

406027 / 407703

IT Project Management / IT Project Practice

Semester 2, 2015
Week 2 (part 1)

AUT ICT CAREERS FAIR

2015

29th JULY, 2015
11am-2pm

WA224
Sir Paul Reeves Building
AUT University

We warmly invite you to the AUT ICT Careers Fair, Wednesday 29th July being held at the Conference Centre – WA224 from 11am-2pm. The organisations below have confirmed their attendance and will be promoting opportunities to graduates and students. Mark your diaries and use this excellent opportunity to progress your future!



To register your attendance at the AUT ICT Careers Fair, workshops and presentation, or for further information visit:
<http://careerhub.aut.ac.nz>
using your AUT network log-in and password.

CV WORKSHOPS

Register, attend and be CV ready for the ICT Fair. Manage your recruitment process to achieve success. Workshops are being held at City Campus:

- Wednesday 22 July, 12pm–1pm in WF410
- Monday 27 July, 12pm–1pm in WG801
- AUT South** – Mon 27 July, 12-1pm, MC214

“A HEAD START IN ICT” plus CV Workshop

This informative and entertaining presentation given by Paul Franey from iQAdemy (the training division of IntegrationQA) provides a great high level view of the ICT world as it currently stands together with insight as to where it is going.
www.nz.linkedin.com/pub/paul-franey/57/b65/47

Tuesday 28 July, WF411. 12pm-2pm - Subway lunch provided

Information

- ▶ Textbook: 7th Edition v 7th Edition revised

Assignment 1

- ▶ Available on AUTOline
- ▶ Your team is required to create a Wiki describing two cloud-based project management software (PMS) tools
- ▶ Wikis will be created for you on AUTOline once team lists are received
- ▶ Deliverables
 - Team project wiki
 - Team presentation
 - Individual learning blogs

Assignment 1

- ▶ Part 1: due Friday, 21 August (week 5) at 4pm.
 - Business case
 - Stakeholder register
 - Stakeholder management strategy
 - Project Charter including roles and responsibilities (must include a project manager)
 - Kick-off meeting plan/agenda
 - Team contract
- ▶ All of Part 1 covered today

Assignment 1

- ▶ Part 2: due Wednesday, 16 Sept (week 7) at 4pm.
 - Communications management plan
 - Scope statement
 - Work Breakdown Structure (WBS)
 - Project Schedule
 - Schedule baseline
 - Network diagram
 - Resource breakdown structure
 - Critical path analysis
 - Risk register

Assignment 1

- ▶ Part 3: due Friday, 2 October (week 9) at 4 pm.
 - Requirements Traceability Matrix
 - Tracking Gantt charts
 - Revisions to documents from parts 1
 - Issue log
 - Team meetings agendas and minutes
 - Lessons-learned report
 - Project deliverables (description of 2 PMS tools)

Assignment 1

- ▶ Individual learning blog is due Friday, 2 October (week 9) at 4 pm.
- ▶ Team presentations: weeks 10-11 during labs.
 - 20 minutes each

Chapter 2: The Project Management and Information Technology Context

Information Technology Project Management, Seventh Edition



Information Technology
PROJECT MANAGEMENT | 7e

Kathy Schwalbe

Note: See the text itself for full citations.

Learning Objectives

- ▶ Describe the systems view of project management and how it applies to information technology (IT) projects
- ▶ Understand organizational structures
- ▶ Explain why stakeholder management and top management commitment are critical for a project's success
- ▶ Understand the concept of a project phase and the project life cycle
- ▶ Describe agile project management

Projects Cannot Be Run In Isolation

- ▶ Projects must operate in a broad organizational environment
- ▶ Project managers need to use **systems thinking**:
 - taking a holistic view of carrying out projects within the context of the organization
- ▶ Senior managers must make sure projects continue to support current business needs



How Top Management Can Help Project Managers

- ▶ Providing adequate resources
- ▶ Approving unique project needs in a timely manner
- ▶ Getting cooperation from other parts of the organization
- ▶ Mentoring and coaching on leadership issues

