

INFT3100
Project Planning
and
Management

Course Coordinator

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Why do we teach Project Management ?

- Projects are everywhere
- Billions of dollars of wastage worldwide on failed projects
- PMI Membership has grown from 93,000 (2002) to more than 500,000 (2012) <https://www.pmi.org/certifications>
- Project managers not always hold “Project Manager” title
- Good news: PM skill set is transferrable in other business and professional domains
- In anyone's career, this is something that is highly likely to be required.

INFT3100 Students don't be afraid of the INFT label

- This course is core for the Bachelor of IT (BIT). It is intended to prepare them for their capstone IT Project and is required for accreditation of the BIT by the Australian Computer Society (ACS)
- But it is **NOT**
 - an IT Project course, nor is it a course all about IT Projects (although the skills for these are covered)
- In fact it **IS**
 - a course on general Project Management principles, tools and techniques, suitable for all disciplines.

Why are YOU learning Project Management?



Survey by Standish Group International

https://www.standishgroup.com/sample_research

2014: Project Smart -Standish Group on Chaos

- The US spends \$250 billion each year on IT application development (approx. 175,000 projects).
- A great many of these projects fail,
- 31% cancelled before completion (\$80 billion);
- half cost 190% of their original estimates

Professional Certifications

- Australian Institute of Project Management:
 - The course has no direct certification, however the course provides training in the competency levels for certification by the AIPM
 - <https://www.aipm.com.au/home>
- Project Management Institute (PMI):
 - CAPM (Certified Associate in Project Management)
 - <https://www.pmi.org/certifications/types/certified-associate-capm>
 - PMP (project Management Professional)
 - 3000 in 1996, >400,000 in 2011

What you'll be learning (in a nutshell)

Week 1

Modern PM Methodologies
Traditional and Agile

Weeks 2 – 4

Selecting Projects
Financial & Non Financial Factors, Org Structure & Culture

Weeks 5 - 7

Project Planning
Work Breakdown Structure, Estimating, Change & Risk Management

Weeks 8 - 9

Resource Allocation & Tracking
Allocating resources, Measuring CPI & SPI

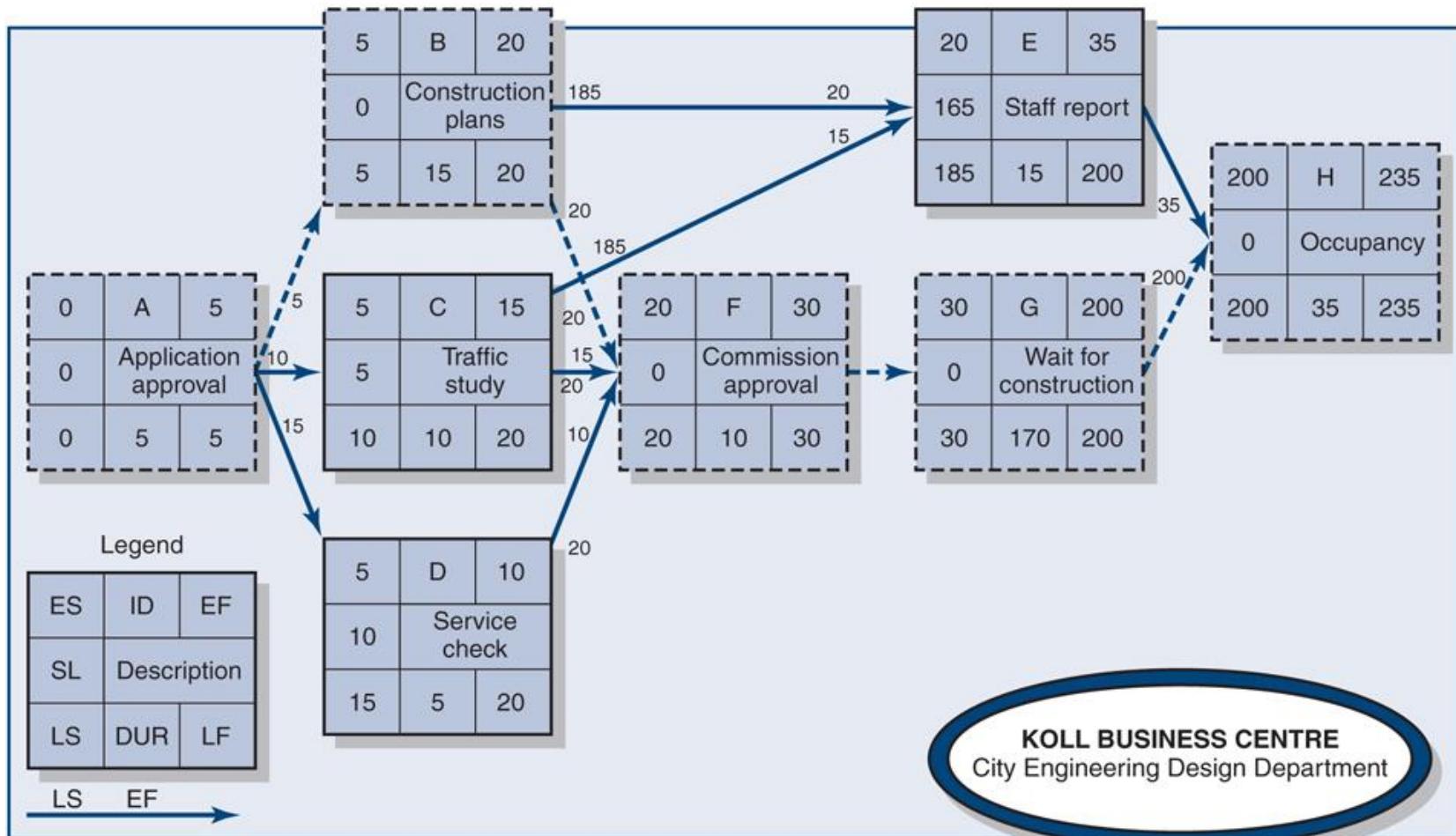
Weeks 10 - 12

Managing teams & Closure, Agile
Leadership, Closing Project

Weeks 1 - 4: Selecting a Project

Weeks 5 – 7: Project Planning

Figure 6.8 ACTIVITY-ON-NODE NETWORK WITH SLACK



Weeks 8: Resource Scheduling

Final resource-constrained schedule

ID	RES	DUR	ES	LF	SL	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	2P	2	0	2	0	2	2													
2	2P	6	234 56	1011 12	210 -1-2			X X X X		2	2	2	2		2	2				
3	2P	4	2	6	0			2 2 2 2												
4	1P	2	2	6	6 -2			1 1 SL SL												
5	1P	2	678 910	1011 12	210 -1-2						X X X X				1	1				
6	1P	4	6	10	0						1 1 1 1									
7	1P	2	1011 12	1213 14	210 -1-2										X X	1	1			
Total resource load						2P	2P	3P	3P	2P	2P	3P	3P	3P	3P	3P	3P	3P	1P	1P
Resource available						3P	3P	3P	3P	3P	3P	3P	3P	3P	3P	3P	3P	3P	3P	3P

Weeks 9: Tracking Progress & Performance

Project number: 163

Project priority now: 4

Status as of: April 1, 2007

Earned value figures:

PV	EV	AC	SV	CV	BAC
588,240	566,064	596,800	-22,176	-30,736	1,051,200
EAC	VAC	EAC _f	CPI	PCIB	PCIC
1,090,640	-39,440	1,107,469	.95	.538	.547

Project description: A computer-controlled conveyor belt that will move and position items on the belt with accuracy of less than one millimeter.

Status summary: The project is approximately 25 days behind schedule. The project has a cost variance of (\$30,736).

Explanations: The schedule variance has moved from noncritical activities to those on the critical path. Integration first phase, scheduled to start 3/26, is now expected to start 4/19, which means it is approximately 25 days behind schedule. This delay is traced to the loss of the second design team which made it impossible to start utilities documentation on 2/27 as planned. This loss illustrates the effect of losing valuable resources on the project. The cost variance to date is largely due to a design change that cost \$21,000.

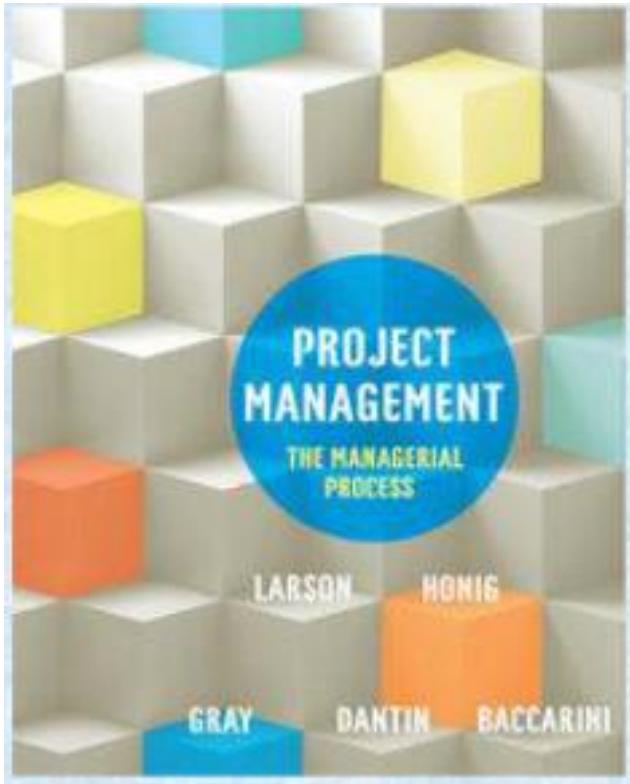
Major changes since last report: The major change was loss of one design team to the project.

Total cost of approved design changes: \$21,000. Most of this amount is attributed to the improved design of the serial I/O drivers.

Projected cost at completion: EAC_f is estimated to be \$1,107,469. This represents an overrun of \$56,269, given a CPI of .95. The CPI of .95 causes the forecast to be greater than the VAC —\$39,440.

Risk watch: Nothing suggests the risk level of any segments has changed.

Course Text



Project Management: The Managerial Process,
Larson & Gray
McGraw-Hill
ISBN 9781259666094

This is the Australian Edition book and it is **very advisable** that each student has their own textbook.

- Most exercises and some assignment questions come from this book.

Alternatively, an Online edition (e-book) can be purchased.

<https://www.mheducation.com.au/9781259666094-aus-project-management-the-managerial-process-group>

Print: <https://theschoollocker.com.au/universities/the-university-of-newcastle/subjects/semester-one/inft3100-project-management>

eBooks: <https://www.vitalsource.com/en-au/products/project-management-erik-larson-v9781760421465>

Course Structure...

- Lecture (2 hours / week)
 - Based on Text Chapters (Read beforehand)
 - Will include discussion
 - May include case studies and worked examples
- Workshop/ lab (2 hours / week): Team directed and where a lot of the learning occurs
 - Exercises
 - Case Studies
 - Feedback
 - Quizzes (week 4, 6, 9 11)
 - Be prepared to present opinion and solutions
- Outside of formal hours –where the other learning happens:
 - You need Dedicated time to work on Assignments; Complete Exercises & Case Studies
 - NOTE: Additional team-based time will be required at times, so plan and allocate time for this as required.

