PROJECT MANAGEMENT TECHNIQUES FOR NON-PROJECT MANAGERS

Session 2

Agenda

- Introduction
- Project Management Overview
- Project Management Concepts
- Project Management Techniques
- BC Technology
- Summary
- Q&A

Introduction

- Speakers

- Session 1 Recap (4/6)
  - Value and Application of Project Management @ Boston College

Overview – Project

- What is **project management**?
  - Application of knowledge, skills, tools and techniques to project activities to meet project requirements

- What is a **project**?
  - A "temporary endeavor undertaken to create a unique product, service or results"
    - Definite beginning & end
    - Team is formed & reassigned at completion

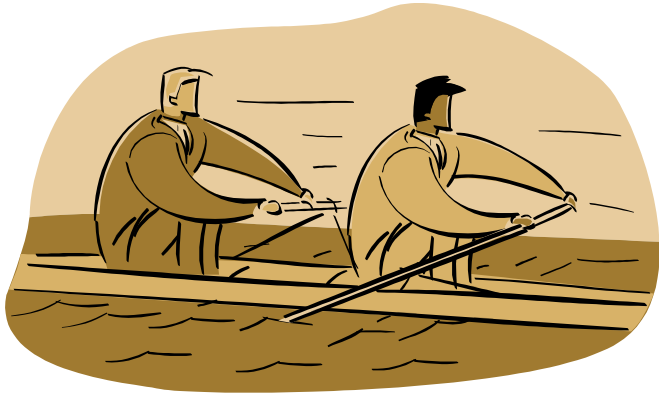
    Vs. operations – ongoing, repetitive

Overview – Project Manager

- What is a **project manager**?
  - The person assigned to achieve the project objectives

.....In most cases – YOU

  - A role not necessarily a job



Project Management Profession

Project Management Institute (PMI®)

- World's leading not-for-profit association for the project management profession (40+ yrs)
- Membership / local chapters
  - Mass Bay & Central Mass (MA)
  - Ocean State (RI), Southern New England (CT)
  - New Hampshire & Greater Monadnock (NH)
  - Maine Chapter (ME), Champlain Valley (VT)
- Credentials / Certifications
  - Program Management Professional (PgMP®)
  - **Project Management Professional (PMP®)**
  - Certified Associate in Project Management (CAPM®)
- www.pmi.org

Overview – Project Challenges

- Why are projects challenging?

  - Unique, something new, no blueprint
  - Sometimes difficult to define – what is it, when does it end
  - Working with people
  - Too much to do, too little time
  - As soon as you start, something changes

"If you don't know where you're going, then any road will get you there" – Alice in Wonderland

Overview – PM Importance

- Why is project management important?
- Why do we need project managers or people who can manage projects?
  - to address the previous challenges
  - to get the required work done as quickly and efficiently as possible

The value from a project is achieved at the END

Concepts – Management

Project Management vs. General Management

Concepts – Project Lifecycle

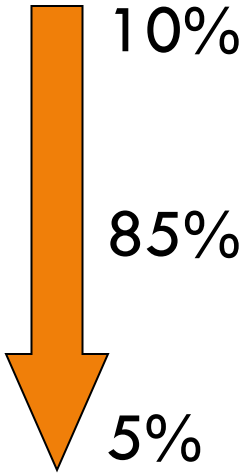
Project Management Processes

1. Initiating
2. Planning
3. Executing
4. Controlling (and monitoring)
5. Closing

Concepts – Project Processes

Where is time typically spent?

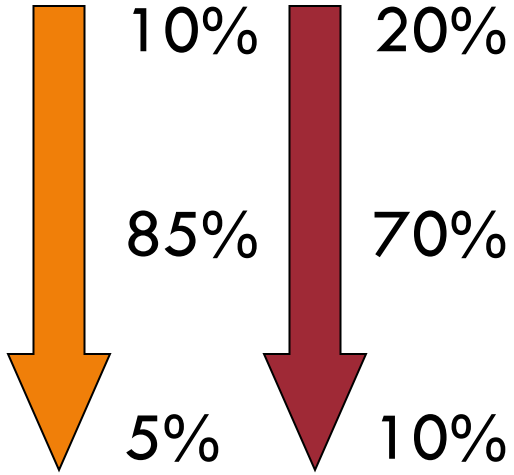
1. Initiating
2. Planning
3. Executing
4. Controlling (and monitoring)
5. Closing



