

Integrated Master Schedules (IMS) and Agile Projects

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Megan's Background

- Managed first project in 1995
- 1997 started managing project to replace an existing mission critical system
- 2002 attended a conference that was all about agile, began introducing concepts to organization
- 2004 worked on a program that implemented the Microsoft Solutions Framework (team model was program management, product management, development, test, release management, user experience and product management)
- Project Management Professional – 2008
- Project Management – Agile Certified Practitioner - 2017

What is an Integrated Master Schedule

- An integrated master schedule is an integrated and networked multilayered schedule of program tasks required to complete the work effort of the program.
- It is a way to show the big picture view of what is going on.
- It integrates all sub-schedules.
- It can include a master list of milestones across multiple projects.
- It is developed from a work breakdown structure.

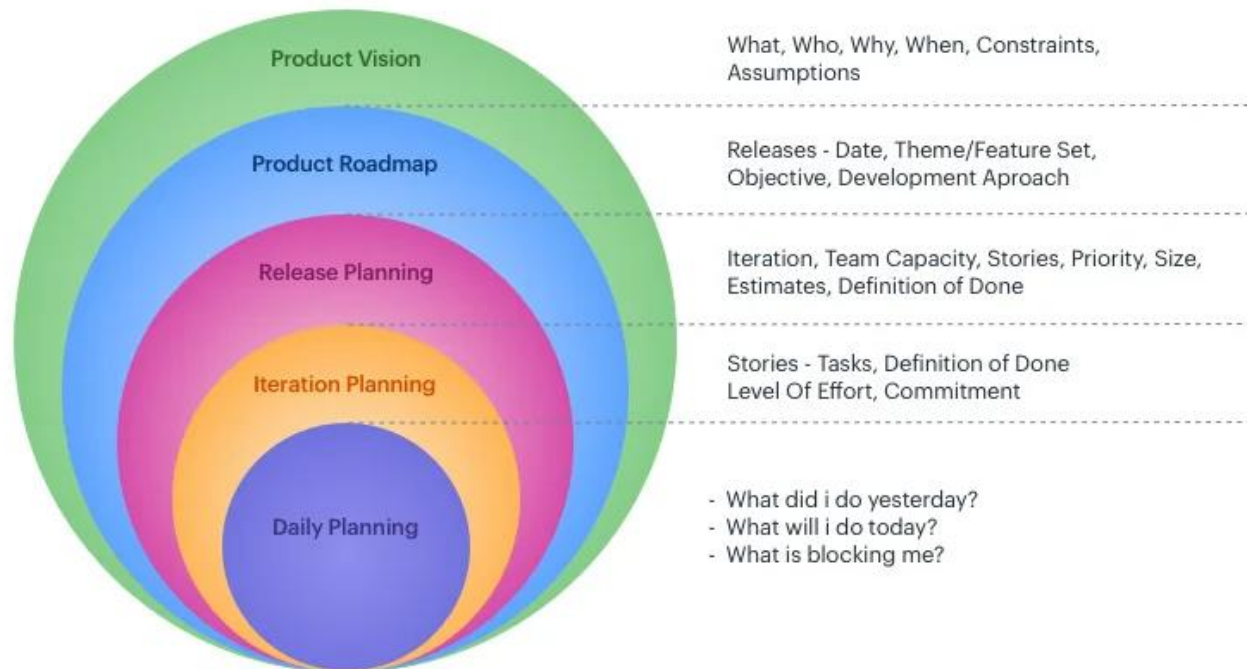
What is the purpose of an IMS?

- A systematic way to track program progress.
- A tool for monitoring the program critical path.
- A communication tool for program reporting.
- Identify and assess actual progress to planned progress.

