

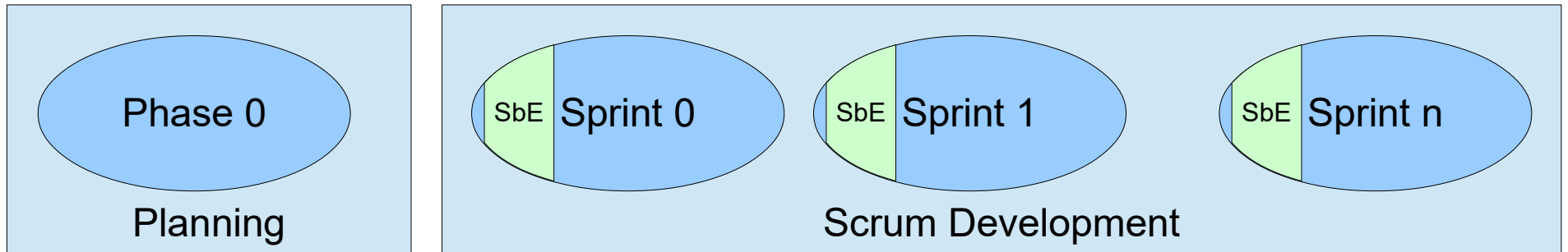
Requirements Team

Phase 0
Specification by Example

Overview

- Phase 0: Planning phase before development starts
- Sprint 0: Initial technical development sprint to set up technical infrastructure and system architecture, developing only one or a few user stories
- Specification by Example: Each sprint starts with defining and automating concrete examples of how the system should behave

Timeline



Planning?

- Big Design Up Front = BAD!
- YAGNI
- However, having an idea of what you are going to build, and how, is useful.
- Big Picture Up Front = GOOD!

Scrum Phases and Processes

- According to SCRUMstudy:
- Scrum processes address the specific activities and flow of a Scrum project. In total there are 19 processes in SBOK™ Guide which are grouped into following five phases:
 - Initiate
 - Plan and Estimate
 - Implement
 - Review and Retrospect
 - Release

Processes in the Initiate Phase

- Create Project Vision
- Identify Scrum Master and Stakeholder(s)
- Form Scrum Team
- Develop Epic(s)
- Create Prioritized Product Backlog
- Conduct Release Planning

Phases + Processes = Agile?

- You may question if software development with well-defined phases and processes is really agile.
- If you always follow the prescribed set of activities, this is not agile.
- However, a checklist to help you remember important activities is useful.
- Remember to always question whether a specific artifact is required in your case.
- Also remember that an artifact is never frozen, it can always be updated if necessary. This is true for everything, including architecture, for example.
- The artifacts you produce should be as light-weight as possible.

Phase 0 Artifacts

- The following is an uncomplete list of artifacts that are useful to consider in phase 0:
 - Vision and goals
 - List of stakeholders and all Scrum roles (Scrum team, Scrum master, product owner)
 - Initial architecture
 - Roles/personas
 - Initial product backlog
 - (Release plan)
 - (Paper prototype of user interface and other usability artifacts)

Vision and Goals

Stakeholders

- It is extremely important to find everyone affected by the new system as soon as possible, in order to get their input.
- Everybody, all together, from early on! is the secret of Lean, according to the book Lean Architecture

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Stakeholders: Who to Include?

- The product owner and the team members, such as developers and testers, are obvious.
- Architects will want a say in how the system is designed.
- System administrators want to know how the system affects IT operations.
- The support organization may need to learn a bit about the system to be able to answer questions.
- If the system requires training, the people developing the training material need to be informed as soon as possible.
- The sales department may need to know about the system or product being built.
- Last but not least, the users of the system may be interested in what the future brings.

Initial Architecture

- It is good if you have some idea of the high-level design of the system before you start developing it.
- For example: which databases and message queues are involved; which external or internal systems do you need to integrate with; what are the most important services in your system?
- This can be a drawing on a whiteboard (or a napkin). It may be useful to put a copy in a wiki for easy access.

Roles/personas

Initial Product Backlog

- Before you can start developing user stories in a development sprint, you need to have an idea of which the most important user stories are.
- The user stories and epics (high-level user stories that probably must be broken into smaller stories) are documented in a product backlog, using post-it notes, or a software system such as JIRA or Trello.

Release Plan

- It may be necessary to estimate how long development will take, or how many user stories will be finished in a given time.
- This requires an estimated product backlog, and an estimate of the velocity of the team.
- To create these estimates early in the project is extremely difficult.
- If you don't have to estimate, then don't.
- Sometimes you can simply work for a number of sprints and hopefully develop something useful, and then decide if development should continue or not.
- Estimates made later in the project are much more precise than the ones made before development starts.

Paper Prototype of UI and Usability Artifacts

- If the system you are building has a complex user interface, it may be useful to early create a lofi prototype of the interface, using a whiteboard or paper.
- If you are serious about usability, phase 0 is a good time to find a group of test users that can help you evaluate the user interface.
- Phase 0 is also the time to perform Contextual Inquiry, if relevant.

Sprint 0

- If you are starting a project from scratch, with no infrastructure already in place, it may be a good idea to use the first development sprint to set up the technical foundations:
 - Version control, branching strategy
 - Continuous integration, continuous delivery pipeline
 - Automation for Specification by Example tests
 - Initial system architecture
- In sprint 0, the focus is on technical issues, but you should always try to implement at least one user story, using the complete system architecture.