Assessment



- Two team-based assignments.
- Four online multiple-choice quizzes (5% each)
- Formal examination

Assessment Type	Quantity	When	How Much
Quiz (Assessment 1)	4	Weeks 4,6,9,11	20%
Group Assignments (Assessment 2 and 3)	2	Weeks 5, 11	10%+30%
Exam (Assessment 4)	1	Exam Period	40%

Assignments and Teams

- Projects involve large amounts of group work
- There is not one BIG Project - All assignments in the course are group based and focus on Project Management Areas
- 4-5 students in a team. Members must be within the same tutorial class. It may differ in Ourimbah campus.
- Peer Evaluations within teams
 - Each team member is to complete a team member rating form – this will be provided as a PDF form on the Course Canvas site (Group Member rating form.pdf). This is a confidential rating and will not be shared with team members. Evaluate yourself and the team members on their ability to work as a group.
 - The assignments will need to be managed by the team. This is where you put the Project Management theory and principles in to practice.

Workshops/ Computer lab

- Exercises focus on central project management techniques
- Exercises are not assessed
 - However skills are tested in exams & assignments
- Case studies to enhance understanding
 - Groups will be expected to be ready to present opinion & solutions

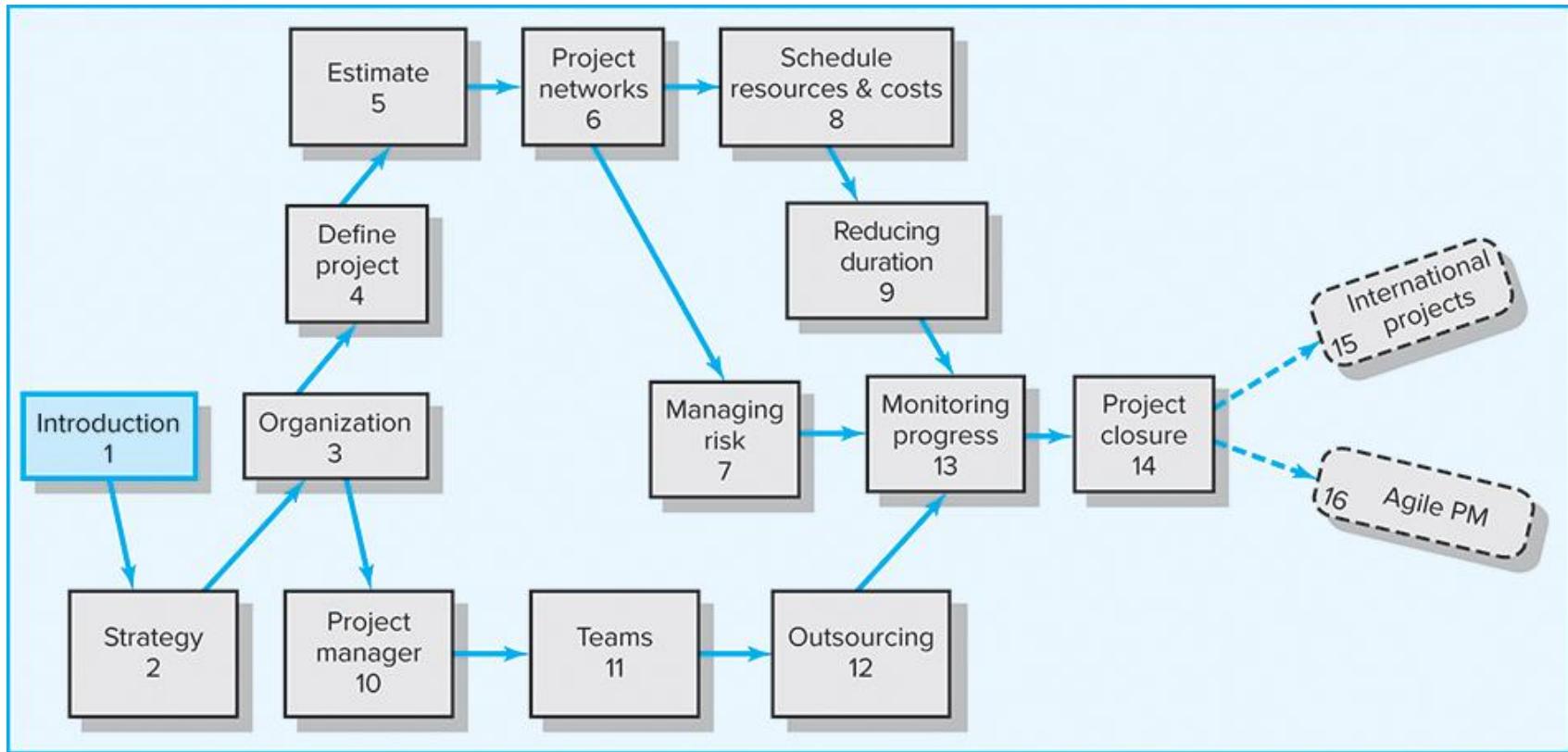
Expectation

- Tutorials start next week (week 2) - Think about groups
- Attendance in Lectures is important but not compulsory (but you get to ask questions)
- Respect others.
- Try to use lecture and lab times for asking questions. However, for further queries, **please use discussion forum in Canvas**. This way we can ensure consistent information sharing with all students. I will try to respond to your queries on every Monday and Thursday.
- Send emails to course coordinators if you face any personal problem while doing the course.
- Enjoy the course!

Chapter One

Modern Project Management

An Overview of Project Management



Learning Objectives

Understand why project management is crucial in today's world

Chapter Outline

- 1.1 What Is a Project?
- 1.2 Current Drivers of Project Management
- 1.3 Project Governance
- 1.4 Project Management Today—A Socio-Technical Approach

What Is a Project?

- A Project is defined as:
 - A complex, non-routine, one-time effort limited by time, budget, resources and performance specifications designed to meet customer needs
 - A temporary endeavor undertaken to create a unique product, service, or result
- Major Characteristics of a Project
 - Has an established objective
 - Has a defined life span with a beginning and an end ..
 - Requires across-the-organizational participation ..
 - Involves doing something never been done before ..
 - Has specific time, cost, and performance requirements

Comparison of Routine Work with Projects

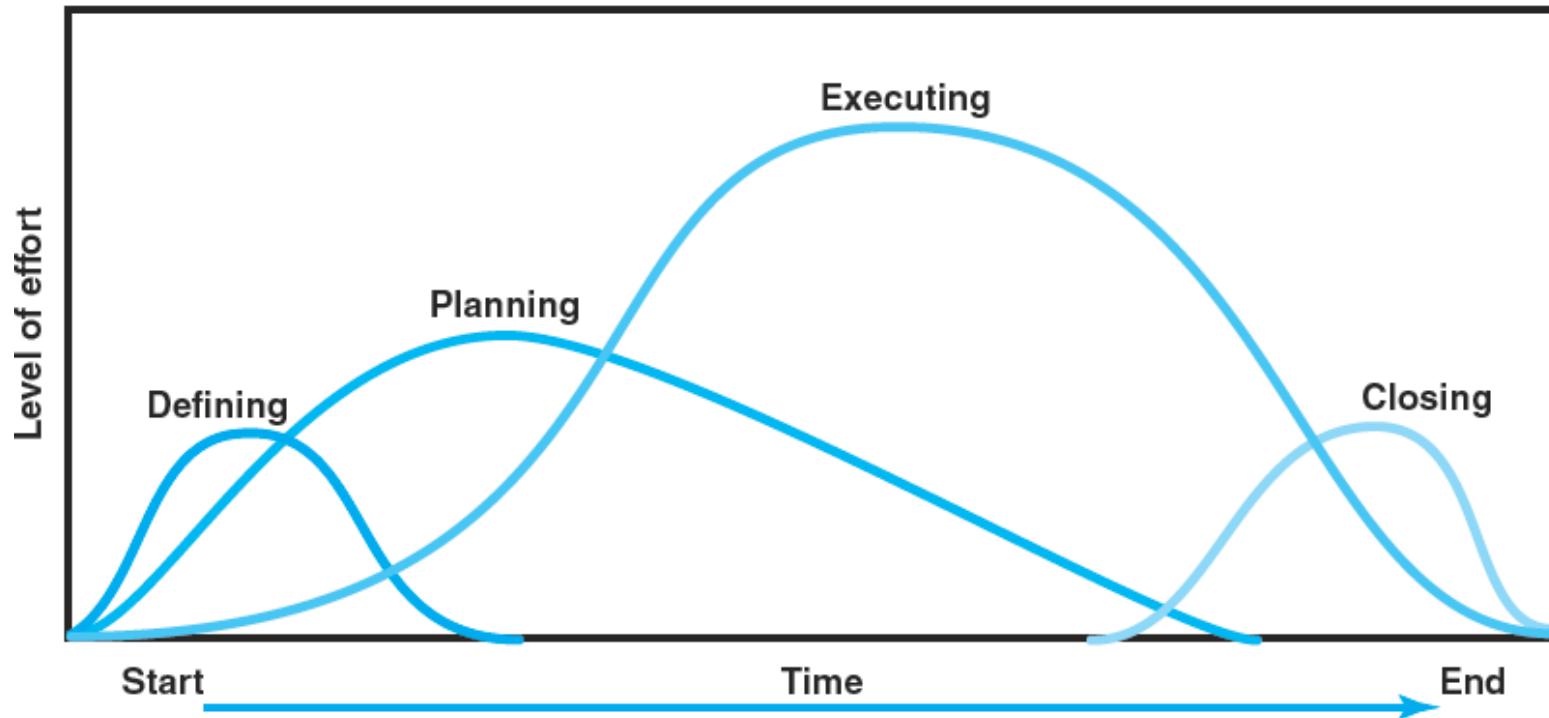
Routine, Repetitive Work	Projects
Taking class notes	Writing a term paper
Daily entering sales receipts into the accounting ledger	Setting up a sales kiosk for a professional accounting meeting
Responding to a supply-chain request	Developing a supply-chain information system
Practicing scales on the piano	Writing a new piano piece
Routine manufacture of an Apple iPod	Designing an iPod that is approximately 2 X 4 inches, interfaces with PC, and stores 10,000 songs
Attaching tags on a manufactured product	Wire-tag projects for GE and Wal-Mart

TABLE 1.1

Program versus Project

- A Program is defined as:
 - a series of coordinated, related, multiple projects that continue over an extended time and are intended to achieve a goal
 - a higher level group of projects targeted at a common goal (e.g. closer to organizational goal)
- Examples:
 - Project: completion of a required course (INFT3100) in project management.
 - Program: completion of all courses required for a IT major.
- Differences lie mainly in scale and time; portfolio
 - Another example: program for curing cancer (project team and program team overseeing the projects)

Project Life Cycle



Defining

1. Goals
2. Specifications
3. Tasks
4. Responsibilities

Planning

1. Schedules
2. Budgets
3. Resources
4. Risks
5. Staffing

Executing

1. Status reports
2. Changes
3. Quality
4. Forecasts

Closing

1. Train customer
2. Transfer documents
3. Release resources
4. Evaluation
5. Lessons learned

FIGURE 1.1

Project Life Cycle

- Starts with ‘go-ahead’ call
- Different teams might be involved in different phases. So, companies need optimized planning to involve the teams effectively
- There might be domain specific life cycles. In soft dev: definition, design, code, integration/test, maintenance

FIGURE 1.1

The Challenge of Project Management

- The Project Manager

- Manages temporary, non-repetitive activities and frequently acts independently of the formal organization.

