

Scrum Planning Principles (Chapter 14)

CEN 4010 Intro to Software Engineering

Professor Alex Roque

Waterfall Versus Scrum

- Waterfall traditionally embraces the concept of doing extensive planning up front before developing the product.
- Scrum embraces the agile methodology so it welcomes change and allows for pivoting.
- Therefore planning with Scrum should not attempt to have an entirely detailed plan at the beginning, given that there is potential that changes may occur.

Scrum Planning Principles

Scrum acknowledges the following:

- Can't get plans right up-front
- Up-front planning should be helpful without being excessive
- Keep planning options open until last responsible moment
- Focus more on adapting and re-planning
- Correctly manage the planning inventory
- Favor smaller and more frequent releases
- Plan to learn fast and pivot when necessary

Can't Get Plans Right Up-Front

- Waterfall development attempts to:
 - Create a detailed plan up front before development begins
 - Goal is to get the plan right so that the rest of the work can proceed in an orderly/planned fashion
- Some folks argue that without such a plan we won't:
 - Know where we are going
 - Be able to coordinate the people and their activities – especially multiple teams (there is some truth in this argument)
 - Know how much it will cost
- Scrum planning adheres to the agile roots of inspect & adapt by achieving a good balance between up-front & just-in-time planning

Up-Front Planning Should Be Helpful Without Being Excessive

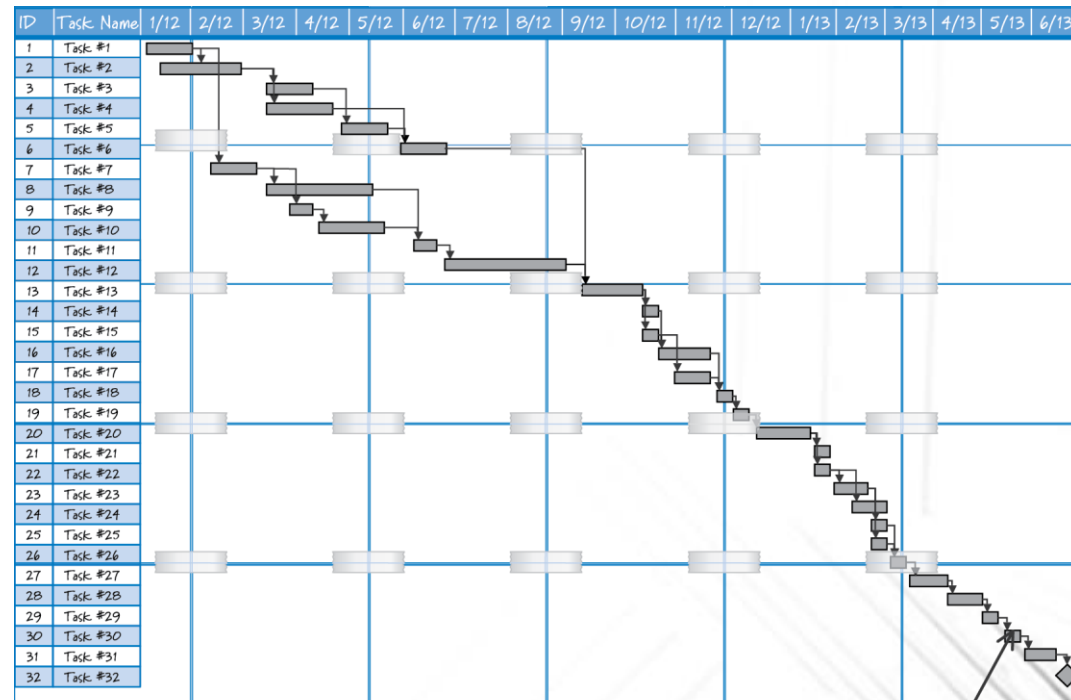
- We never can predict with **great certainty** when we will have to change course (plans) or why
- Any detailed plan up front rarely, if ever, matches the actual plan for the project
- Rarely does anyone bother to look back at the original plan thinking or saying, “Got it perfect!”
- Believing a plan is correct to the point of ignoring real-time data is doomed
- Goal: Just-right balance of planning

Keep Planning Options Open Until the Last Responsible Moment

- Sometimes, in the beginning, there is insufficient information available
- Save the planning that is best performed in a just-in-time fashion for when we have much better information
- Premature planning can end up being very costly and wasteful