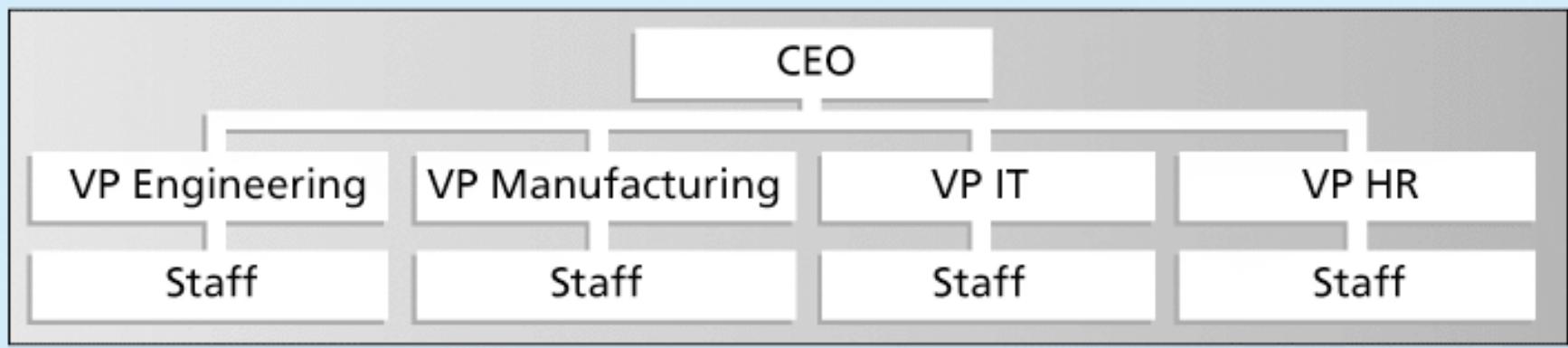
Organizational Structures

- ▶ 3 basic organization structures
 - **Functional**
 - **Project**
 - **Matrix**

Functional Organizational Structure

- ▶ Functional managers report to the CEO
- ▶ Very hierarchical
- ▶ Staff have specialized skills