- Organizes resources for the project.
 - Is linked directly to the customer interface.
 - Provides direction, coordination, and integration to the project team.
 - Is responsible for performance and success of the project.

- Must induce the right people at the right time to address the right issues and make the right decisions.



The Challenge of Project Management

- The Project Manager
 - create new team, allocate resources, create new processes
 - work with diverse set of characters
 - Need to do trade-offs among time, cost and scope
 - Satisfying job
 - Challenging job
 - Good project managers are in demand

The importance of Project Management

- Factors leading to the increased use of project management:
 - Compression of the product life cycle
 - Time to market (10 to 15 yrs → 1 to 3 yrs). 6 mo delay->33% revenue loss
 - Knowledge explosion
 - Complexity → integration of divergent technologies, PM is required
 - Triple bottom line (planet, people, profit)
 - Global warming < > profit; renewable sources, energy saving etc.
 - Increased customer focus
 - Customized products and services, Golf-clubs example
 - Corporate downsizing
 - Outsourcing. PM needs to handle internal and external project teams
 - Small projects represent big problems
 - Next slide

The importance of Project Management

Google, Apple, General Electric and Sony all have over 1,000 projects being implemented concurrently every day.

- *How do these organizations oversee the management of all these projects?*
- *How were these projects selected?*
- *How can project management continually improve?*
- *How are resources allocated among projects?*

Sometimes small projects overlooked. Why? Then what might be the problem?

Benefits of an integrative approach

- Integration (or **centralization**) of project management provides senior management with:
 - An overview of all project management activities
 - A big picture of how organizational resources are used
 - A risk assessment of their portfolio of projects
 - A rough metric of the firm's improvement in managing projects relative to others in the industry
 - Linkages of senior management with actual project execution management
- Project management under **one umbrella**. Same tools, processes, techniques etc for all projects. Strategic planners and project planners work in coherence.

Integrated Management of Projects

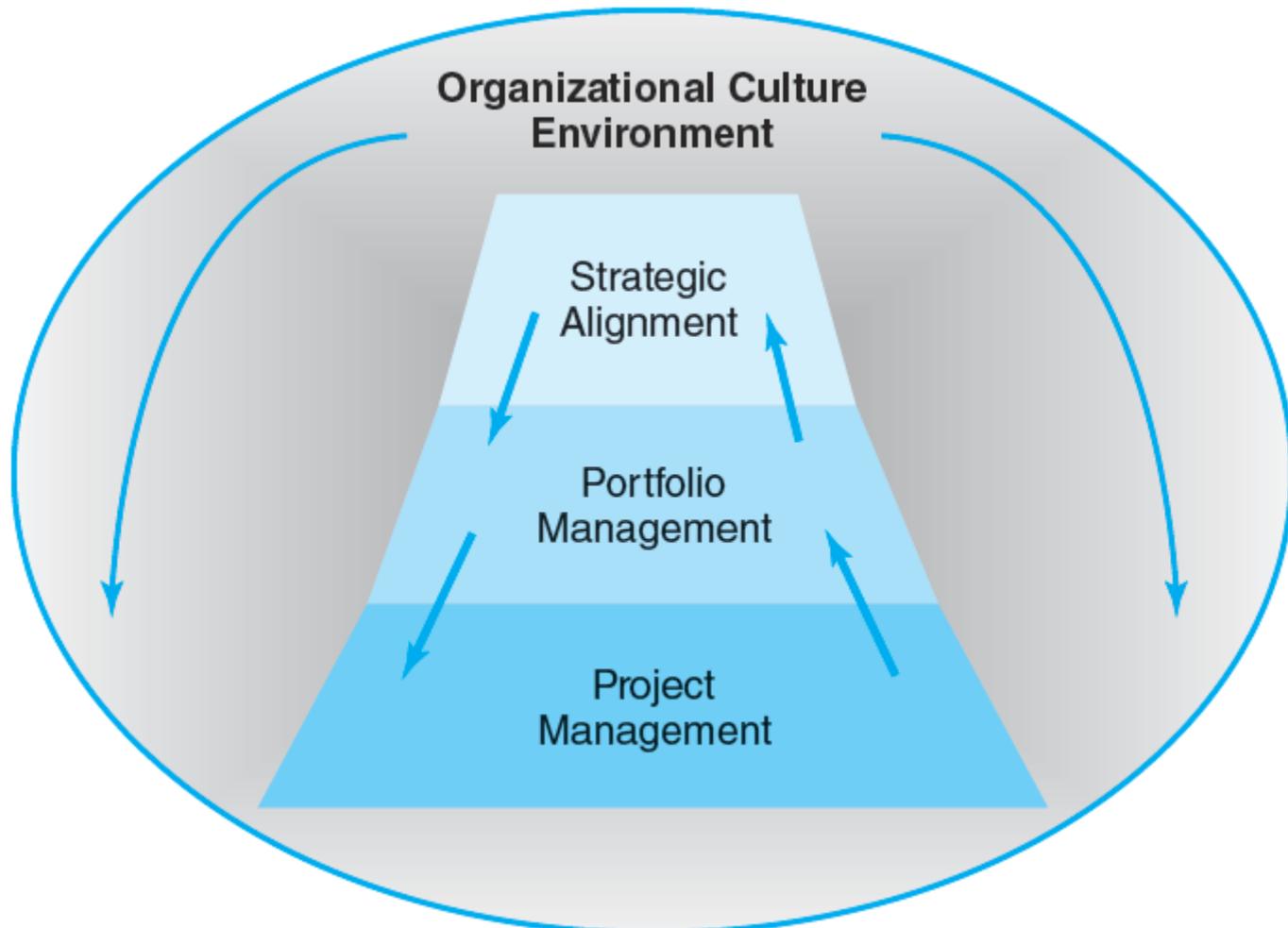
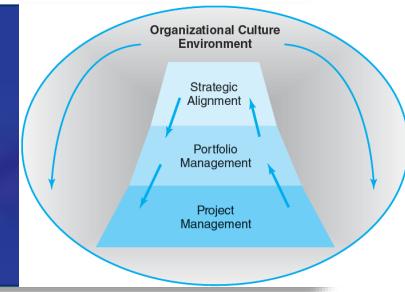


FIGURE 1.2

Alignment of Projects with Organizational Strategy



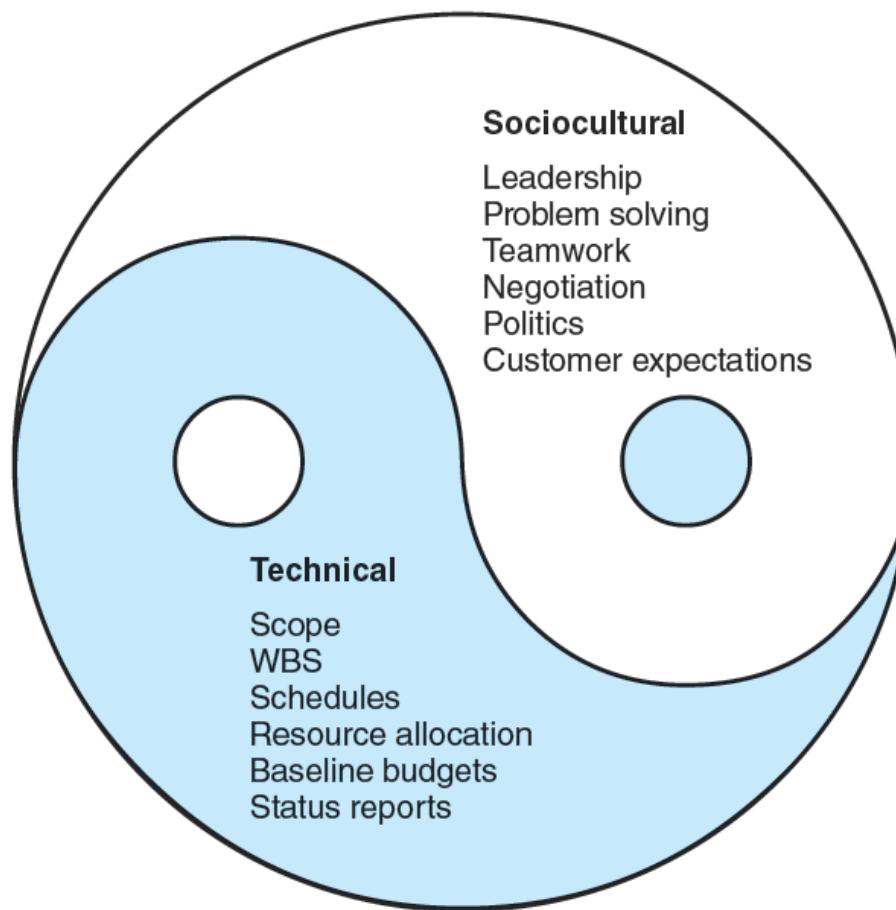
- Problems resulting from the uncoordinated project management systems include:
 - Projects that do not support the organization's overall strategic plan and goals.
 - Independent managerial decisions that create internal imbalances, conflicts and confusion resulting in dissatisfied customers.
 - Under these condition, resources (people, capital and equipment) are wasted in non-value-added activities/projects.

Major functions of portfolio management



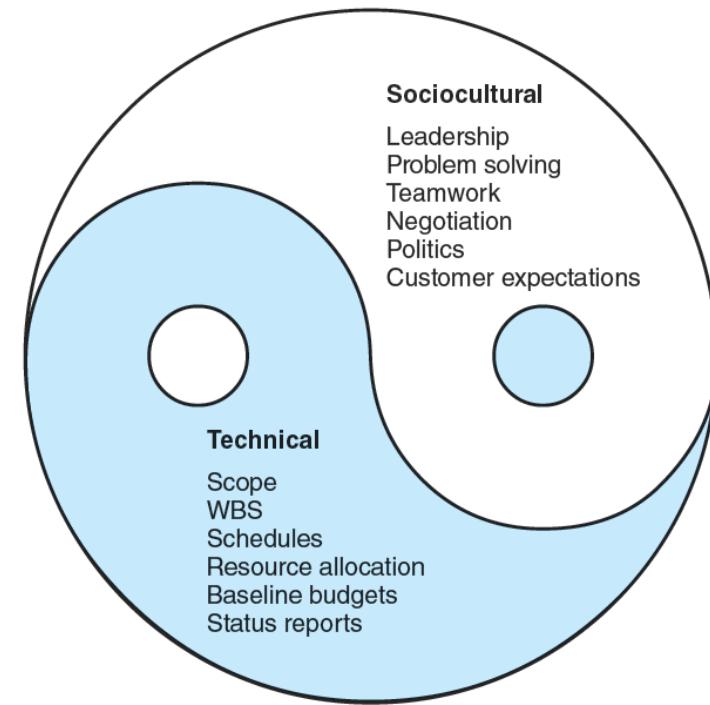
- Project portfolio is group of projects that **have been selected** for implementation balanced by project type, risk, and ranking by selected criteria.
 - Oversee project selection
 - Doing the right projects (in PM, Doing projects right)
 - Monitor aggregate resource levels and skills
 - The controlled allocation of scarce resources to projects based on strategic priorities
 - Balance projects in the portfolio in order to represent a risk level appropriate to the organisation
 - Improve communication among all stakeholders
 - Create a total organization perspective. Eliminate silo thinking
 - Improve overall mgt of projects over time

