Release Planning in Agile
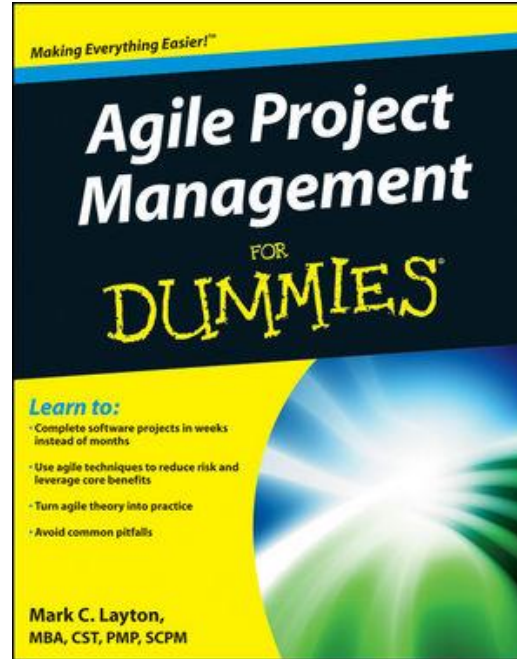
- Prof K G Krishna

Text/Reference Books
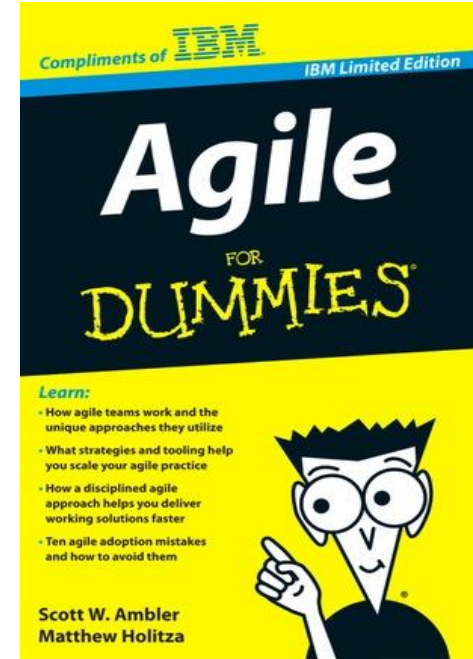
T1: Agile & Iterative Development — A Manager's Guide, Craig Larman, Agile Software Development Series, Alistair Cockburn and Jim Highsmith, Series Editors, PEARSON

T2: Agile Project Management FOR DUMMIES, Making Everything Easier!™, Learn to: Complete software projects in weeks instead of months; Use agile techniques to reduce risk and leverage core benefits; Turn agile theory into practice; Avoid common pitfalls. Mark C. Layton, MBA, CST, PMP, SCPM

Agile FOR DUMMIES, Compliments of IBM, IBM Limited Edition, Learn: How agile teams work and the unique approaches they utilize; What strategies and tooling help you scale your agile practice; How a disciplined agile approach helps you deliver working solutions faster; Ten agile adoption mistakes and how to avoid them. Scott W. Ambler, Matthew Holitza

➔ As this field is evolutionary, the student is advised to stay tuned to the current and emerging practices by referring to their own organization's documentation as well as Net sources