Functional



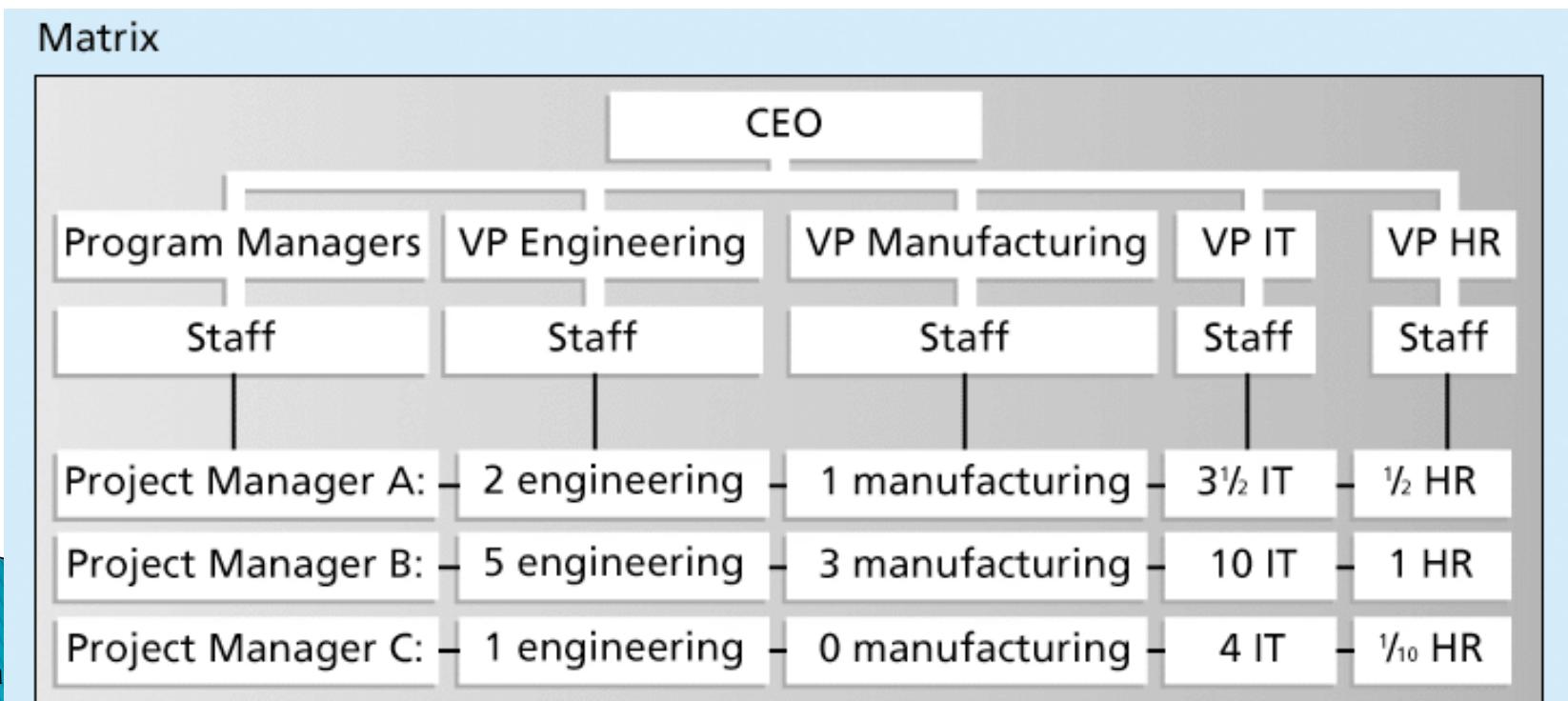
Project Organizational Structure

- ▶ Program managers report to the CEO
- ▶ Hire people to work specifically on specific projects
- ▶ Staff have a variety of skills
- ▶ Reason for use: primarily earn money from undertaking projects for other groups and organizations e.g. defense, architectural, engineering and consulting companies



Matrix Organizational Structure

- ▶ Middle ground between functional and project structure
- ▶ Staff report to both the functional and project manager(s)
- ▶ Can be strong, weak or balanced based on the amount of control exerted by the project managers.