A Project Management Today: A Socio-Technical Approach



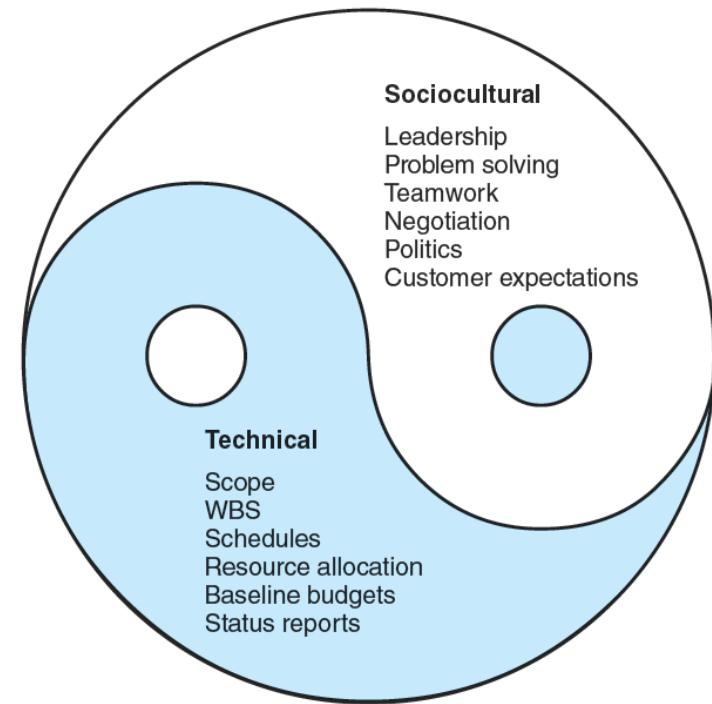
A Project Management Today: A Socio-Technical Approach

- The Technical Dimension
(The “Science”)
 - Consists of the formal, disciplined, purely logical parts of the process.
 - Includes planning, scheduling, and controlling projects.
 - ex: Clear proj. deliverables, WBS, change management

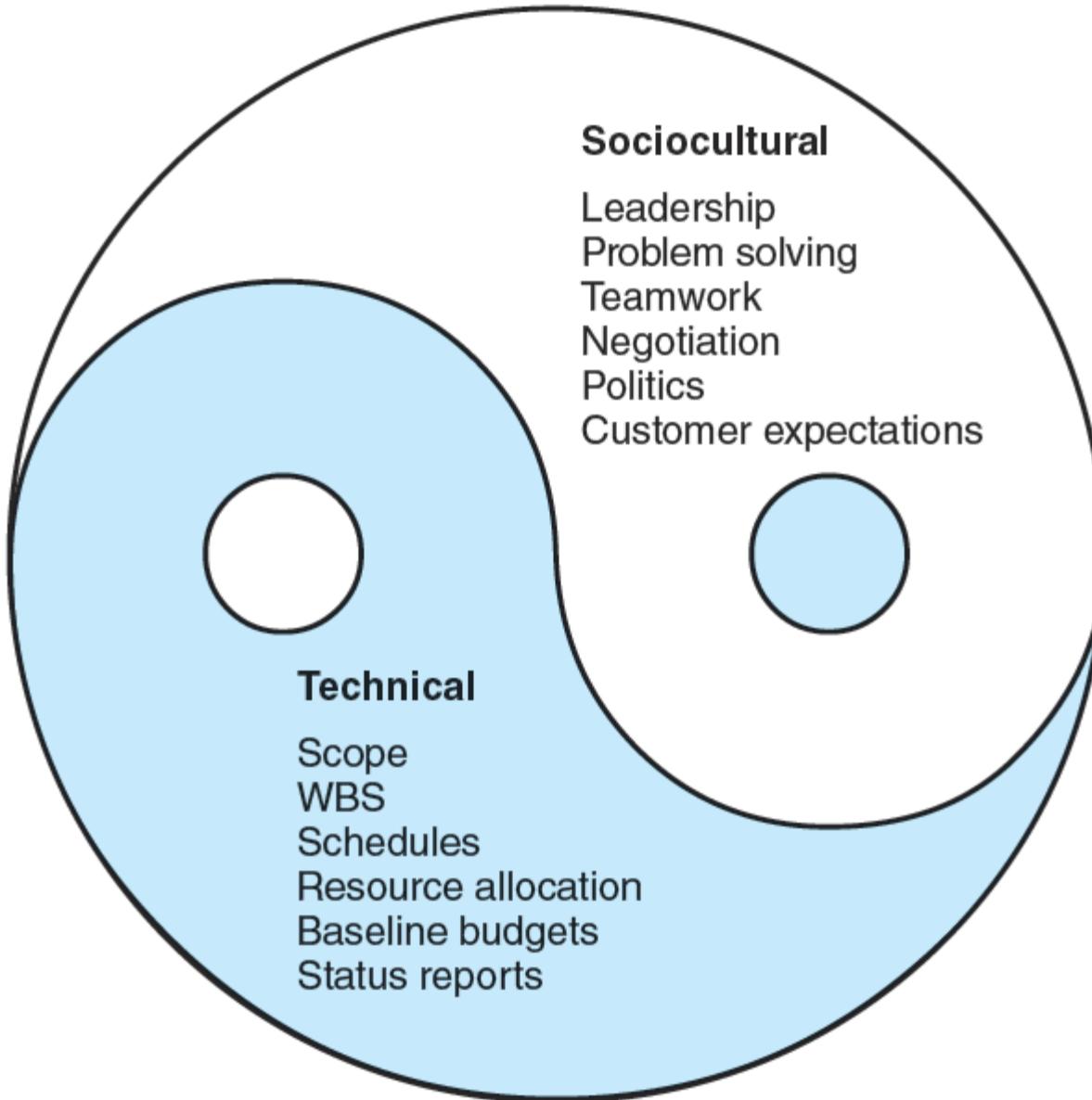


A Project Management Today: A Socio-Technical Approach

- The Sociocultural Dimension
(The “Art”, needs ppl/soft skills)
 - Involves contradictory and paradoxical world of implementation.
 - Centers on creating a temporary social system within a larger organizational environment that combines the talents of a divergent set of professionals working to complete the project.
 - Gaining political supports from seniors, negotiate with functional counterparts, subcontractors
 - Often overlooked



A Socio-Technical Approach to Project Management



'Good project managers balance their attention to both the technical and the sociocultural aspects of project management.'

FIGURE 1.3

Key Terms

Program

Project

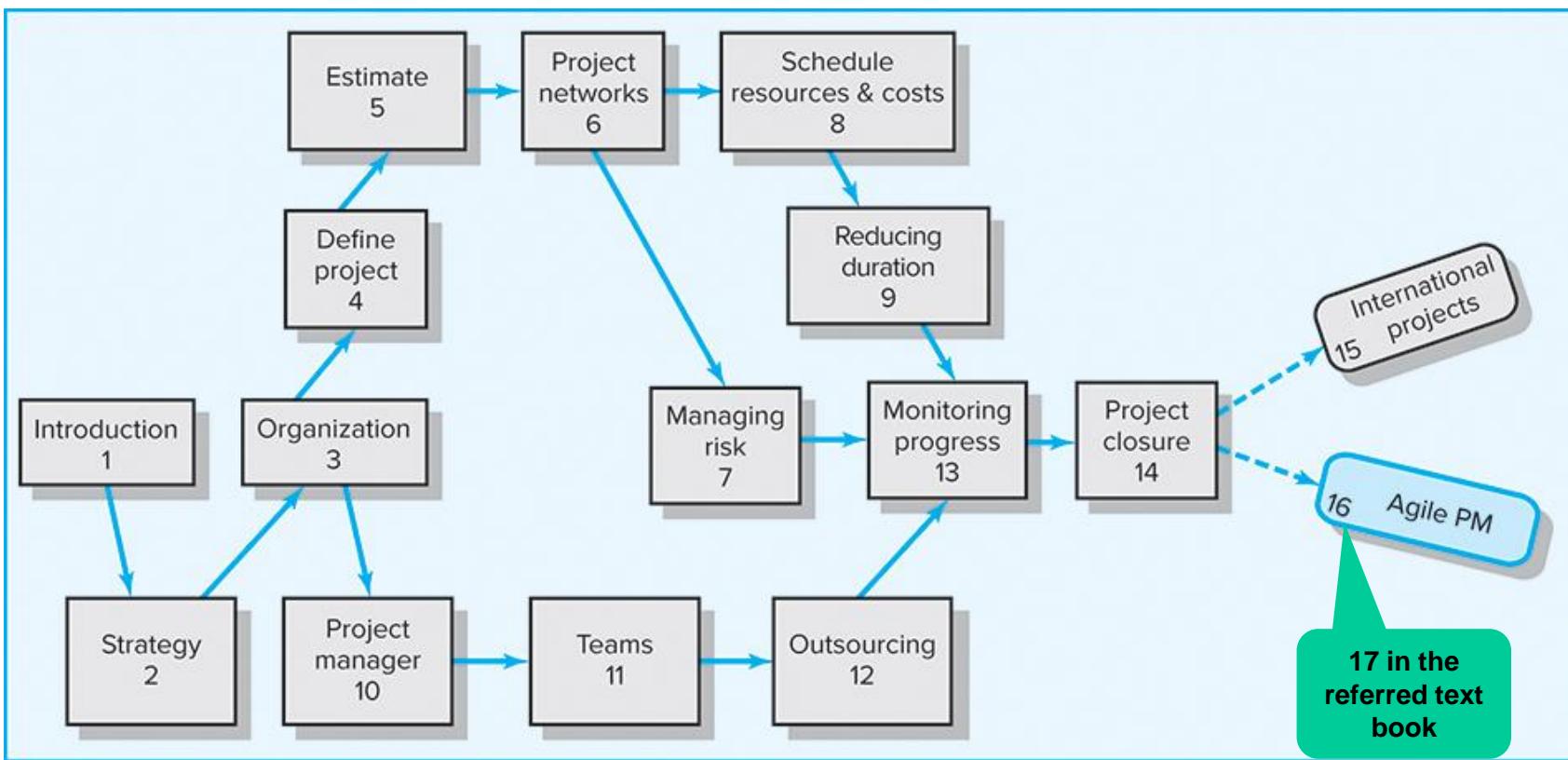
Project life cycle

Project Management Professional (PMP)

Chapter 17

An Introduction to Agile Project Management

Where We Are Now



Learning Objectives

Recognize the conditions in which traditional project management versus agile project management should be used

