Purpose

To describe a custom tailored process model. This will help us keep track of our progress and know what we need to do next. This will also help us report our status to outsiders such as stakeholders.

Considerations

This document is not meant be unchanged, but, rather we expect it to evolve over time as we learn more about what does and does not work for us. As we make modifications to the process model, we will have to manage our stakeholder's expectations by notifying him about important changes.
We do not want this process model to become a hindrance for us. Furthermore, if this process model takes too much overhead then it defeats the purpose.

Improvement Processes

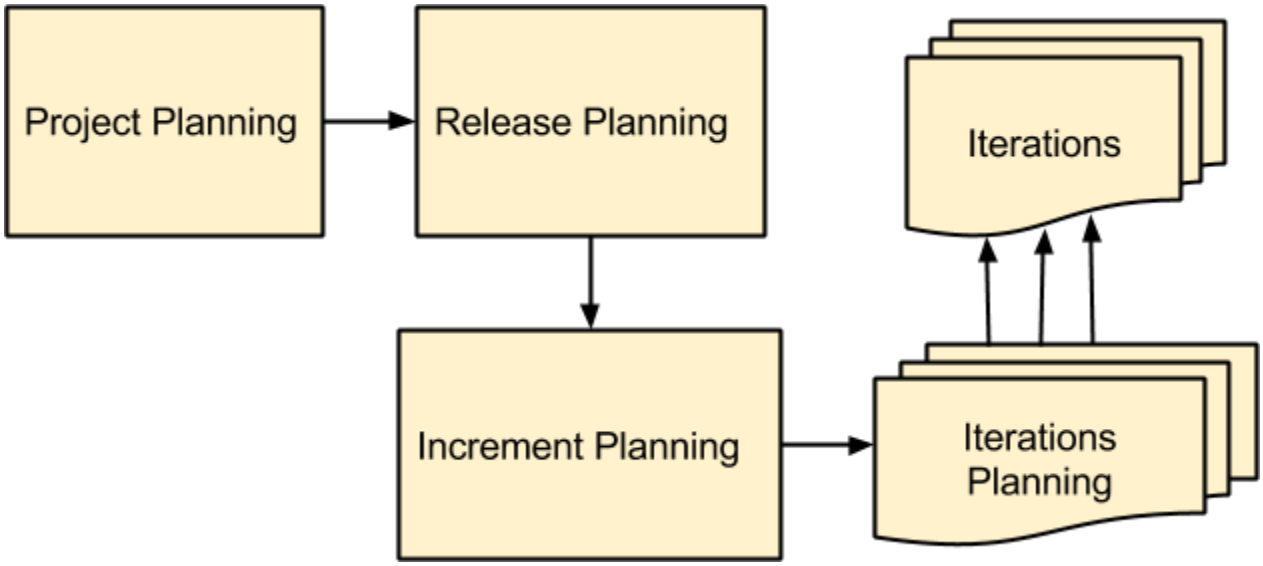
Any process model could not work well. To ensure that a given process model works for us we should test it by attempting to execute some of the phases informally. After we run through the test, we will reflect on what we did to try and spot potential weaknesses with the process model design. We will ask ourselves questions such as is this model helping us? We will use the feedback from the questions to improve our model.

Definitions

An **increment** divides a project into smaller portions.
An **iteration** is the cycle we use per increment. This cycle makes progress towards user stories.
Internal verification means that an artifact is verified for correctness by someone who has not been working on it.
External verification means that the stakeholder verifies the artifact for correctness.

Description

This process model borrows characteristics from XP, incremental, and other iterative process models. We divide our process model into phases. The phases will be executed in the following order: Project Planning, Release Planning, Increment Planning, Iterations Planning, Iterations. The increment planning is optional if we would like divide our project into subteams that could work concurrently. If we have multiple subteams then there will be an iteration planning and an iteration for each.

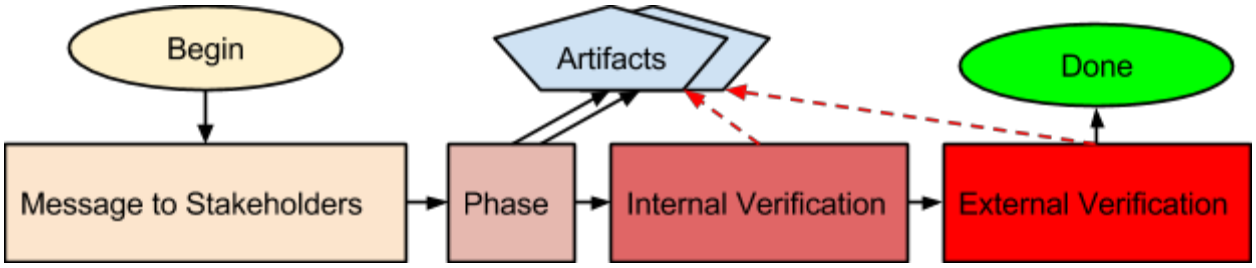


Communication with Stakeholders

We will communicate with our stakeholders before we begin each phase and after each phase. When we communicate with the stakeholders after each phase, we will ask them to verify some of the artifacts that we have created. We would also provide you will an estimated completion for each phase.

Phase Exit Conditions

Each phase will need it's artifacts verified before the phase will be considered complete. There will be two verifications processes: internal verification and external verification. These process give 3 Sigmas of correctness assuming that the ones that work on the artifact check their work over. In particular, the internal verification will be used to verify integration as well as style. For example, internal verification may check to ensure a product will build from source.



Adaptation

In the situation where our priorities change either due to shifting stakeholder expectation or a rising risk, we will save our progress by documenting the current state of a phase and then shifting human resources to the higher priority item.

Task Management

XXX Need to discuss this.

Process Model Phases

- Project Planning.
- Release Planning.
- Increment Planning.
- Iteration Planning.
- Iterations.

Phases in Detail

Project Planning

- Vision
- Definition
- User stories

Release Planning

For traceability, each user story will be give an ID #.

1. Estimate User Story Time -- Estimate the time it takes to do each user story in weeks and give a reason for justification.
2. Prioritize User Stories -- Choose the stories that are most critical. There are several methods of prioritization.
3. Select the Feasible Head -- Select a subset of stories that are most critical and fit within the allocated resources such as time or money.

Methods of prioritization

- Based on stakeholder preference.
- Based on dependencies.
- Based on risk.

Increment Planning

1. Divide project into subsections.
2. Formally define each increment.

Iteration Planning (for each increment)

1. Divide user stories into tasks.
2. Estimate the time for each task in days.
3. Prioritize tasks.

4. Select a subset of tasks to work for the iteration.

Iteration (for each increment)

1. Design
2. Development
3. Quality Assurance
4. Deliver