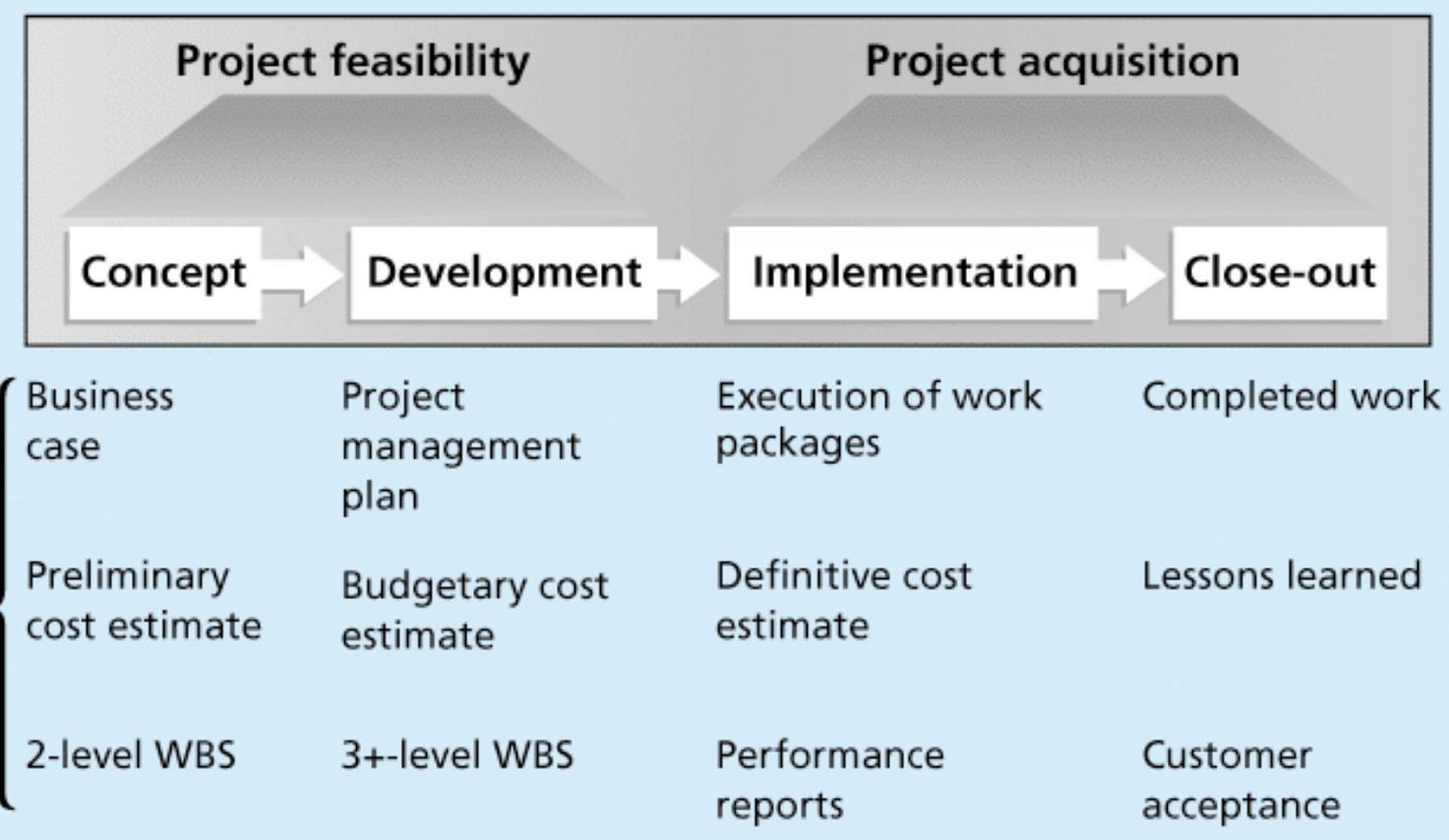
Organizational Structure Influences on Projects

Project Characteristics	Organizational Structure Type			Project	
	Functional	Weak Matrix	Balanced Matrix	Strong Matrix	
Project manager's authority	Little or none	Limited	Low to moderate	Moderate to high	High to almost total
Percent of organization's personnel assigned full-time to project work	Virtually none	0–25%	15–60%	50–95%	85–100%
Who controls the project budget	Functional manager	Functional manager	Mixed	Project manager	Project manager
Project manager's role	Part-time	Part-time	Full-time	Full-time	Full-time
Common title for project manager's role	Project coordinator/project leader	Project coordinator/project leader	Project manager/project officer	Project manager/program manager	Project manager/program manager
Project management administrative staff	Part-time	Part-time	Part-time	Full-time	Full-time

Project Phases and the Project Life Cycle

- ▶ A **project life cycle** is a collection of project phases that defines
 - what work will be performed in each phase
 - what deliverables (product or service) will be produced and when
 - who is involved in each phase, and
 - how management will control and approve work produced in each phase

Phases of the Traditional Project Life Cycle



The Importance of Project Phases and Management Reviews

- ▶ A project should successfully pass through each of the project phases in order to continue on to the next
- ▶ Management reviews, also called **phase exits** or **kill points**, should occur after each phase to evaluate the project's progress, likely success, and continued compatibility with organizational goals