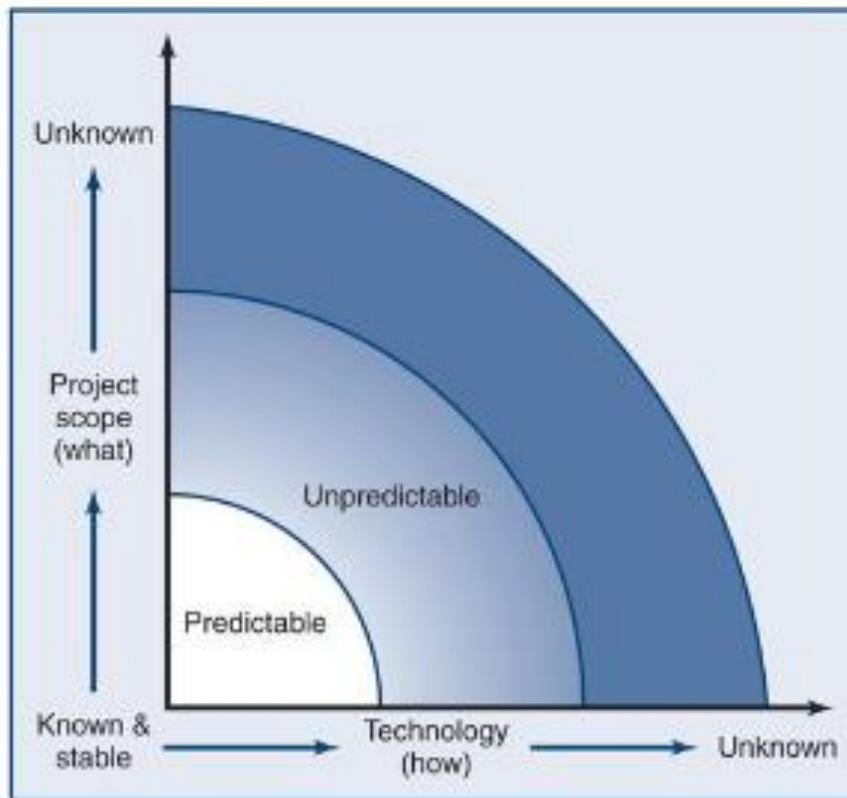
Chapter Outline

- 16-1 Traditional versus Agile Methods
- 16-2 Agile PM
- 16-3 Agile PM in Action: Scrum
- 16-4 Limitations and Concerns

Project Uncertainty

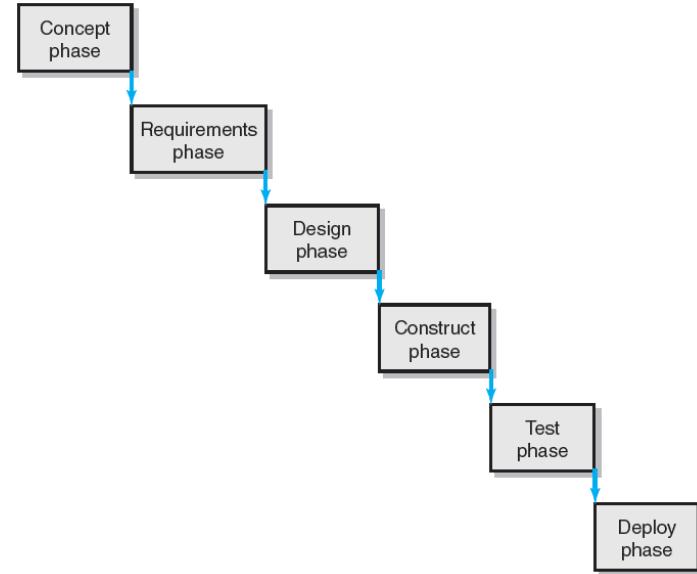
Figure 17.1

PROJECT UNCERTAINTY



Traditional versus Agile Methods

- Traditional Project Management Approach
 - Concentrates on thorough, upfront planning of the entire project.
 - Requires a high degree of predictability to be effective.
 - Waterfall approach
 - Traditional approaches do not deal well with **frequent change**
 - Scope firmly established, every details in WBS, most problems and risks are identified and assessed, estimates are made, resources assigned, adjustments made, baseline schedule and budget are created.
 - Control means: comparison of plan and versus actual and corrective action to get back on plan
 - Needs high degree of predictability. However is it always possible?

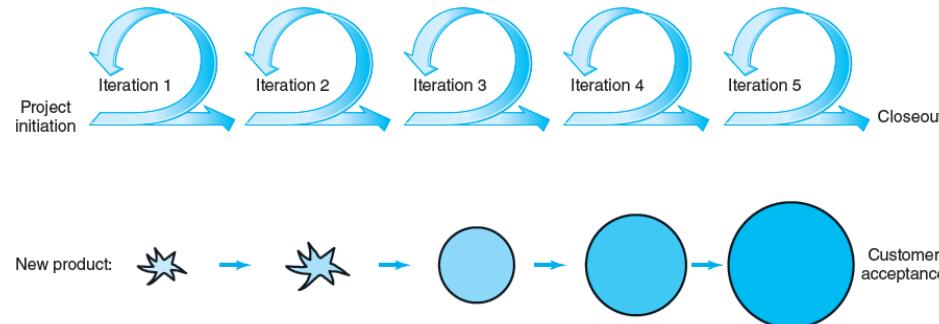


Traditional versus Agile Methods

- Agile Project Management (Agile PM)
 - House building analogy
 - Research projects
 - Ideal for exploratory projects (req. need to be discovered and new tech tested)
 - Software development projects
 - Electric car example.

Traditional versus Agile Methods

- Agile Project Management (Agile PM)
 - Is related to the rolling wave planning and scheduling project methodology.



- The process is imperfectly defined, not all pieces of work are completely understood.
 - Frequent change, unpredictable outputs.
- Focuses on active collaboration between the project team and customer representatives.
- Relies on incremental, iterative development cycles to complete projects. Each cycle delivers a workable product

Traditional Project Management versus Agile Project Management

Traditional

Design up front

Fixed scope

Deliverables

Freeze design as early as possible

Low uncertainty

Avoid change

Low customer interaction

Conventional project teams

Agile

Continuous design

Flexible

Features/requirements

Freeze design as late as possible

High uncertainty

Embrace change

High customer interaction

Self-organized project teams

TABLE 16.1

Traditional PM Versus Agile

- Look at the first video (7 minutes)

– <https://youtu.be/9TycLR0TqFA>

This is a video that summarises an overview of Agile and its difference to traditional PM methods.

- Look at this video in your own time (8:30 minutes)

<http://www.youtube.com/watch?v=OJfIDE6OaSc&feature=related>

This video shows a completed project, using both traditional Waterfall and also Agile methods.

- While the video advertises a specific product suite of Agile PM tools (Workfront), be aware that there are many other good products, eg Jira in the Atlassian suite of Agile tools
- <https://www.atlassian.com/software/jira/agile-project-management>

TABLE 16.1

Agile is not just for IT

- Where can I use it? What industries use scrum? (2:39 minutes)

<https://youtu.be/ILj1YRSnqal>

- Agile in Health

- Agile in Healthcare (2:26 minutes) https://youtu.be/i7njkJP_-2U
- Case Study Agile in Business: Sales Team (9:42) <https://youtu.be/0EcovfPZ-n4>
- Agile in Education (5:21) https://youtu.be/1nDXthY_yvA
- Case Study: Stories of Scrum at Hope High School: The Freedom to Teach and Learn (19:21) <https://youtu.be/6QBAeGUMHUG>
- Agile in the Classroom (Presentation) (13:15 minutes)
<https://youtu.be/HNUT9E115MQ>

- Agile in Marketing

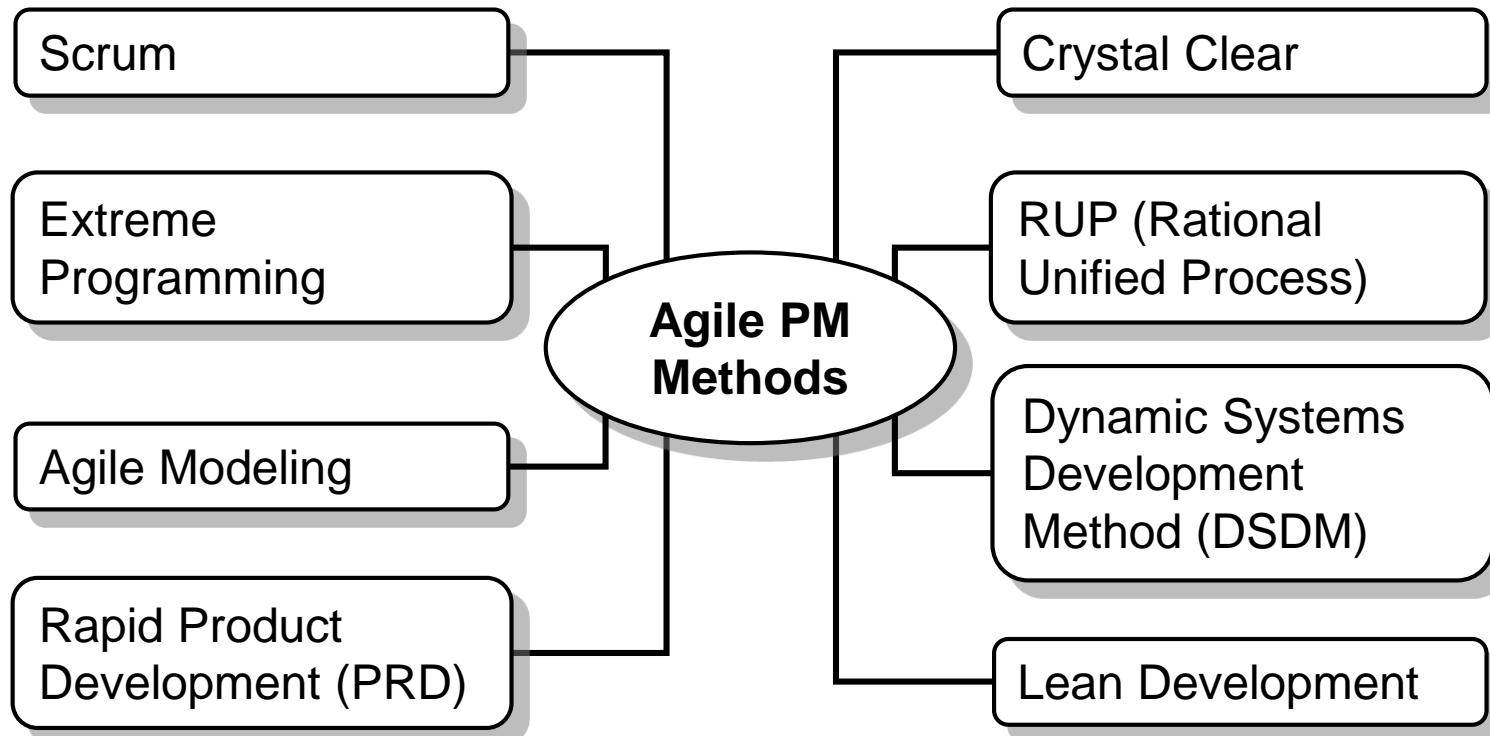
- Whiteboard Friday (7:15) <https://youtu.be/g-74TDjtzEQ>
- Whiteboard Friday with Moz (8:11) <https://youtu.be/5jYrzobkpP0>

TABLE 16.1

Agile Project Management (cont'd)

