To maintain consistency.
Lectures throughout TIM158 adapted or borrowed from Kevin Ross.
Additional material added as needed.
Lecture 15

Chapter 8
Managing IT Project Delivery
Outline

• Presentations
• Administrative issues
• Last week recap – Cisco and ERP
• IT Project Delivery
What is Project Management?

http://www.slideshare.net/OneDeskApp/onedesk-infographicwhatisprojectmanagement
Projects Matter

- **Agile Manifesto**

1. Individuals and interactions over Processes and tools
2. Working software over Comprehensive documentation
3. Customer collaboration over Contract negotiation
4. Responding to change over Following a plan
On each iteration we work on the items that give us most value. Until the list is empty or resources run out (time or money). "to do" list for this iteration. To do things must be done, done.

Fixed duration iterations (typically 2 weeks each)

Integration
Development
Test
Information sharing inside the team
Information sharing outside the team
Public presentation

All stakeholders should be kept INFORMED about.

"to do" list

CLIENT

Agenda
-> ANALYZE
-> project REVIEW
-> Iteration PLANNING
-> work procedures review

Working software (and other deliverables)
Scrum

... especially good at bringing about innovation continuously, incrementally and spirally ...
**Axosoft**

**Scrum Diagram:**

1. **Product Backlog**
   The Product Backlog contains a wish list of all the User Stories of a product.

2. **Release Backlog**
   The goal of a given release is to deliver a subset of the Product Backlog, known as the Release Backlog.

3. **Sprint Backlogs**
   Each Sprint (or short duration milestone) takes a small chunk of the Release Backlog and gets it Ship-Ready!

4. **Burndown Chart**
   The progress of the team is monitored using a Burndown Chart.

5. **Daily Scrum Meetings**
   Short daily standup meetings ensure everything is on track and everyone has the tools they need.

6. **Sprint Retrospective**
   After each sprint, a longer retrospective meeting helps fine-tune the process.

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**Team Roles:**

- **Product Owner:** Is responsible for what goes into the product backlog and prioritizes it. Would probably make a good dictator if given the chance.

- **Scrum Master:** A team facilitator. Ensures teams have what they need to get the job done. Also, sets up meetings and monitors everything. Also, kicks asses when necessary.

- **Developers & Testers:** They write code and make sure it does what it’s suppose to do. Duh!

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**For more info:**

[Intro to Scrum Video](http://www.axosoft.com/scrumvideo)
the Problem with Projects

88% are past deadline, over budget or both
For every 100 starts, there are 94 restarts
Average cost overrun is 189%
Average time overrun is 222%

31% of projects are cancelled before completion

Solution? Get a PMP®

Certified Project Management Professional
Themes for chapter 8

1. Understand possible sources of IT project risk and how these can be managed
2. Recognize different approaches to project execution and understand their relatives merits
3. Understand the value of both consistency and agility in project management
What is an IT Project?

• Clear beginning and end
• Can be any size or complexity level
• Managed by a project manager
Why are IT projects difficult to manage?

Some things are easy to get wrong…

• Amount of change involved
  – Misunderestimated!!

• Time required
  – Misunderestimated!!

• Lost in translation/communication
  – Misunderstanding of requirements
Major sources of implementation risk

1. Project size
2. Experience with the technology
3. Requirements volatility
Effects of Additional Risk Factors (Large Size, High Technology, High Requirements Volatility) on Project Risk
Project Implementation Dip

• Most projects don’t go smoothly all the way
• New system going live common point
• Expectations not always realistic
• Short term downward shift may be necessary
• All happens in middle of business cycle and worker turnover
• Need to focus on end goal to get through value of change when people are complaining
• Ideally see it before it comes and get people ready
What People Expect and What Often Happens at System Cutover

Major improvement programs are usually “sold” within an organization with a picture (sometime implicit) that looks something like this:

When these programs begin, they proceed in accord with a picture that looks more like this:
What would you do as PM?
Portfolio Risk

- Multiple projects can add or reduce risk
- Low-risk not always good
- All high-risk is vulnerable
- Identify risks in all projects, then consider combined portfolio of risks
### Project Categories and Degree of Risk

<table>
<thead>
<tr>
<th>Low Technology*</th>
<th>High Requirements Volatility</th>
<th>Low Requirements Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spreadsheet support for budgeting</td>
<td>Year 2000 compliance work</td>
</tr>
</tbody>
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</thead>
<tbody>
<tr>
<td></td>
<td>Online graphic support for advertising copy</td>
<td>Artificial intelligence (AI)—driven bond trading</td>
</tr>
</tbody>
</table>
Risk Assessment

• Risk profile questionnaire
• Higher risk score, higher management approval required
• Repeated several times throughout project
• Different perspectives on risk expectation can lead to disaster
Risk and Return Distribution for Portfolio of Projects

- Breakthrough systems
- New Platforms
- Derivative systems

○ = New Projects
○ = Ongoing Projects

© F. Warren McFarlan, 2005
Development Methodologies

A development methodology is a sequence of phases that a project will follow.