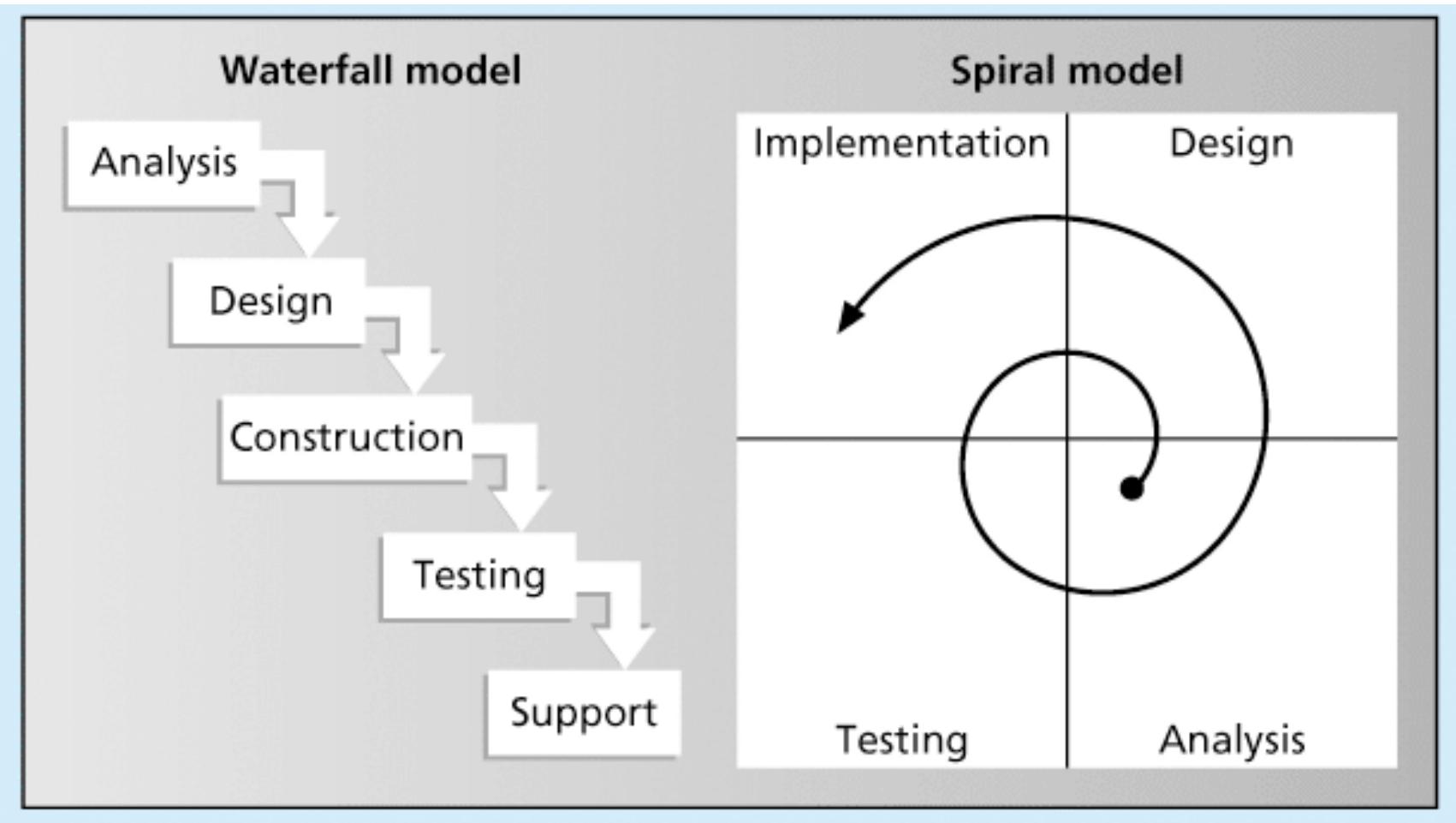
System Development Life Cycles

- ▶ The **Systems Development Life Cycle (SDLC)** is a framework for describing the phases involved in developing and maintaining information systems
- ▶ Systems development projects can follow
 - **Predictive life cycle**: the scope of the project can be clearly articulated and the schedule and cost can be predicted
 - **Adaptive Software Development (ASD) life cycle**: requirements cannot be clearly expressed, projects are mission driven and component based, using time-based cycles to meet target dates