Topics

<u>Release Planning in Agile Methods</u>

- Characteristics of Agile Planning
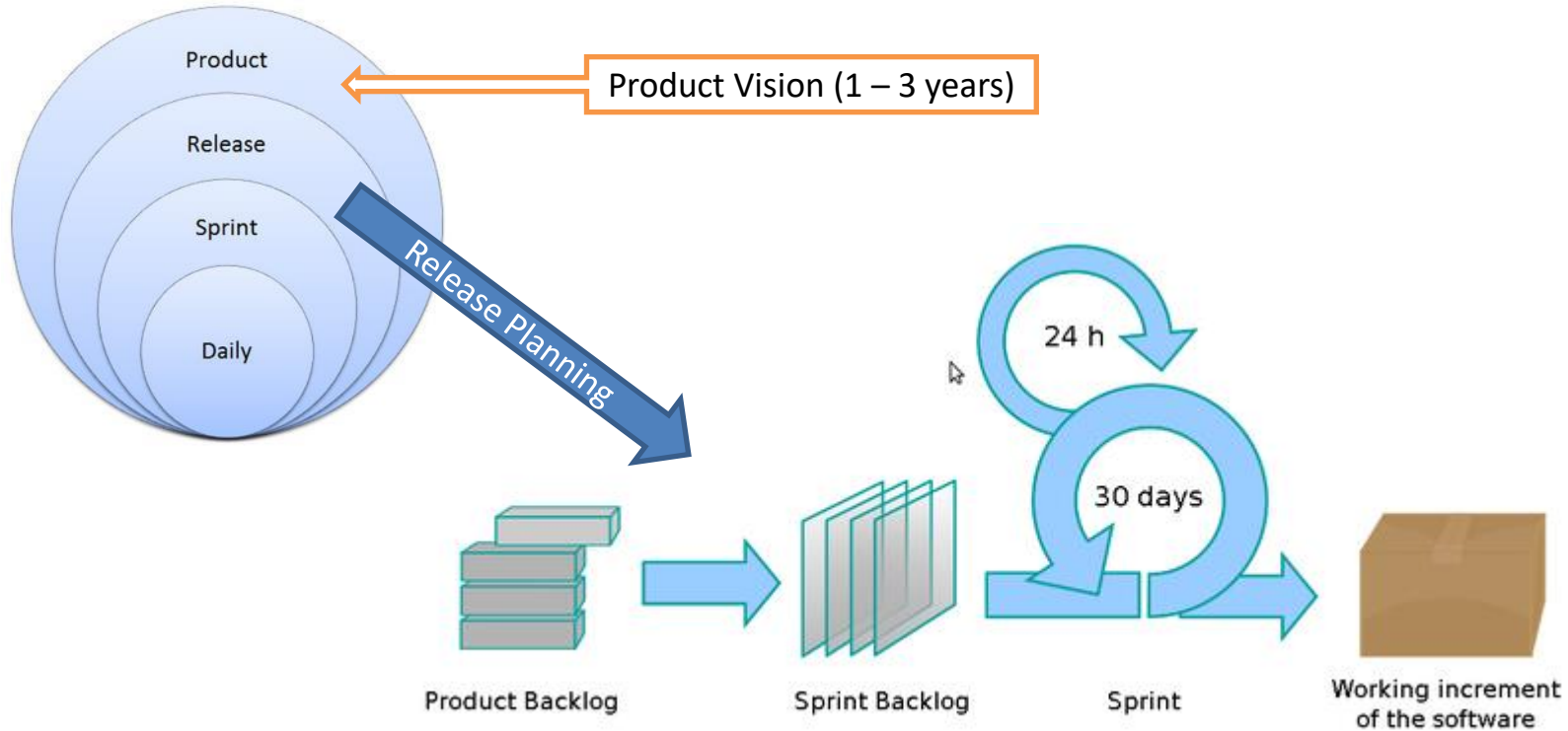- Stages of Agile Planning
- Release Planning

Planning is *Continuous*!
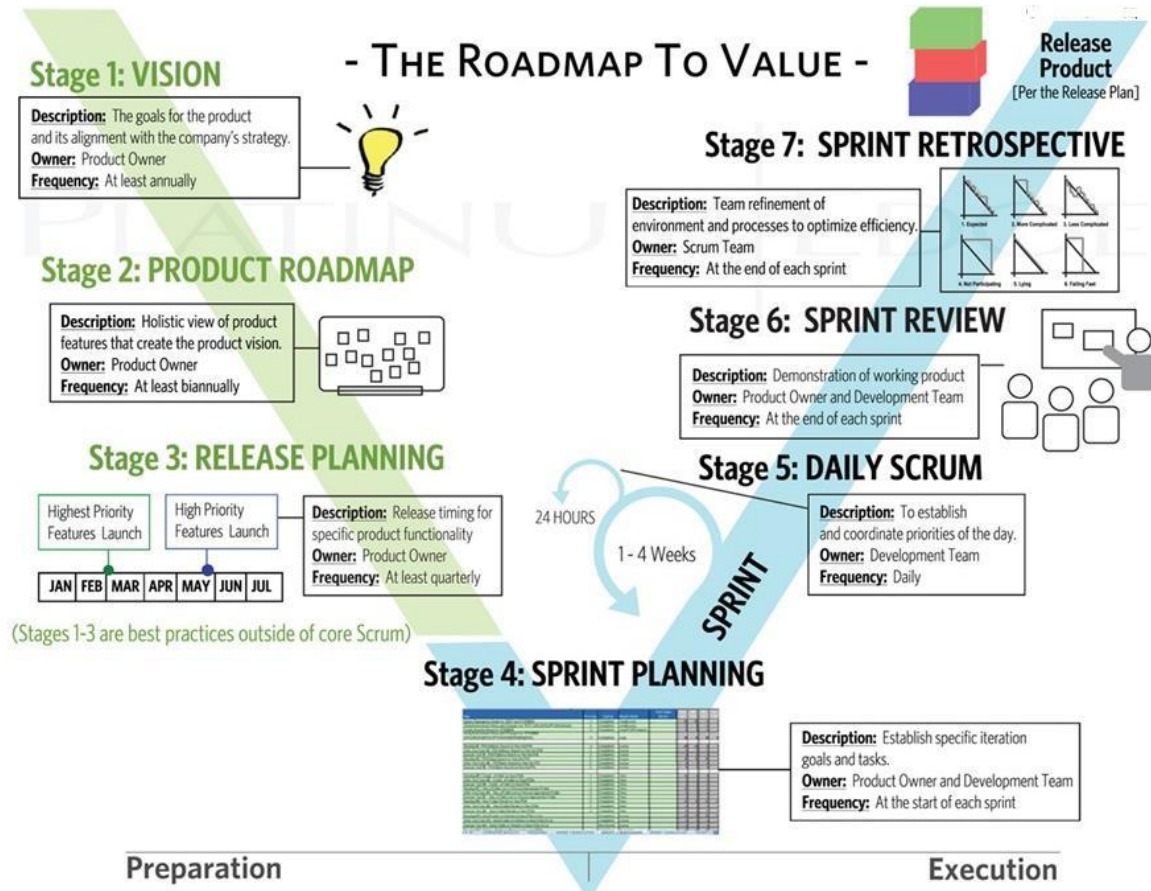## (Deming's Continuous Improvement Cycle)