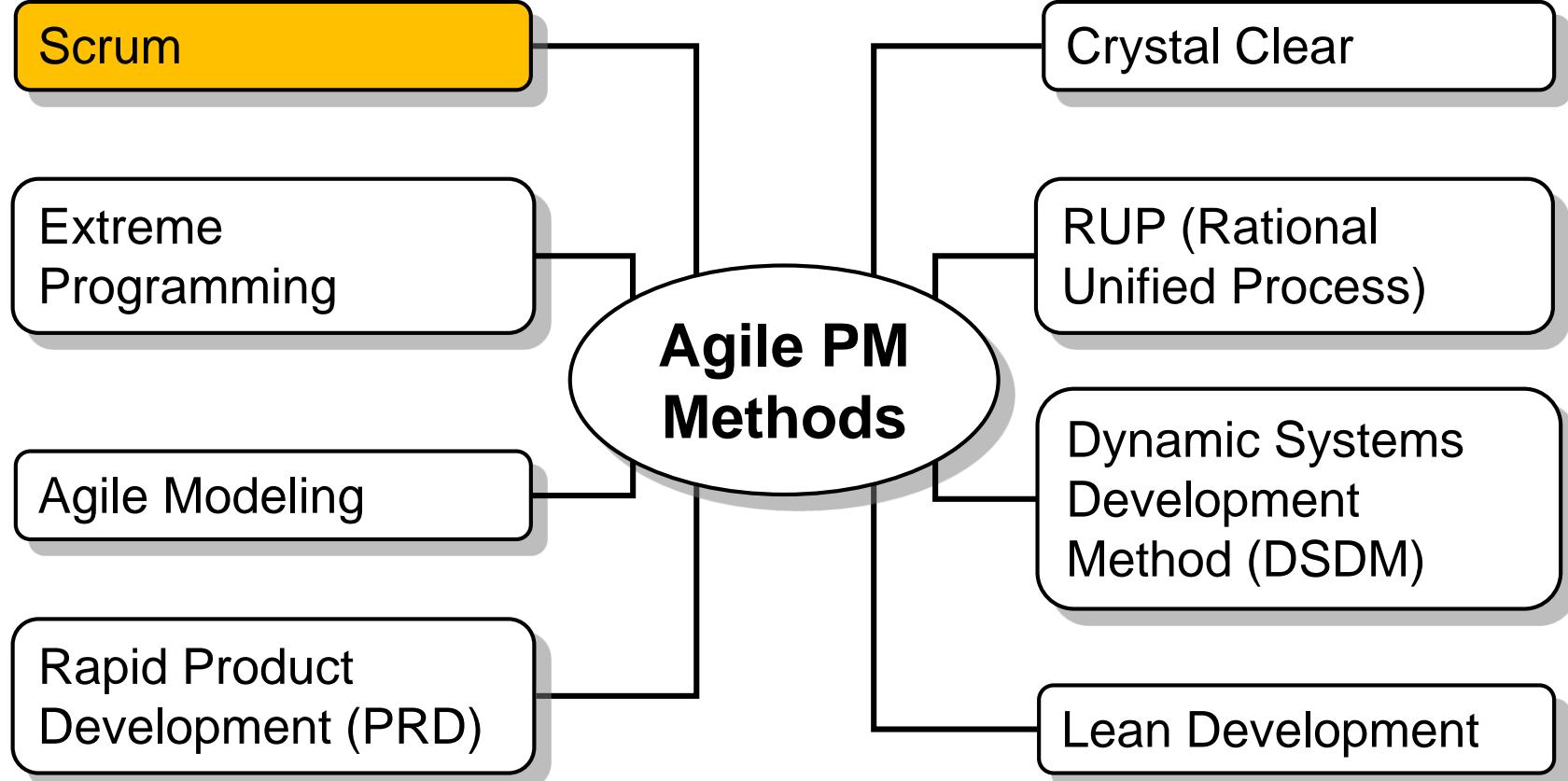
- Advantages of Agile PM
 - Useful in developing critical breakthrough technology or defining essential features
 - Continuous integration, verification, and validation of the evolving product
 - Frequent demonstration of progress to increase the likelihood that the end product will satisfy customer needs
 - Early detection of defects and problems

Popular Agile PM Methods



- **Principles:** Focus on customer value, iterative & incremental delivery, experimentation & adaptation, self-organization, continuous improvement

Popular Agile PM Methods



Agile PM in Action: Scrum

- Scrum Methodology
 - Scrum is an agile, lightweight process
 - To manage and control project with **rapidly changing requirements**
 - holistic approach for use by a cross-functional team collaborating to develop a new product
 - defines product features as deliverables and prioritises them by their perceived highest value to the customer
 - re-evaluates priorities after each iteration (sprint) to produce fully functional features
 - has four phases: analysis, design, build, test

Why Scrum?

Traditional methods are
like relay races



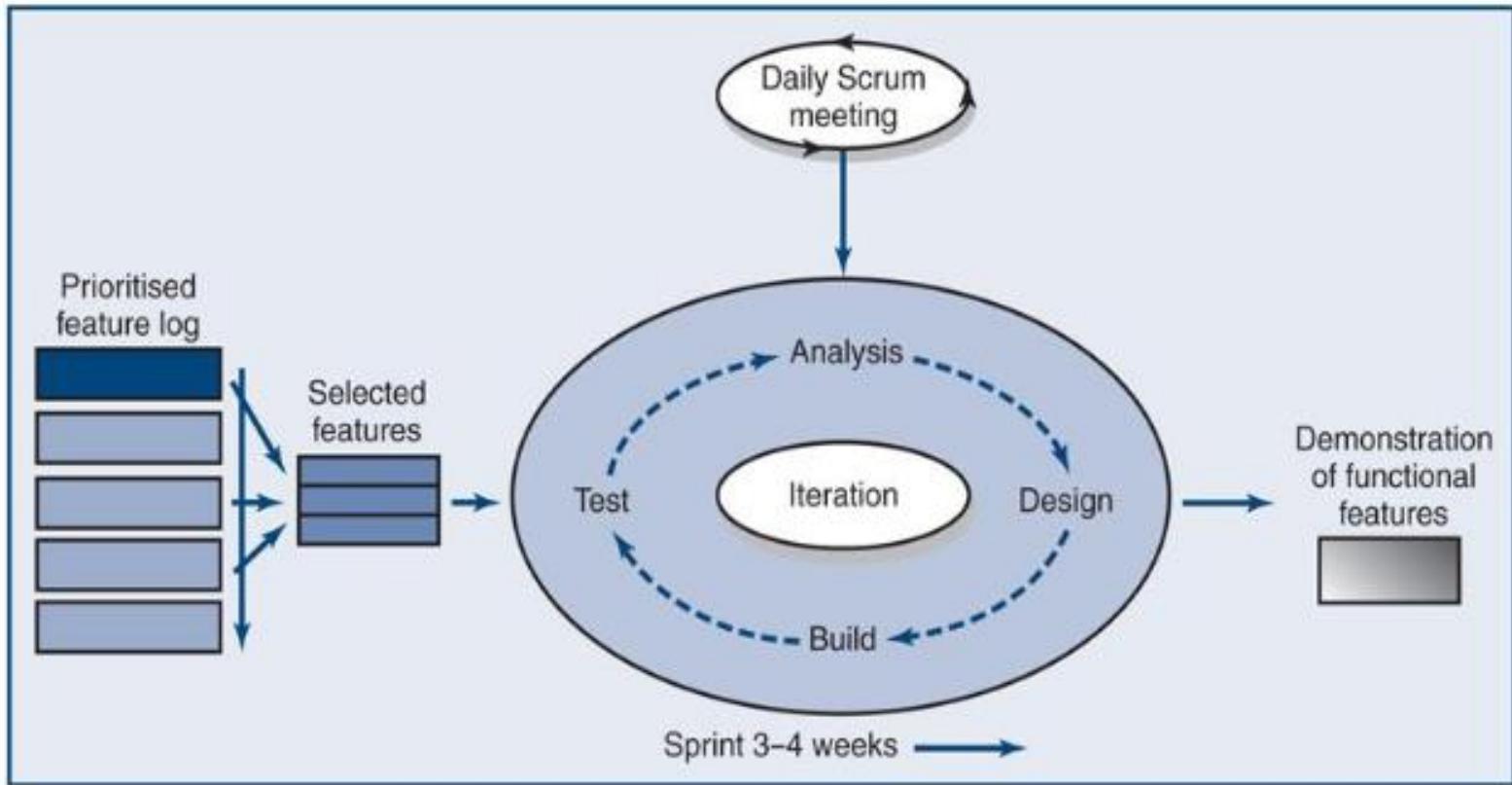
Agile methods are like
rugby



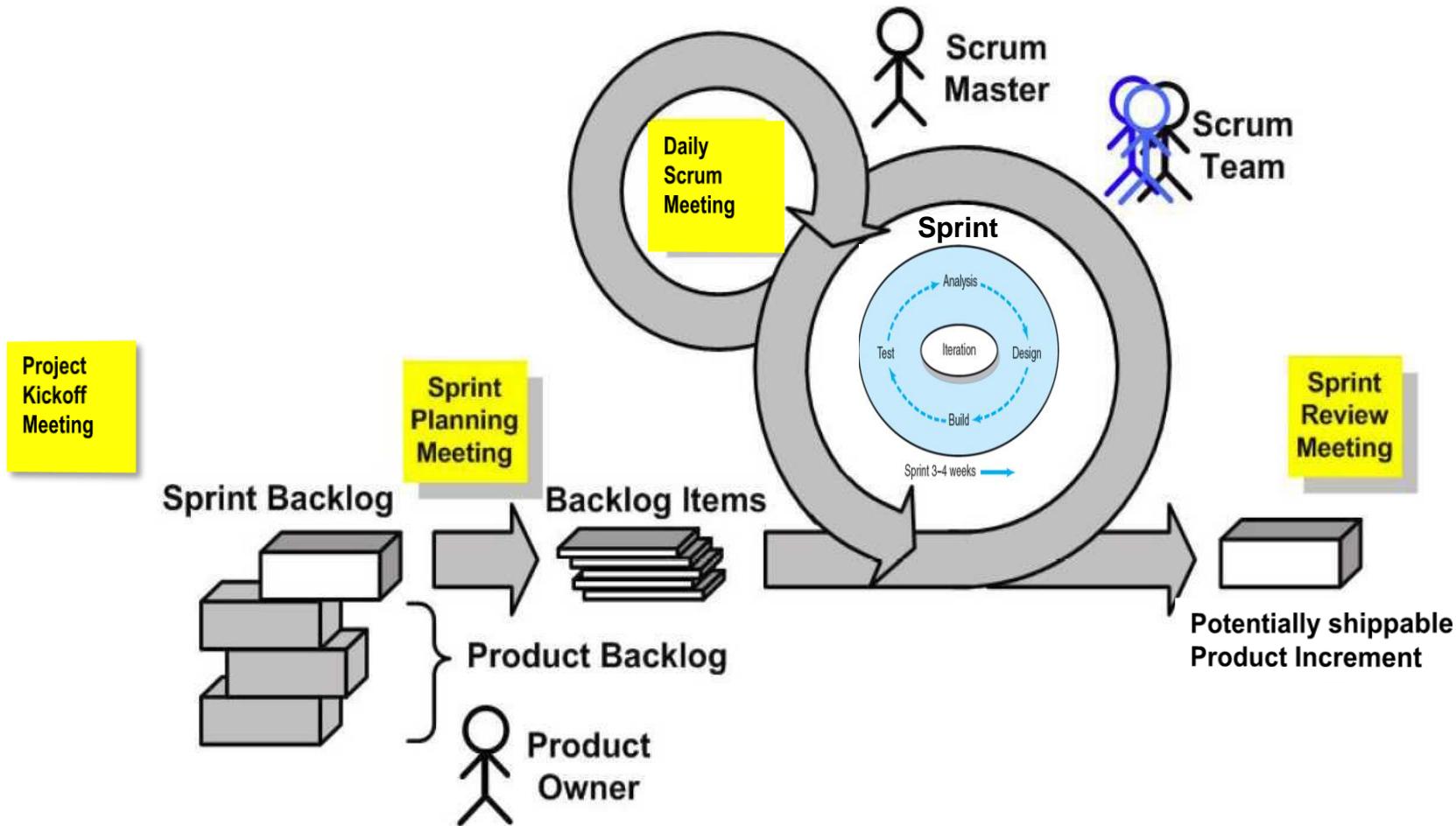
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http://upload.wikimedia.org/wikipedia/commons/b/bf/Rugby_ST.F-ST.T_27022007-19.JPG
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Overview of Scrum

