

Comp8081

Management Issues in Software Engineering

Week 1 - Introduction

Donna Turner



Agenda

- ◆ Introductions
 - ◆ Each other (with Attendance)
 - ◆ Course Logistics
- ◆ Let's get started
 - ◆ Overview of major course topics
- ◆ Summary
- ◆ For next week

Introduction - instructor

- ◆ Instructor

- ◆ Donna Turner, P.Eng., PMP
dturner80@bcit.ca 604-456-8092
- ◆ Office hours: TBD
- ◆ Office location: NE21-110 (for now)

Introduction – each other

- ◆ Interview the person next to you about their
 - ◆ Career goals
 - ◆ Work experience (any software related?)
 - ◆ Expectations for the course
 - ◆ What do they think it will cover?
 - ◆ What do they want to get out of the course?
 - ◆ Favourite food
- ◆ Then: Introduce each other to the class

Logistics



Course Description

- ◆ This course presents topics important to the management of software development projects.
- ◆ Emphasis will be given to management techniques and practices for executing software projects that improve productivity and increase project success, as well as identifying common mistakes to avoid.
- ◆ Special emphasis is placed on exploring personality types and how this impacts motivation and teamwork in software projects.

Course Materials

- ◆ McConnell - *Rapid Development*
- ◆ Briggs Myers - *Introduction to Type*
- ◆ Hirsh and Kummerow - *Introduction to Type in Organizations*

Links to case studies and other reading materials will be provided in the course notes and on the D2L course site.

Policies

◆ Email:

- ◆ Please include your *name* and the *course* in your emails
- ◆ Do not email me from within D2L, use a personal email
- ◆ I will respond to all messages asap, not including weekends or holidays

◆ Attendance:

- ◆ Attendance in lectures is mandatory
- ◆ In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with his/her instructor indicating the reason for the absence
- ◆ Prolonged illness which causes the student to miss 10% or more of the labs will require a BCIT-approved medical certificate submitted to the department, substantiating the reason for the absence
- ◆ Unapproved absence of 10% or more of the labs may result in failure or forced withdrawal from this course

Course Evaluation

Component	Percent of Final Grade	Notes
Assignments	45%	3 assignments at 15% each
Mid-Term Exam	20%	Focused on First Half of Course
Final Exam	35%	Course Summative
Total	100%	

All exams must be written on the date and time outlined in the Course Outline (unless revised by the instructor). The mid-term and final examinations must be written on the date and at the time published in the Course Timetable. Students not present during the scheduled examination period will be given a zero on the exam.

Let's agree to keep communication open and for there to be few/no surprises.
There will be challenges and changes but if we keep the communication going then we give ourselves the best chance of success.

Academic Integrity

Like all educational institutions, BCIT takes academic integrity very seriously. Collaboration is encouraged – academic dishonesty is not. Understand the difference.

BCIT Definition of Honesty – Policy 5104 Academic Integrity and Appeals

Appropriate academic behaviour includes, but is not limited to:

- Independently producing work submitted under one's own name
- Acknowledgement of any and all individuals who have contributed to a piece of work in any manner
- Properly and appropriately referencing all work
- Completing examinations without giving or receiving assistance, except for those students who have received authorization from the Institute to obtain accommodation because of a documented disability

BCIT Policies

<https://bcit.ca/about/administration/policies>

- Acknowledging all sources used
- Respecting the integrity of examination materials and /or the examination process
- Respecting the integrity of computer security systems, software copyrights and the privacy of other's files

Plagiarism

- Academic integrity requires that persons do not falsely claim credit for the ideas, writing, or other intellectual property of others, either by presenting such works as their own or through impersonation

Course Schedule (1/2)

Week	Date	Lecture topics	Reference
1	Jan 8	Course introduction Rapid development Rapid development strategy	McConnell Chapters 1-2
2	Jan 15	Classic/typical mistakes Software development fundamentals	McConnell Chapters 3-4
3	Jan 22	Risk management	McConnell Chapter 5
4	Jan 29	Core issues in rapid development	McConnell Chapter 6
5	Feb 05	Lifecycle planning Selecting lifecycles and planning Evolutionary delivery	McConnell Chapter 7
6	Feb 12	Estimation Scheduling	McConnell Chapters 8-9
7	Feb 19	Mid-Term Exam, in class	

Course Schedule (2/2)

Week	Date	Lecture topics	Reference
8	Feb 26	Customer-oriented development	McConnell Chapter 10
9	Mar 05	Meyers-Briggs Type Indicator (MBTI) instrument Introduction to type	Briggs Meyers
10	Mar 12	Introduction to type in organizations	Hirsh and Kummerow
11	Mar 19	Team motivation Motivation factors	McConnell Chapter 11
12	Mar 26	Teamwork Teamwork guidelines	McConnell Chapter 12
13	Apr 02	Feature set control Project recovery	McConnell Chapter 14 and 16
14	Apr 09	Course wrap-up and final exam review	
15	Apr 16	Final Exam, in class	

Let's Get Started

Effective Software Development Practices
Chapters 1 -2



A Few Questions...