- Planning is NOT a One-time Activity at the Beginning of a Project
- Part of PDCA (Deming's Cycle of Continuous Improvement)
- PDCA vs. "Plan-the-Work, Work-the-Plan" (Waterfall Model)

- Agile Planning
  - Just-In-Time Planning / "Situational Planning"
  - Agile Planning is Continuous throughout the Project

Levels of Planning in Agile

Product

Release

Sprint

Daily

Product Vision (1 – 3 years)

Release Planning

24 h

30 days

Product Backlog

Sprint Backlog

Sprint

Working increment of the software

Planning at *Every* Stage in Agile (SCRUM)

Source: (T2)

Key Characteristics of Agile Planning

- Planning occurs at <u>every</u> Stage

- Planning, like Development is <u>Iterative</u>

- <u>Just-enough and Just-in-Time</u> Planning at every Stage

- <u>Progressive Detailing</u> - start with a broad plan and narrow it progressively

- <u>Prioritizing Value</u> at every Stage: Add High-value Requirements first

- <u>Adapt</u> the Plan after Feedback at every Stage

Plan-**D**o-**I**nspect-**A**dapt

Agile Release Planning Stages in Detail ➜➜

Stage-1: Defining Product Vision

- The Vision Statement (Summary) communicating Product Strategy
  - Product Goals aligned with Strategy
  - Owned by the Product Owner
  - Frequency: annually (minimum)

- Developing the Vision Statement
  - Develop the Product Objective
  - Draft the Vision Statement
  - Validate the Statement with Stakeholders and Revise after Feedback
  - Finalize the Vision Statement

- The Vision Statement must be:
  - Clear with Simple language
  - Non-technical (everyone can understand)
  - Brief (in one or two lines)
  - Internally focused (at development, not a sales pitch)

Vision Statement for Product:

For:	(Target Customer)
who:	(needs)
the:	(product name)
is a:	(product category)
that:	(product benefit, reason to buy)
Unlike:	(competitors)
our product:	(differentiation/value proposition)

Stage-2: Holistic Product Roadmap

- Derived from Project Vision

- Identify Requirements that <u>Define</u> Product Roadmap

- Arrange Requirements into <u>Logical Groups</u>

- <u>Estimate</u> Effort and <u>Prioritize</u> Requirements

- Set <u>High-level Time-frame</u> for each Group of Requirements

- Beginning of the Creation of <u>Product-Backlog</u>

➔ Update the Product Roadmap throughout the Project (unlike Project Vision)

Common activities		Reduction in call volume	
Authentication and access to my accounts.	Pay bills.	Order checks.	Order a copy of a statement.
View balance.	Transfer money between accounts.	Put a stop on a check or range of checks.	Open an account.
View pending transactions.	View a statement.	Change password.	
View bills.			
Find a branch/ATM machine.	Call customer service.		