Figure 17.3 SCRUM DEVELOPMENT PROCESS

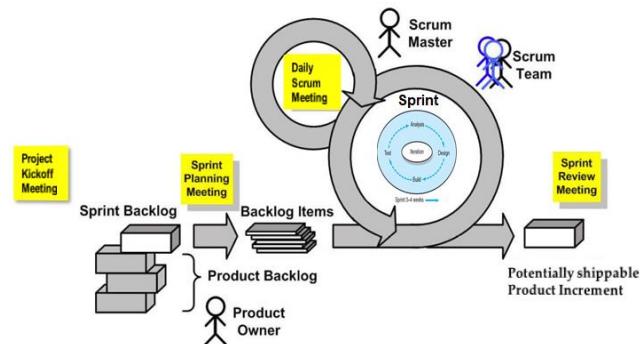


Overview of Scrum



Components of Scrum

- Scrum Roles
 - Scrum Master, Scrum Team, Product Owner
- Process
 - Kickoff Meeting
 - Sprint Planning Meeting
 - Sprint (~ Iteration in a Unified Process)
 - Daily Scrum Meeting
 - Sprint Review Meeting
- Scrum Artifacts
 - Product Backlog, Sprint Backlog, Backlog Items
 - Potentially shippable Product

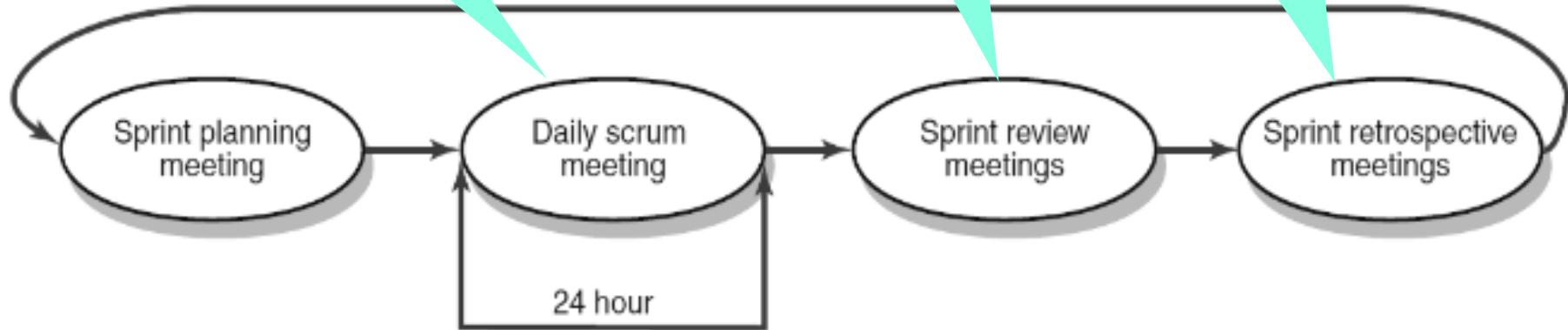


Scrum Meetings

SCRUM Meeting / Standup (short <15 minutes)
Same time, same place –no late notes.
•What have you done since the last SCRUM?
•What will you do before the next one?
•What will get in your way to stop you performing the work?

Demonstrate work product increments to product owner and relevant stakeholders
•Product owner accepts work as done or returns them to product backlog
•Team suggests new features/improvements => adapts product

SPRINT Retrospective for continuous improvement (product and team interactions).
Scrum master facilitates.
Reflect on how well previous sprint went and identify actions to improve future sprints
What worked?
What can be improved?



Key Roles and Responsibilities in the Scrum Process

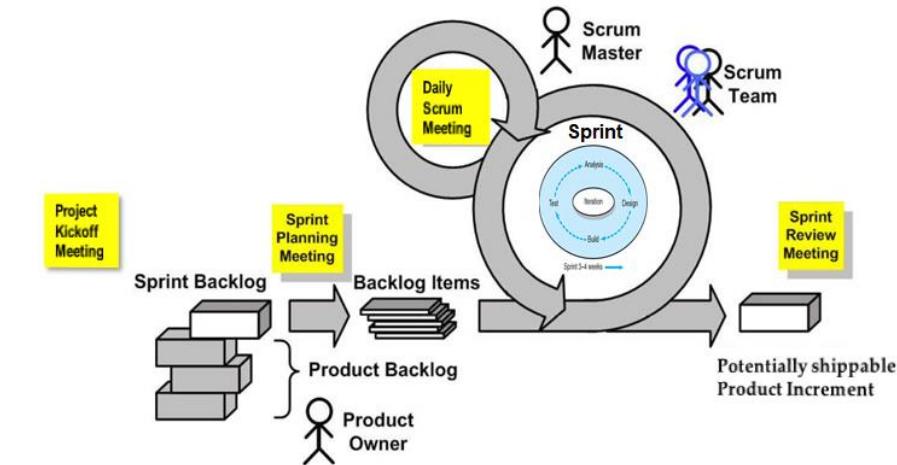
- Product Owner
 - Acts on behalf of customers/end users to represent their interests.
 - Knows what needs to be build and in what sequence this should be done (i.e. responsible for the Product Backlog priorities)
- Scrum Master (aka Project Manager)
 - Represents management to the project
 - Facilitates scrum process
 - Resolves impediments at the team and organisation level by acting as a buffer between the team and outside interference
- Scrum Team
 - Is a team of five to nine people with cross-functional skill sets responsible for delivering the product.
 - Scrum team sets own goals, organises itself, makes decisions.

Scrum Process Activities

- Project-Kickoff Meeting
- Sprint Planning Meeting
- Sprint
- Daily Scrum Meeting
- Sprint Review Meeting
- Sprint Retrospective Meeting

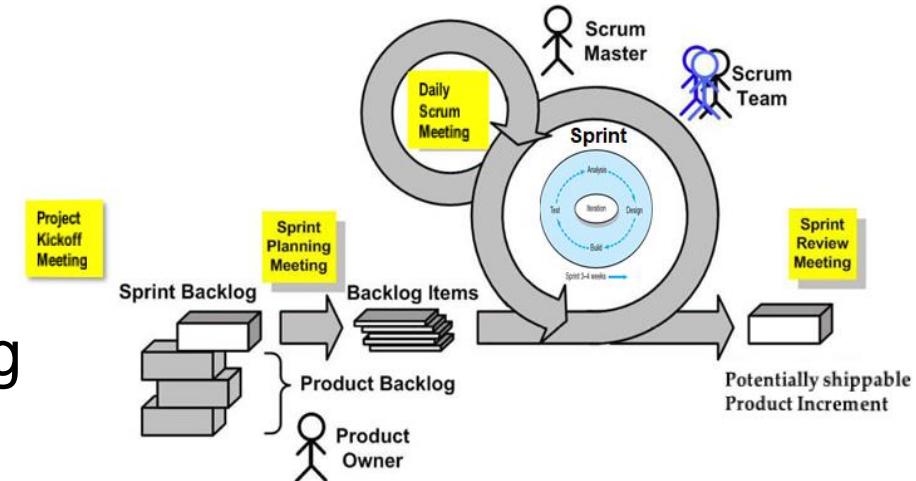
Scrum Process Activities

- Project-Kickoff Meeting
 - A collaborative meeting in the beginning of the project
 - Participants: Product Owner, Scrum Master
 - Usually takes full day and consists of 2 parts ("before lunch and after lunch")
 - Goal: Create the Product Backlog
- Sprint Planning Meeting
- Sprint
- Daily Scrum Meeting
- Sprint Review Meeting
- Sprint Retrospective Meeting



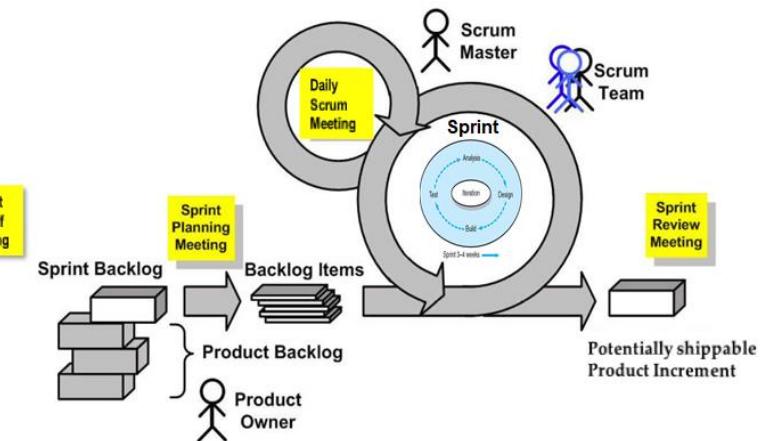
Scrum Process Activities

- Project-Kickoff Meeting
- Sprint Planning Meeting
 - A collaborative meeting in the beginning of each Sprint
 - Participants: Product Owner, Scrum Master and Scrum Team
 - Usually takes a full-day & consists of 2 parts ("before lunch and after lunch")
 - Goal: Create the Sprint Backlog
- Sprint
- Daily Scrum Meeting
- Sprint Review Meeting
- Sprint Retrospective Meeting



Scrum Process Activities

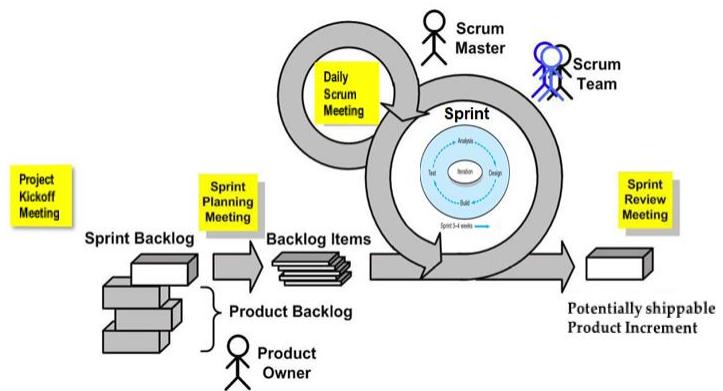
- Project-Kickoff Meeting
- Sprint Planning Meeting
- Sprint
 - a time-controlled mini-project that implements a specific portion of a system
 - Firm 30 day time box with specific goals or deliverables; The scope of that sprint is then frozen, and no one can change it—neither the product owner nor any other users
 - The Sprint backlog defines the scope
 - Four phases: analysis, design, build, test
- Daily Scrum Meeting
- Sprint Review Meeting
- Retrospective Meeting



Scrum Process Activities

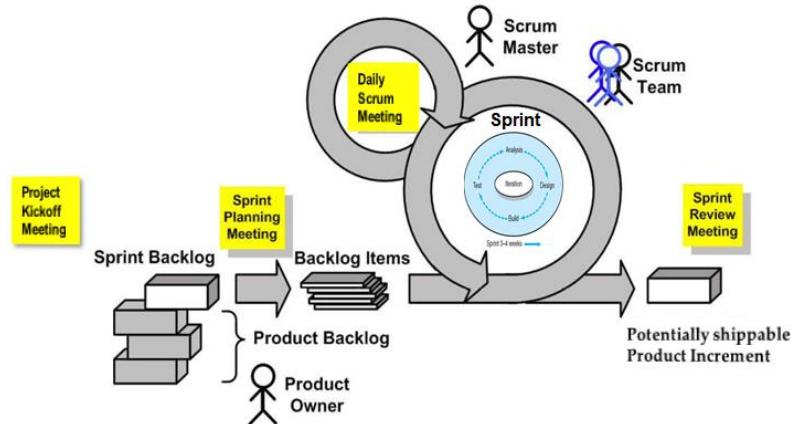
- Project-Kickoff Meeting
- Sprint Planning Meeting
- Sprint
- Daily Scrum Meeting
 - Is a short (15 minutes long) meeting, which is held every day before the Team starts working
 - Participants:
 - Scrum Master (which is the chairman), Scrum Team
 - Every Team member should answer on 3 questions
 - Sometimes referred to as a “Standup”
- Sprint Review Meeting
- Retrospective Meeting

1. Status:
What did I do since the last Scrum meeting?
2. Issues:
What is stopping me getting on with the work?
3. Action items:
What am I doing until the next Scrum meeting?