Predictive Life Cycle Models

- ▶ **Waterfall model:** has well-defined, linear stages of systems development and support
- ▶ **Spiral model:** shows that software is developed using an iterative or spiral approach rather than a linear approach
- ▶ **Incremental build model:** provides for progressive development of operational software
- ▶ **Prototyping model:** used for developing prototypes to clarify user requirements
- ▶ **Rapid Application Development (RAD) model:** used to produce systems quickly without sacrificing quality

Waterfall and Spiral Life Cycle Models



Manifesto for Agile Software Development

- ▶ In February 2001, a group of 17 people that called itself the Agile Alliance developed and agreed on the Manifesto for Agile Software Development, as follows:
- ▶ “We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:
 - Individuals and interactions over processes and tools
 - Working software over comprehensive documentation
 - Customer collaboration over contract negotiation
 - Responding to change over following a plan”*

*Agile Manifesto, www.agilemanifesto.org.

Agile Project Management

- ▶ Agile means being able to move quickly and easily
 - Some don't believe this is possible.
- ▶ Agile means using a method based on iterative and incremental development, in which requirements and solutions evolve through collaboration.
- ▶ Seasoned project managers understand that they have always had the option of customizing how they run projects, but that project management is not easy, even when using Agile.

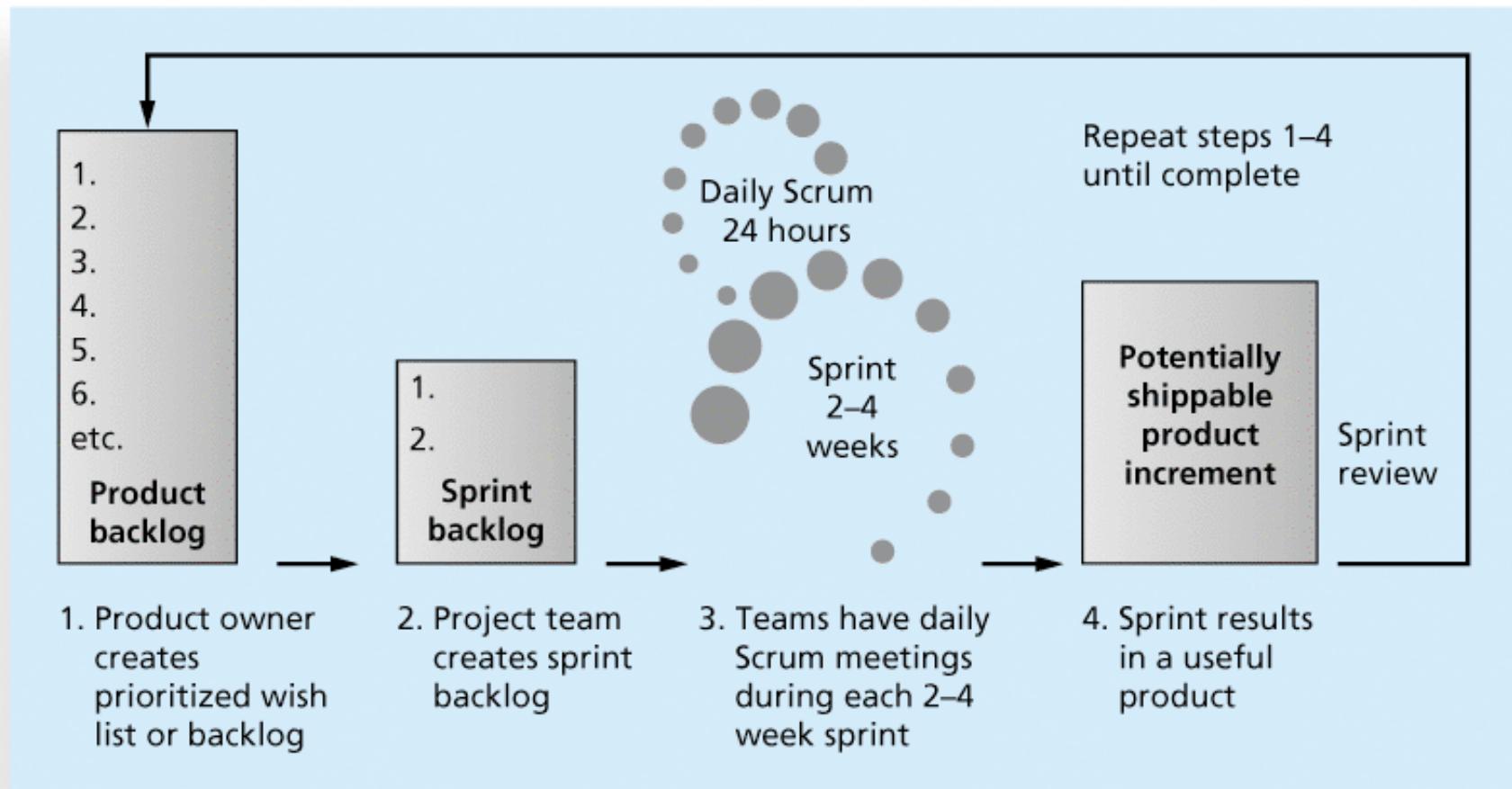
An Informed Decision

- ▶ It is not a snap decision whether to use an agile approach or not, just like flying or driving somewhere on a trip
- ▶ Projects with less rigid constraints, experienced and preferably co-located teams, smaller risks, unclear requirements, and more flexible scheduling would be more compatible with an agile approach

Scrum