Stage-3: Release Planning

- Elaboration of Project Roadmap into Details
- A Release is a *Minimum set* of Marketable Requirements
- Requirements Breakdown Structure (WBS) by granular Decomposition
- "Epic-story ..→ User-stories"
- User-story: Simple Description of Requirements (user-walkthrough or benefit statement)
- Create *Personas* for each Class of Users
- Identify each Story by ID and set a Value (in terms of benefits or priority)
- Estimate Effort for each Story ("story points")
- Document on Index-cards or Post-it Notes
- Product Owner manages the Stories
- Break Stories further into detailed Features/Tasks for Sprint Planning,

Title Transfer money between accounts

As Carol,

I want to review fund levels in my accounts and transfer funds between accounts

so that I can complete the transfer and see the new balances in the relevant accounts.

Jennifer

Value   Author   Estimate

Stage-4: Sprint Planning

- A Sprint is a consistent (fixed-length ~ 1-4weeks) Iteration of Time in which Product takes Demonstrable Shape
- Sprint Backlog: List of User-stories (prioritized) with detailed WBS and Time-estimates
- Each Task to be completed in 1-2 days max (no over-committing, reduce Scope if necessary)
- Task Done ➔ Developed, Integrated, Tested and Documented
- Development Team work only on one Requirement (Story/Tasks) at a time
- Only the Development Team can modify the Sprint Backlog
- Each Sprint includes:
  - Sprint Planning (max. 2 hours at the beginning of every week)
  - Daily Scrum Meeting (standup meeting for 15-20mins)
  - Development (bulk of the effort in Sprint)
  - Sprint Review
  - Sprint Retrospective

Stage-5: Daily Scrum

- Each Day can be a Planning/Replanning Day (Daily Scrum meeting)
- Daily Scrum Meeting to be Brief (~15-20mins Standup)
- Scrum Master to facilitate the meeting (review progress, roadblocks,…)
- Participants: Product Owner, Development Team and Scrum Master
- Focus of Meeting: Coordinate/Prioritize (Not to solve Problems)
- Update Sprint Backlog Daily (at the end of the meeting) and make it visible to everyone in the team

To Do		In Progress	Verify	Done
Code the... 9	Test the... 8	Code the... DC 4	Test the... 6	Code the...
Code the... 2	Code the... 8	Test the... SC 8		Test the... Test the... Test the...
Test the... 8	Test the... 4			Test the... SC 6

Stage-6: Sprint Review

- Sprint Review Meeting at the end of each Sprint to review and demonstrate User-stories that were completed during the Sprint

- Entire Team (Product Owner, Development Team, Stakeholders and Scrum Master) participates

- Product Owner confirms Status of Completion of Sprint (ready for Release of partial-working product)

- Invites Feedback from all Stakeholders

- Scrum Master to update Product-backlog for the next Sprint Planning

Stage-7: Sprint Retrospective

- Post Sprint Meeting (Scrum Master, Development Team and Product Owner) to discuss *the experience* of the Sprint – What went right and what went wrong

- Focus is on Continuous Improvement of the *Process* to improve *Efficiency* and *Velocity* of throughput

- Adapt Scrum Processes to improve morale of Team and their Work-life balance

- Lasting for ~45mins maximum for every week of the Sprint

- Opportunity to *Inspect and Adapt* (Plan-Do-Inspect-Adapt) Scrum Process

Preparing for Release

- End of every Sprint to be *Working and Demonstrable* Product

- A Sprint outcome can be a Release Sprint meant for Customers

- Sprint-backlog Items in a Release Sprint might include:
  - Creating User Documentation for the just finished Release
  - Testing of Key Non-Functional Requirements (Performance, Security, Load balancing,…)
  - Compliance with mandatory Organizational or Regulatory Procedures
  - Integrating with existing Organization's Enterprise Systems
  - Preparing Deployment Package (Installation scripts, etc)
  - Preparing a Release Note

- Note that Development for Regular Sprint is different that of Release Sprint

- Sprint Review meeting for Release to include Customer and Key Stakeholders from Marketing and Operations as well

Summary: Release Planning

- Planning is Continuous in Agile – at every Stage in the Scrum Process (Release Planning, Daily Scrum, Sprint Review)

- Each Release may span one or more Sprints

- Agile Planning is planning for a pre-determined number of Releases to Customers

- Planning for Release involves more Tasks (Sprint-backlog) than for regular Sprint

- Sprint Retrospective Meeting identifies Opportunities for Improvement in the Scrum Process and implements them before the next Sprint cycle

More Meetings, More Sharing of Information/Feedback, Near-Real-Time Visibility into the Product, and finally 'Unsurprising' and Acceptable Product Release(s)!

Thank You