Scrum Process Activities

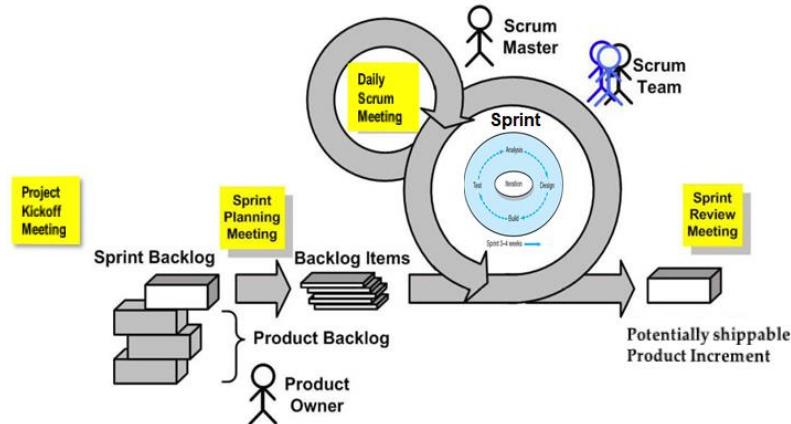
- Project-Kickoff Meeting
- Sprint Planning Meeting
- Sprint
- Daily Scrum Meeting
- Sprint Review Meeting
 - At the end of each sprint, a sprint review meeting is held.
 - A bit longer, e.g., half day
 - Participants: Product Owner, Scrum Master and Scrum Team
 - During this meeting the scrum team shows which scrum product backlog items they completed during the sprint.
 - This might take place in the form of a demo of the new features.
 - Product owner accepts work as done or returns them to product backlog
- Sprint Retrospective Meeting



Scrum Process Activities

- Project-Kickoff Meeting
- Sprint Planning Meeting
- Sprint
- Daily Scrum Meeting
- Sprint Review Meeting
- Sprint Retrospective Meeting

- [sometimes a separate meeting] **SPRINT Retrospective** for continuous improvement. Scrum master facilitates. Reflect on how well previous sprint went and identify actions to improve future sprints
 - What worked?
 - What can be improved?



Partial Product Backlog

The priority might change as other tasks are completed

The status of the task is evaluated after each sprint

Important as we learn from our estimated versus actual times to help us to refine later estimates

	A	C	E	G		
1	Phone-In Prescription Software Project					
2	Product Backlog					
3						
4	ID	Product	Priority	Status	Estimate Hours	Actual Hours
5						
6						
7	1	Customer Information	2	Complete	100	90
8	2	Insurance Information	1	Complete	160	180
9	3	Drug Information	3	Started	80	
10	4	Doctor Information	5	Not started	40	
11	5	Inventory status	4	Started	120	
12						

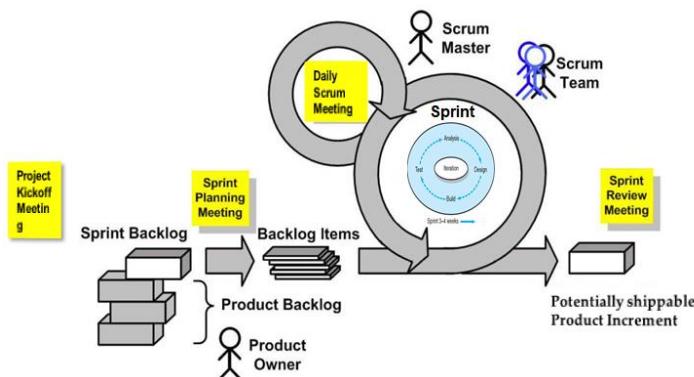


FIGURE 16.6

Partial Sprint Backlog

Only ONE person is responsible for managing the task.
Note: Not necessarily involved in doing the task

Track time on the task to help in tracking the usage of resources

Defines the Status of the task, eg the task has been defined, it has been started, it has been tested but not yet accepted.

NOTE: Dates might be better in some projects

	B	C	D	E	F	G	H	I
1	Phone-In Prescription Software Project Sprint Backlog							
2	Sprint Description	Responsible	Actual Hours	Remaining Hours	Defined	In Progress	Tested	Accepted
3								
4								
5								
6								
7	Drug categories	RT	16	0	X	X	X	✓
8	Generics	CG	32	0	X	X	X	✓
9	Branded	AL	24	8	X	X	X	
10								
11								
12	Design drug inventory system	EL	40	0	X	X	X	✓
13	Code inventory availability	CE		32				
14	Code manufacture order	MC		32				
15	Integrate all inventory systems	LE	4	16	X			
16								

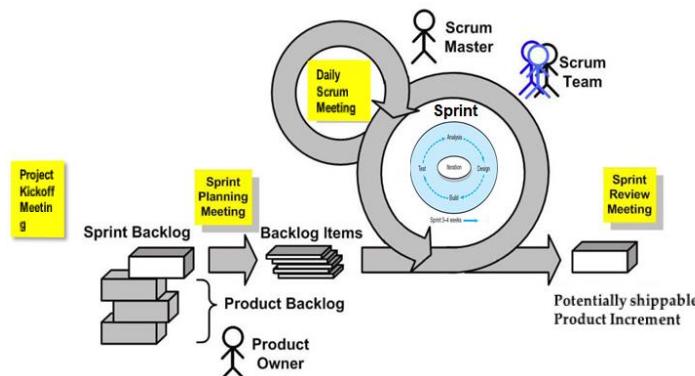


FIGURE 16.7

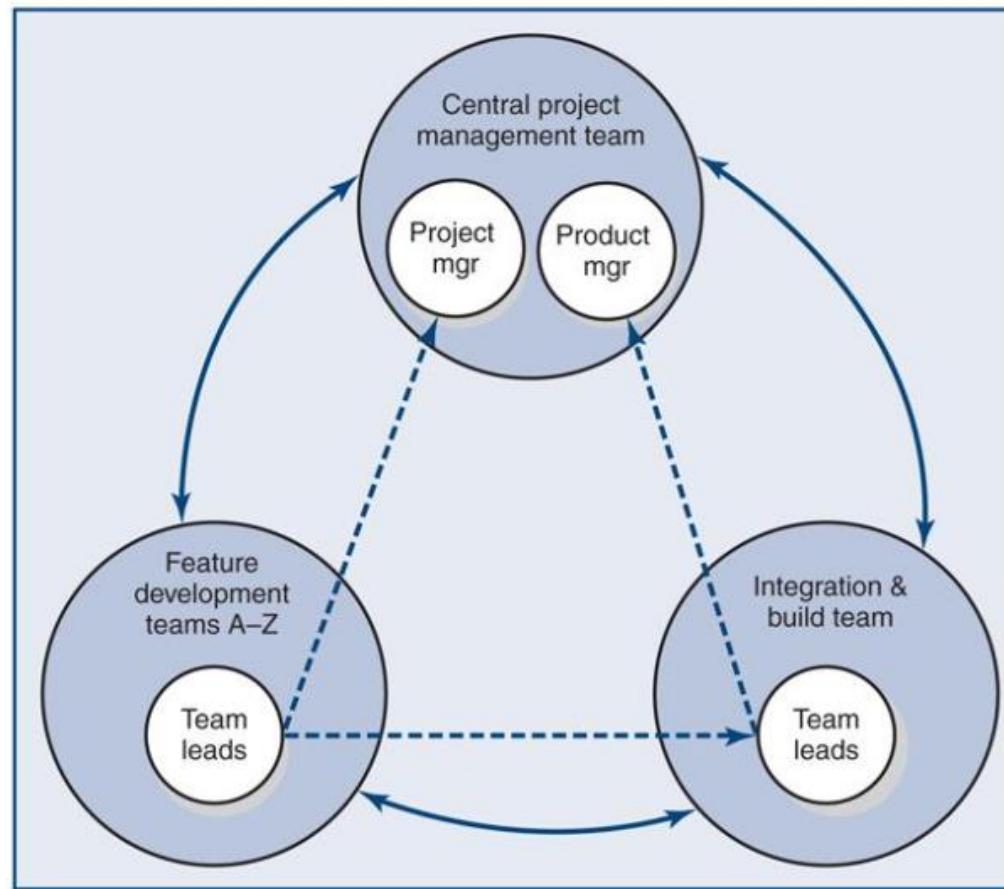
Applying Agile to large projects

- Scaling
 - Using several teams to work on different features of a large scale project at the same time
- Staging
 - Requires significant upfront planning to manage the interdependencies of different features to be developed
 - Involves developing protocols and defining roles to coordinate efforts and assure compatibility and harmony

Hub project management structure

Figure 17.7

HUB PROJECT MANAGEMENT STRUCTURE



Limitations and Concerns of Agile PM

- It does not satisfy top management's need for budget, scope, and schedule control.
- Its principles of self-organization and close collaboration can be incompatible with corporate cultures.
- Its methods appear to work best on small projects that require only five to nine dedicated team members to complete the work.
- It requires active customer involvement and cooperation.

Key Terms

Agile PM

Product backlog

Sprint backlog

Product owner

Scrum master

Scrum team

Next Week

- Read Chapter Two and view Online Readings
- Look at Agile Scrum method in your discipline from the earlier slide links (health, marketing, etc)
 - for example: Software Development (8:52 minutes) <https://youtu.be/XU0IIRltyFM>
- Look at the following videos that will be useful for your workshops and assignments:
 - Agile standups (2:57) <https://youtu.be/42hFGMVszkQ>
 - Scrum in under 5 minutes <https://youtu.be/2Vt7Ik8Ublw>
- See how Agile works with different tools:
 - Eg, marketing with Trello and Scrum (20:47) https://youtu.be/-PTh9w3Mj_U
 - Have a play with TRELLO <https://trello.com/en>