- ▶ According to the Scrum Alliance, Scrum is the leading agile development method for completing projects with a complex, innovative scope of work.
- ▶ The term was coined in 1986 in a Harvard Business Review study that compared high-performing, cross-functional teams to the scrum formation used by rugby teams.
- ▶ https://www.youtube.com/watch?v=vmGMpME_phg

Scrum Framework



Scrum Roles

- ▶ **Product owner:** The person responsible for the business value of the project and for deciding what work to do and in what order, as documented in the product backlog.
- ▶ **Scrum Master:** The person who ensures that the team is productive, facilitates the daily Scrum, enables close cooperation across all roles and functions, and removes barriers that prevent the team from being effective.
- ▶ **Scrum team or development team:** A cross-functional team of five to nine people who organize themselves and the work to produce the desired results for each **sprint**, which normally lasts 2-4 weeks.

Scrum Artifacts

- ▶ An artifact is a useful object created by people
- ▶ Scrum artifacts include:
 - **Product backlog:** A list of features prioritized by business value
 - **Sprint backlog:** The highest-priority items from the product backlog to be completed within a sprint
 - **Burndown chart:** Shows the cumulative work remaining in a sprint on a day-by-day basis

Scrum Ceremonies

- ▶ **Sprint planning session:** A meeting with the team to select a set of work from the product backlog to deliver during a sprint.
- ▶ **Daily Scrum:** A short meeting for the development team to share progress and challenges and plan work for the day.
- ▶ **Sprint reviews:** A meeting in which the team demonstrates to the product owner what it has completed during the sprint.
- ▶ **Sprint retrospectives:** A meeting in which the team looks for ways to improve the product and the process based on a review of the actual performance of the development team.