Discussion in groups, take notes, then discuss as a class:

From your experience so far:

- ◆ What is “software engineering”?
- ◆ What are the 1-2 top factors that determine whether any software engineering effort will be successful?
- ◆ What frustrates you about software engineering?
- ◆ What’s your view now? What practices are you going to make sure you do and/or what mistakes/pitfalls are you going to make sure to avoid?

Why are we here?

- 💧 What do we mean by “project”?
- 💧 What is the point of studying, investigating or discussing these topics?
- 💧 Who are these topics for?
- 💧 What makes something “effective”?
- 💧 Who is responsible for the success of a project?

Definitions

💧 **Software Engineering**

(IEEE, Standard Glossary of Software Engineering Terminology)

THE APPLICATION OF A SYSTEMATIC, DISCIPLINED,
QUANTIFIABLE APPROACH TO THE DEVELOPMENT,
OPERATION, AND MAINTENANCE OF SOFTWARE

💧 **Project**

(PMI, Project Management Book Of Knowledge)

A PROJECT IS A TEMPORARY
ENDEAVOUR UNDERTAKEN TO CREATE A UNIQUE
PRODUCT, SERVICE, OR RESULT.

Different Perspectives

- 💧 Think about how expectations can differ between:
 - 💧 Customer
 - 💧 Management
 - 💧 Project Manager
 - 💧 Team Member

Success

- ◆ Shared project vision
- ◆ Motivated team
- ◆ Upfront project plan, with monitoring and control against the plan
- ◆ Realistic estimates and schedule
- ◆ Demonstrated progress
- ◆ Good customer relationship

Rapid Development

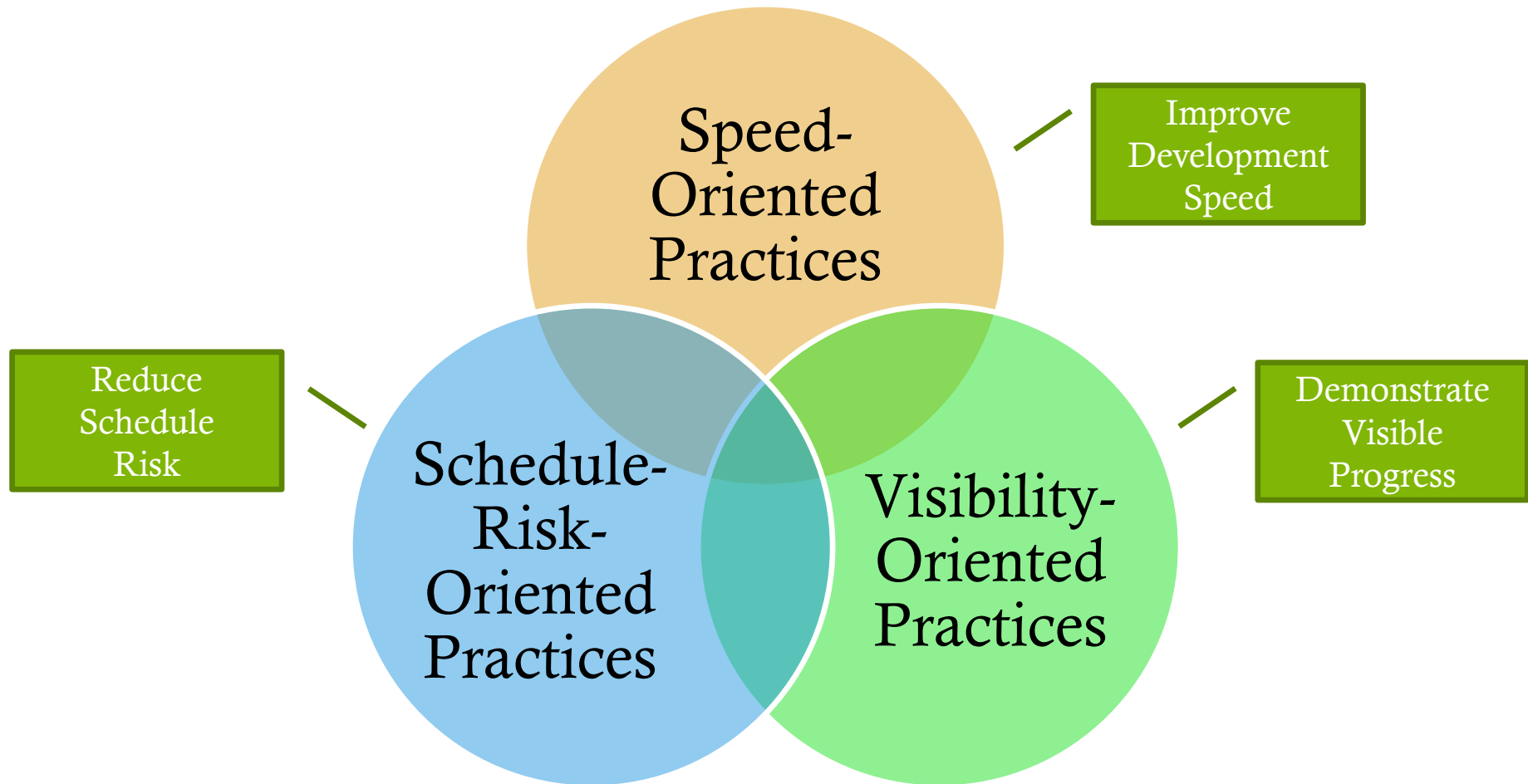
- “Any project that needs to emphasize development speed”
- McConnell, pg.2
- Why is speed a good thing?