- Analysis and design
- Construction
- Implementation
- Operation and maintenance
Adaptive Methodologies

Adaptive methodologies often focus on prototyping and rapidly going through the normal development phases several times.

- Iterative – design, construct, implement on each iteration
- Fast cycles
- Early delivery of limited functionality
- Require skilled management to quickly change plans
- Analysis of value such as ROI becomes difficult
Project Management

- No single correct plan
- Management Tools
  - External integration tools
  - Internal integration tools
  - Formal planning tools
  - Formal result controls
- See table 10.1: Tools for project management
# Tools for Project Management

## Table 10.1: Tools for Project Management

<table>
<thead>
<tr>
<th>Integration Tools/Techniques, External</th>
<th>Integration Tools/Techniques, Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection of user as project manager</td>
<td>Selection of experienced IT professional to lead team</td>
</tr>
<tr>
<td>User steering committee (which meets frequently)</td>
<td>Team meetings</td>
</tr>
<tr>
<td>User-managed change control process</td>
<td>Distribution within team of information on key design decisions</td>
</tr>
<tr>
<td>Distribution of project team information to key users</td>
<td>Technical status reviews/inspections</td>
</tr>
<tr>
<td>Selection of users as team members</td>
<td>Human resources techniques to maintain low turnover of team members</td>
</tr>
<tr>
<td>User approval process for system specifications</td>
<td>Selection of high percentage of team members with significant previous work relationships</td>
</tr>
<tr>
<td>Prototyping with users</td>
<td>Participation of team members in goal setting and deadline establishment</td>
</tr>
<tr>
<td>Progress reports</td>
<td>Obtaining outside technical assistance</td>
</tr>
<tr>
<td>User involvement/responsibility in other key decisions and actions</td>
<td><strong>Formal Results Control Tools</strong></td>
</tr>
</tbody>
</table>

**Formal Planning Tools**

- Project management software
- PERT, CPM
- Milestone setting and estimation tools
- Systems specifications processes
- Project approval processes
- Postproject audit procedures

**Formal Results Control Tools**

- Status-versus-plan reports
- Change control disciplines and systems
- Milestone review meetings
- Analysis of deviations from plan
Process Consistency and Agility in Project Management

• Balancing tension between process consistency and process agility
• Tools useful one place shouldn’t necessarily be applied to everything
• Success in balance often includes minimal formalization
• Flow
  – Understand interrelationships between projects
• Completeness
  – Keeping track of all tasks in project
• Visibility
  – Getting info on status of rest of project
Lecture 16

Volkswagen
Year “19XX” - Guess

What year?
Facts

• 10 BU’s

• 40 projects

• Funding required $210 M

• Budget $60 M
  – $16M for stay in business projects
  – $30 M for enterprise projects
  – $14 M highest priority BU project
We will learn ...

- How difficult it is to set priorities in a company
- The importance of deciding priorities
- Issues of scarce resources
- The relevance of transparency
Dr Matulovic’s dilemma

Setting priorities is one of the hardest things managers do. You try to involve everyone in the process and make it transparent, so that everyone owns the outcomes. But there is always room to second-guess the process, or decisions made in the process. People have a tendency to forget why decisions were made, or that we all agreed on the decision when it was made. What they see is “my project didn’t get funded, and this is keeping me from doing my job.” IT looks like an obstacle. If there’s one thing I’d like to turn around, it’s the idea that IT is an obstacle.
Proposal process summary

• **Phase I**—Calling for Projects, Communicating Process, and Identifying Dependencies
• **Phase II**—Formal Project Requests from Business Units
• **Phase III**—Transforming Business Unit Requests into Enterprise Goal Portfolios
VW proposal categorization

- **Investment thesis**
  - Stay in business (SIB)
  - Return on investment (ROI)
  - Option-creating investment (OCI)

- **Technological application types**
  - Base-enterprise IT platform
  - Enterprise applications
  - Customized point solutions
Special Exceptions

• Should Dr Matulovic grant “special exceptions”
• Can he get past “IT is an obstacle?”
Why is there over commitment?

• History
• Culture
• Acquisitions
• New models
Over commitment impact

• Failure
  – By not managing expectations

• PIP problem
  – Avg time to complete a project
  = # of projects / Capacity of process

9 projects
3 projects per year capacity (9/3)
Add a project and it is 10/3 = 3 years 4 months!!
Add 6 projects and it is 15/3 = 5 years each ... phew!!
Main impact

• People get spread too thinly
What is the ideal number of projects?

% Time Spent Adding Value
What is a good process?

• Transparency
  – Helps manage expectations
  – Reduces disappointment

• Ownership
  – Get ‘em involved

• Formality, consistency and continuity
  – No side deals

• Dynamic
  – Be prepared to adapt

• Finally (what else)
  – ??
Preparing for the final exam
Next Week(s)

• Storytelling lecture
• Conclusions on June 3, 2014
• Finals on June 9 or earlier?