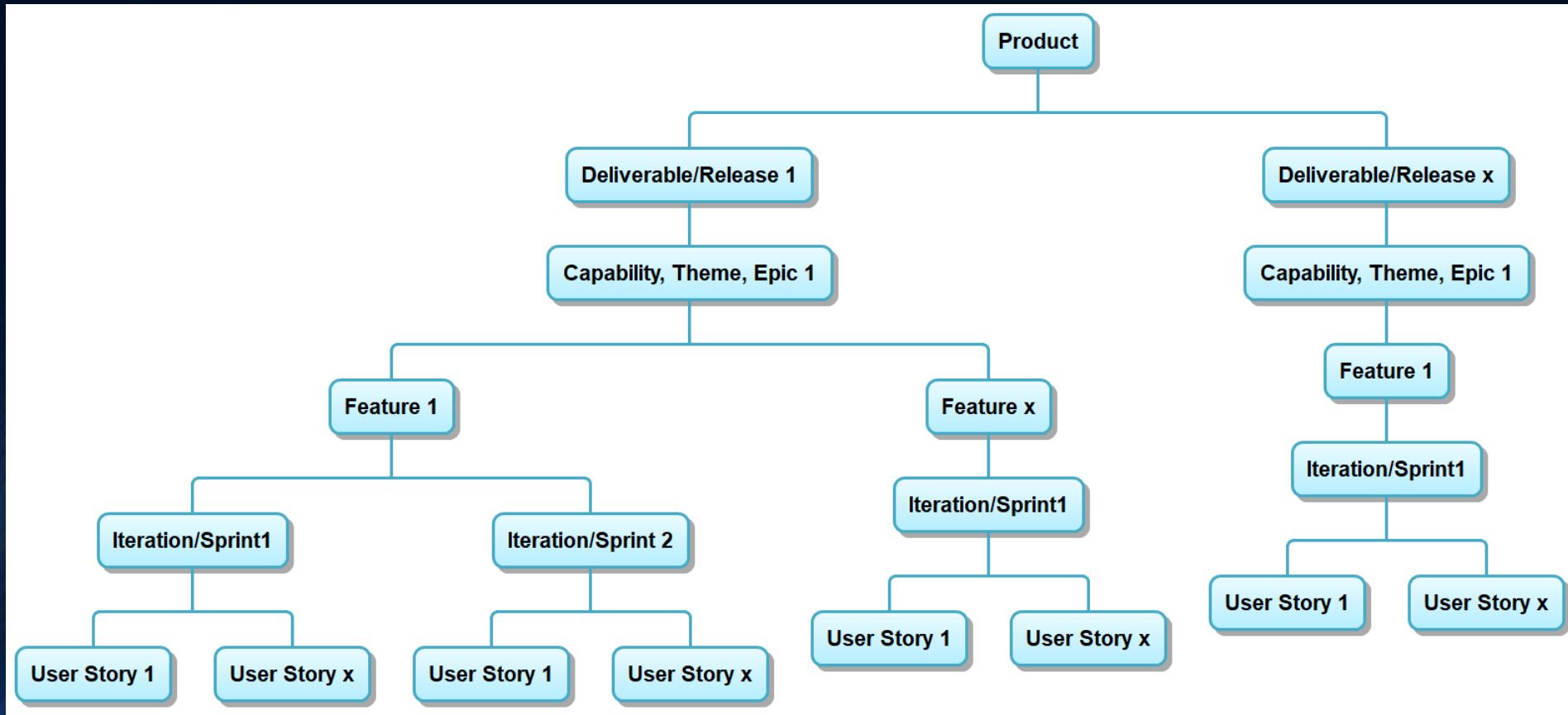
Agile Planning

Agile Planning Onion

5 Levels of Agile Planning



WBS might look like this



Planning Level	Planning Frequency	Planning Horizon	Planning Precision	Planning Artifact	Included in IMS?
Product Planning	Project Startup, update throughout project	Project Duration	Epics/Capabilities Releases	Product Backlog, Product Roadmap, Minimal Viable Product	Yes Epics/Capabilities to releases –
Release Planning	Each Release	Release	Feature/Stories	Product Backlog update, Release plan	Yes, IMS planning of features. Networking them to capabilities and releases
Iteration Planning	Each Iteration	Weeks	Stories/tasks	Iteration Backlog	As they relate to the planned effort of the work needed for feature
Daily Planning	Daily	Day	Tasks	Updated iteration backlog	No, Update story status.

Measuring Progress of Features

- Feature Percent Complete =
Total Completed Weighted Stories (SP)/Total Planned Weighted Stories (SP)
- Feature Remaining effort =
(Total Planned SP – Total Completed SP) x
Total Hours for Iteration to date/Total Completed SP

*SP = Story Points

Why is it important to have Feature in IMS?

- To measure progress AND
- To track dependencies either from other teams or other features

Dependencies in Agile

Agile teams are intended to be cross-functional, self-organized, and capable of delivering a product.

HOWEVER, there are outside factors that create dependencies, especially on large efforts:

- Requirements clarification dependencies
- Expertise dependencies
- Activity dependencies
- Technical dependencies

Identify dependencies at both the Feature level and the User Story Level

Key Points to consider for IMS

- The feature level will show in the IMS, the story level will not.
- Iteration/Sprint does not equal Critical Path
 - Use Sprints/Iterations as a time guide for how long it will take to complete features based on available resources and backlog prioritization.
 - The goal is to create the “Minimal Viable Product” and development will take a many sprints needed to meet that success criteria.
- Identify dependencies between teams and create integration points.
- Identify key milestones and tasks that support them that maybe outside the agile team:
 - Technical Reviews
 - External Reviews/Briefings
 - Coordination with external stakeholders
 - Operational support

Discussion Time

- Thoughts on breaking up an implementation by a Configuration Team vs a Deployment/Readiness team?
- Thoughts on how much detail should be included in IMS, agree or disagree about it being at feature level?
- Thoughts on external dependencies on how they should be managed?

Reference Material

- [Agile Release Planning and Integrated Scheduling, September 2021, DHS.GOV](#)
- [An Industry Practice Guide for Agile on Earned Value Management Programs, March 26, 2018. National Defense Industrial Association](#)
- [An agile guide to the planning processes, May 2009, PMI.ORG](#)