Software Practices



- McConnell, pg.3

Schedule Oriented Practices



- McConnell, pg.4

The Four Pillars of Rapid Development

Best Possible Schedule

Development
Fundamentals

**Efficient
Development**

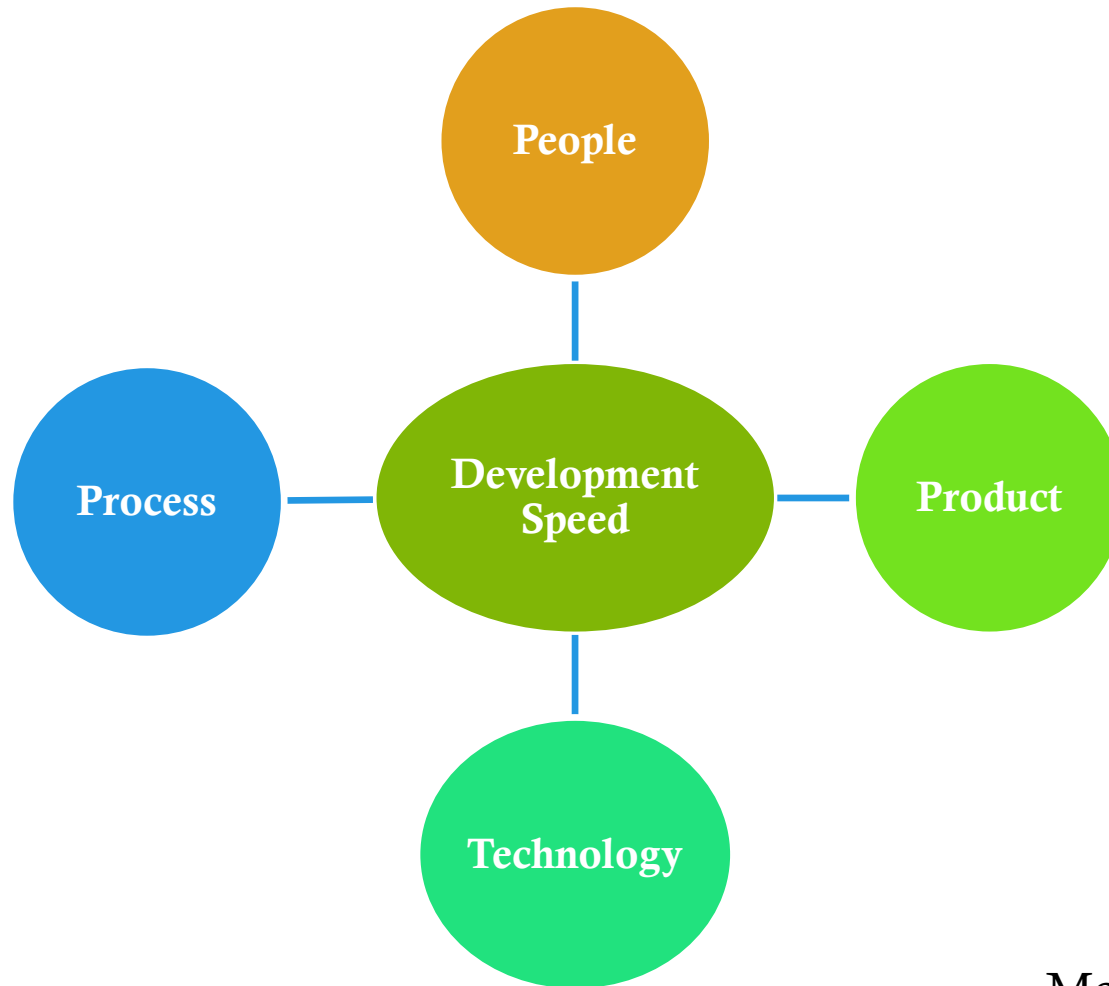
Risk Management

Avoid Classic Mistakes

Schedule-Oriented
Practices

- McConnell pg.9

The Four Dimensions of Development Speed



- McConnell pg.11

Four Dimensions

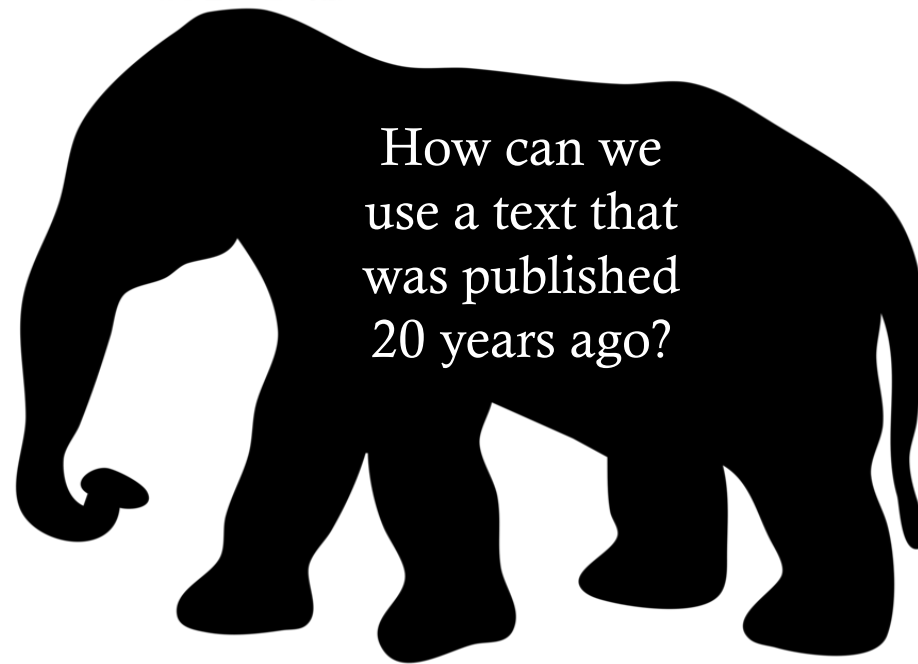
elaborated

People	Process	Product	Technology
<ul style="list-style-type: none">• “Peopleware”• Staff selection• Team organization• Motivation	<ul style="list-style-type: none">• Rework avoidance• QA• Development fundamentals• Risk management• Resource targeting• Lifecycle planning• Customer Orientation	<ul style="list-style-type: none">• Product size• Product characteristics	<ul style="list-style-type: none">• Tools• Languages

Which of these Dimensions is the most important?

Is anything left out?

The elephant in the room



What has changed in the last 20 years?

Summary

Today we:

- ◆ Discussed what makes software engineering effective
- ◆ Were introduced to McConnell's basic frameworks of
 - Schedule-Oriented Practices, the
 - Four Pillars of Rapid Dev and the
 - Four Dimensions of Dev Speed

