Planning and Managing Software Projects 2012-13
Class 2

Classic Mistakes

Emanuele Della Valle
http://emanueledellavalle.org
Credits

- This slides are largely based on Prof. John Musser class notes on “Principles of Software Project Management”
- Original slides are available at http://www.projectreference.com/
- Reuse and republish permission was granted
Class 1 Review

- Project and Program
- The field
- 4 Project Dimensions
  - People, process, product, technology
- Rapid Development Strategy
  - Avoid classic mistakes, development fundamentals, risk management, schedule-oriented practices
- Trade-off Triangle
- Process. One size not fit all.
- Phases
Know which of these are fixed & variable for every project
Class 1 Review

Project Phases A.K.A.

- Software Concept
  - Concept
  - Concept Exploration
  - System Exploration

Requirements Analysis

Architectural Design

Detailed Design

Implementation Development

Coding and Debugging

Systems Testing

Deployment & Maintenance

QA

Production Operations
Today

- Classic Mistakes
36 Classic Mistakes

- McConnell’s Anti-Patterns
  - The mistakes [http://www.stevemcconnell.com/rdenum.htm](http://www.stevemcconnell.com/rdenum.htm)

- Seductive Appeal

- Types
  - People-Related
  - Process-Related
  - Product-Related
  - Technology-Related

- Gilligan’s Island
  - Every week there's some new, crazy scheme to escape the island, but at the end of the episode, the castaways always end up stuck on the island for yet another week.
Classic Mistakes

Let’s Spend 30 Minutes on the Case Study

- The case study
  - **Steve McConnell**
    
    Buy Rapid Development from Amazon.com in **paperback** or **Kindle** formats or from O'Reilly in **Ebook** format.

  - A Case Study in Classic Mistakes
    - Available online
      [http://www.stevemcconnell.com/rdmistak.htm](http://www.stevemcconnell.com/rdmistak.htm)
    - Also cached at
      [http://emanueledellavalle.org/slides/P&MSP2013_02b_Case-Study.pdf](http://emanueledellavalle.org/slides/P&MSP2013_02b_Case-Study.pdf)

- You have 30 minutes to go through the text and highlight mistakes
- Try also to name this mistakes
- After, you have read it, we will discuss all together
Classic Mistakes

People-Related Mistakes Part 1

- Undermined motivation
- Weak personnel
  - Weak vs. Junior
  - Junior != bad
- Uncontrolled problem employees
- Heroics
  - “Can-do”, “how high” attitudes
  - Companies becomes their hostage
- Adding people to a late project
Classic Mistakes

People-Related Mistakes Part 2

- Noisy, crowded offices
  - 60% of developers feel unsatisfactory environment
  - need quite and privacy

- Customer-Developer friction
  - Results in ‘poor communication’
  - Passive vs. aggressive?

- Unrealistic expectations
  - Perception woe

- Politics over substance
  - managing up

- Wishful thinking
  - Cognitive dissonance
  - Closing your eyes and hoping
  - McConnell: maybe causes the most problems in software development
Classic Mistakes
People-Related Mistakes Part 3

- Lack of effective project sponsorship
  - a must
  - PMs have no power if they lack a sponsor

- Lack of stakeholder buy-in

- Lack of user input
  - User input is number 1 reason for success
  - Without user input you can only guess
Classic Mistakes

Process-Related Mistakes Part 1

- Optimistic schedules
  - Similar to wishful thinking
  - Puts unnecessary pressure

- Insufficient risk management
  - Risks will manage you

- Contractor failure
  - late, poor quality, or fails to meet specifications
  - Requires lots of management

- Insufficient planning
  - “if you don’t care where you’re going, any plan will do”

- Abandonment of plan under pressure
  - Fall into code-and-fix mode
Classic Mistakes

Process-Related Mistakes Part 2

- Wasted time during fuzzy front end (before sign-off)
- Shortchanged upstream activities
  - Lack of analysis and design results in implementation problems
    - 10 to 100 times more costly
    - 5 hrs vs. 50
- Inadequate design
  - I’ve seen schedules without it at all
- Shortchanged quality assurance
  - Seems easy to compress
  - 1 day QA == 3 to 10 days later
Insufficient management controls
  • PMs need to be able to track
  • We’ll cover lots of these in the second part of the course
  • It’s the core of PMI

Premature or too frequent convergence
  • Waste of time

Omitting necessary tasks from estimates
  • Often 20-30% of a schedule

Planning to catch-up later
  • How many times have you seen a project catch-up?
  • Only by all-nighters

Code-like-hell programming
Product-Related Mistakes

- Requirements gold-plating
  - [Link](http://www.phrases.org.uk/meanings/gild-the-lily.html)
  - E.g., Performance is required more often than need be

- Feature creep
  - A normal project experiments 25% average change in requirement

- Developer gold-plating
  - Beware the pet project
  - Nifty new technology

- Push-me, pull-me negotiation
  - Slip schedule and add features

- Research-oriented development
Classic Mistakes

Technology-Related Mistakes

- Silver-bullet syndrome
- Overestimated savings from new tools and methods
  - Fad warning

- Switching tools in mid-project
- Lack of automated source-code control

[source](http://blogs.infosupport.com/blogs/richardz/archive/2010/02/26/dilbert-on-changing-methodology-during-a-project.aspx)
Optional Reading

- McConnell: Chapters 1-4
  - We covered most of Ch 3 today
- Schwalbe: chapters 1-2, 11 (344-345)