Example Product and Sprint Backlogs

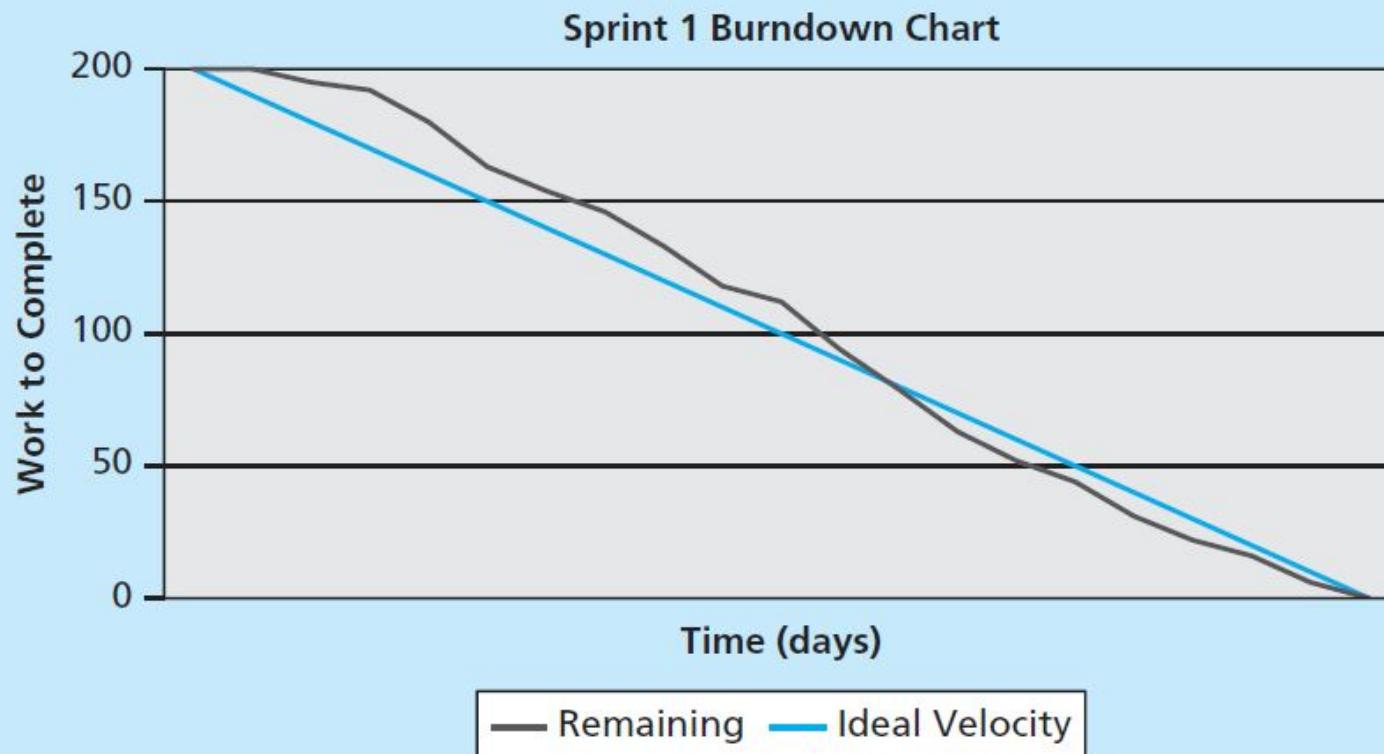
Product Backlog

1. User story templates, samples, and point person
2. WBS templates, samples, and point person
3. Project schedule templates, samples, and point person
4. Ability to charge customers for some intranet products and services
5. Ability to collect user suggestions
6. Business case templates, samples, and point person
7. Ask the Expert feature
8. Stakeholder management strategy templates, samples, and point person
9. Risk register templates, samples, and point person
10. Etc.

Sprint Backlog

1. User story templates, samples, and point person
2. WBS templates, samples, and point person
3. Project schedule templates, samples, and point person
4. Ability to charge customers for some intranet products and services
5. Ability to collect user suggestions

Example Burndown Chart



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Agile, the PMBOK® Guide, and a New Certification

- ▶ The PMBOK® Guide describes best practices for *what* should be done to manage projects.
- ▶ Agile is a methodology that describes *how* to manage projects.
- ▶ The Project Management Institute (PMI) recognized the increased interest in Agile, and introduced a new certification in 2011 called Agile Certified Practitioner (ACP).

Summary

- ▶ Project managers need to take a systems approach when working on projects
- ▶ The structure of an organization has strong implications for project managers
- ▶ Projects should successfully pass through each phase of the project life cycle
- ▶ Life cycles can by predictive (example Waterfall) or adaptive (example Agile)

Assignment 1

► Team formation