Focus More on Adapting and Replanning

- **Detailed plan up-front** takes additional time at start therefore there may be a tendency to “stick to the plan” rather than update it
- **Scrum mindset says:**
 - We can't get it right up-front
 - We can't eliminate change
 - Therefore...
 - We value responding to change
 - We value replanning



George 18 months from today

Focus More on Adapting and Re-planning

- Rather than “Assumed correct until proven wrong”...
- Go with “When the map doesn’t match the terrain, believe the terrain”
- Rather than measuring progress with conformance to or variation from the plan...
- Don’t allow the plan to become more important than the “terrain”
- Scrum views the up-front plan as helpful but will change so deal with it



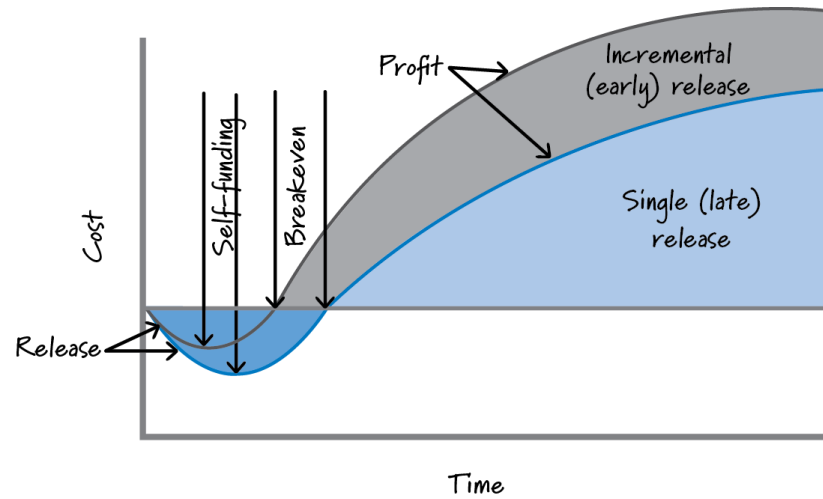
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Correctly Manage the Planning Inventory

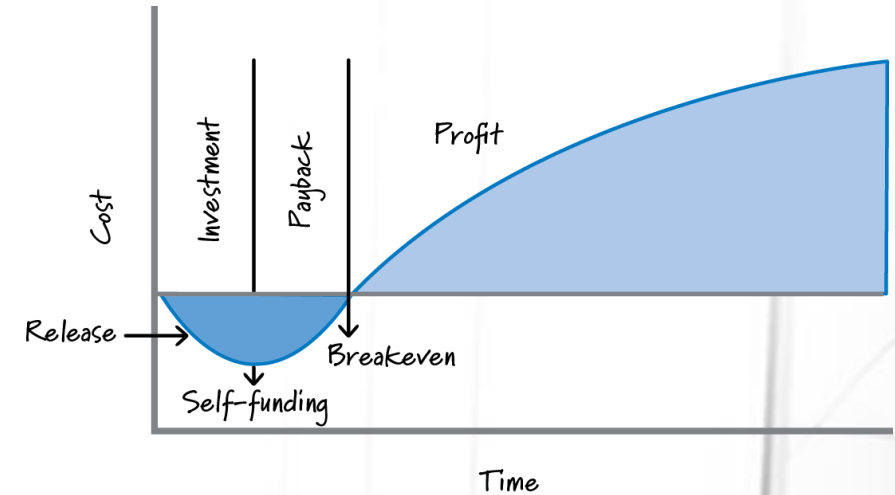
- Synonyms: work in process and WIP
- Key insight during planning is to realize it's a time and \$ waster to create not-yet-validated planning artifacts
- Historically, project managers have invested large amounts of time updating initial and on-going complete project Gantt charts
 - Wasted effort on parts of the plan that are now possibly being discarded
 - Wasted effort of having to update the plan
 - Wasted opportunity to invest time in more valuable activities
- Key thought...balance planning time with what you know/don't know

Favor Smaller and More Frequent Releases

- Provides faster feedback
- Improves the product's Return on Investment (ROI)
- Single-release vs multi-release economics



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Plan to Learn Fast and Pivot when Necessary

- No amount of up-front predicting or guessing can replace...
 - Doing something
 - Learning fast
 - Pivoting (changing directions based on what we learned), if necessary
- Fast feedback lets us know if our plans are taking us in a viable direction or not