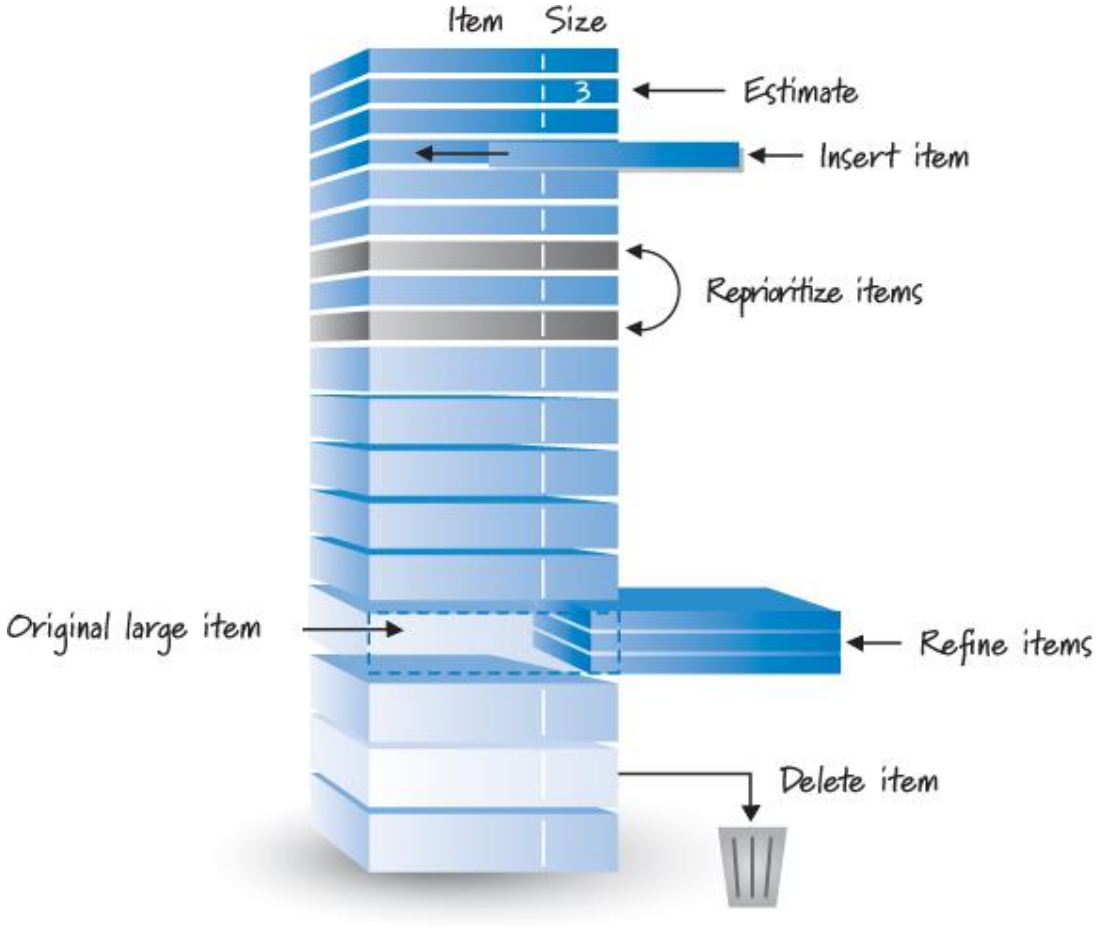

Image source: http://www.informit.com/articles/article.aspx?p=1928232&seqNum=4

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Product Backlog Refinement (PBR)

Anti-Patterns:

- Having inappropriate/uninvited attendees
- Someone, other than Product Owner, attempts to prioritize
- Status reporting, individual work assignments, sprint commitments
- Endless discussions, going in circles, no time-boxing
- Deep dives into “How to do work” (technical task decomposition)

Scrum

Release Planning*

- Not formally defined as Scrum event, since Team expected to release at the end of every Sprint
- “Necessary Evil”, when Team does not release at the end of every Sprint
- Is based on longer-term, overarching strategy, coming from Customers, SME, Sr. Management
- Format is similar to Sprint Planning but with broader content

Scrum

Release Retrospective*

- Not formally defined as Scrum event, since Team expected to release at the end of every Sprint
- Is based on lessons learned over a longer period of time, during multiple Sprints
- Format is similar to Sprint Retrospective but with broader content

Scrum

Product Backlog

- Single, ordered source of requirements; ever-living, never finalized "document"
- PO is responsible for Backlog (content, availability, and prioritization): anyone can contribute to BL but only PO decides on priorities
- Team is responsible for estimation of Backlog items
- Both, Team an PO are responsible for decomposition/refinement of requirements
- Contains features, functions, requirements, enhancements, and bug fixes
- Items at the top of Product Backlog are better refined and more accurately estimated
- Items at the bottom of Product Backlog are less refined and coarse-estimated

Scrum

Sprint Backlog

- Sub-set of Product Backlog items selected for Sprint, by a single Team, based on Sprint Goals
- Forecasted by Development Team to develop a product increment, at the end of Sprint, as per DoD
- Development Team updates Sprint Backlog during Sprint to reflect work progress
- Development Team can change its Sprint Backlog during a Sprint only at PO's discretion
- Completion of scope could be monitored by using various optional techniques:
  - Sprint Burn-up/burn-down charts
  - Cumulative Flow Diagrams (CFDs)

Scrum

Product Increment

- Quote from “The Scrum Guide” (page 13):

“*The Increment is the sum of all the Product Backlog items completed during a Sprint and the value of the increments of all previous Sprints. At the end of Sprint, the new Increment must be “Done,” which means it must be in useable condition and meet the Scrum Team’s definition of “Done.” It must be in useable condition regardless of whether the Product Owner decides to actually release it.*”

- Potentially Shippable Product Increment (PSPI)
- Minimal Viable Product (MVP)
- Minimal Marketable Product (MMP)