Going forward we will:

- ◆ Unpack these frameworks and dig into their component details
- ◆ Critically analyze, discuss and engage with these components to see what conclusions we can draw
- ◆ Look for opportunities to connect these components to current practice through case studies

For Next Week (week 2)

To Do before next class:

- ◆ Procure the McConnell textbook
- ◆ Review McConnell, chapters 1-2
- ◆ Read McConnell, chapters 3-4
 - ◆ Pay close attention to the Case Study, pp. 29-37
 - ◆ which “Classic Mistakes” are present?
- ◆ Read the following article on the Ariane 5 Launch Failure:
 - ◆ [https://en.wikipedia.org/wiki/Cluster_\(spacecraft\)](https://en.wikipedia.org/wiki/Cluster_(spacecraft))
- ◆ Read the following articles on the Translink Compass Card project:
 - ◆ <http://www.vancouversun.com/news/TransLink+interim+defends+Compass+Card+delays/10942115/story.html#ixzz3mVvNtBN7>
 - ◆ <http://www.theglobeandmail.com/news/british-columbia/metro-vancouvers-compass-transit-smart-card-system-to-run-in-fall/article25871062/>
 - ◆ <http://thetyee.ca/News/2015/02/20/Compass-Card-Hires-Lobbyist/>

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end of Week 1

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