Concepts – Project Processes

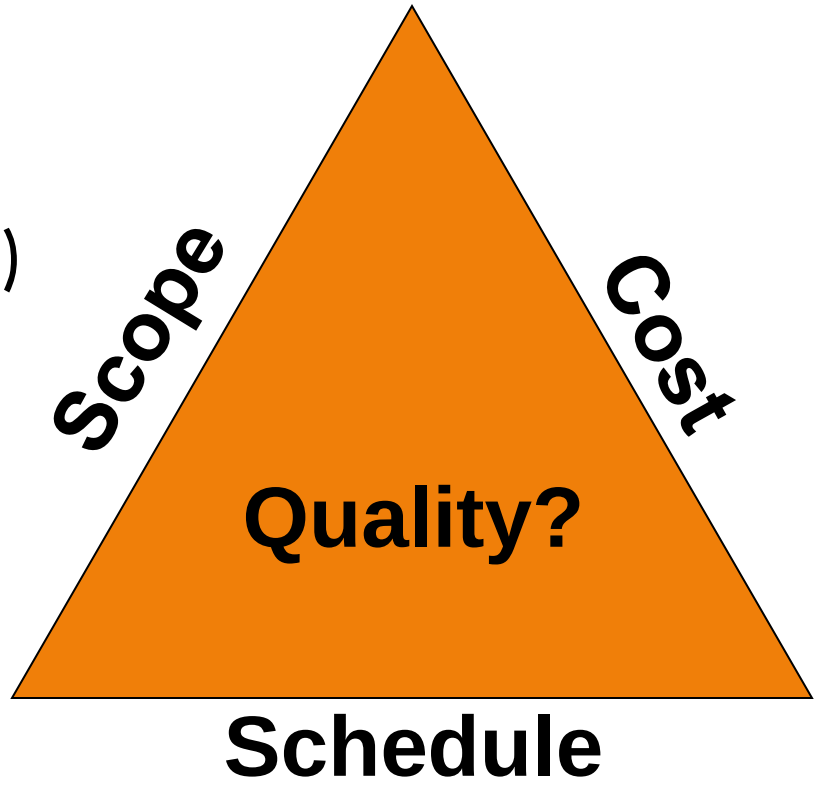
How time should be spent!

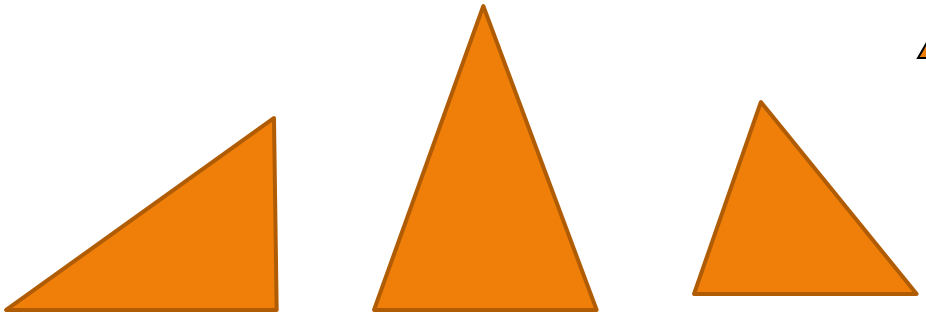
1. Initiating
2. Planning
3. Executing
4. Controlling (and monitoring)
5. Closing



Concept – Triple Constraint

Change in one side MUST affect another side (or both)





Techniques – Overview

Definition: "a body of technical methods", "a method of accomplishing a desired aim"

- One size does NOT fit all – tailor to project size / complexity
- Just enough PM – not a burden or impediment to achieving your end goal (project's objective)

Concepts – Project Lifecycle

Project Management Processes

1. Initiating
2. Planning
3. Executing
4. Controlling (and monitoring)
5. Closing

Techniques – Project Charter

Start the project – document 'hallway' conversation

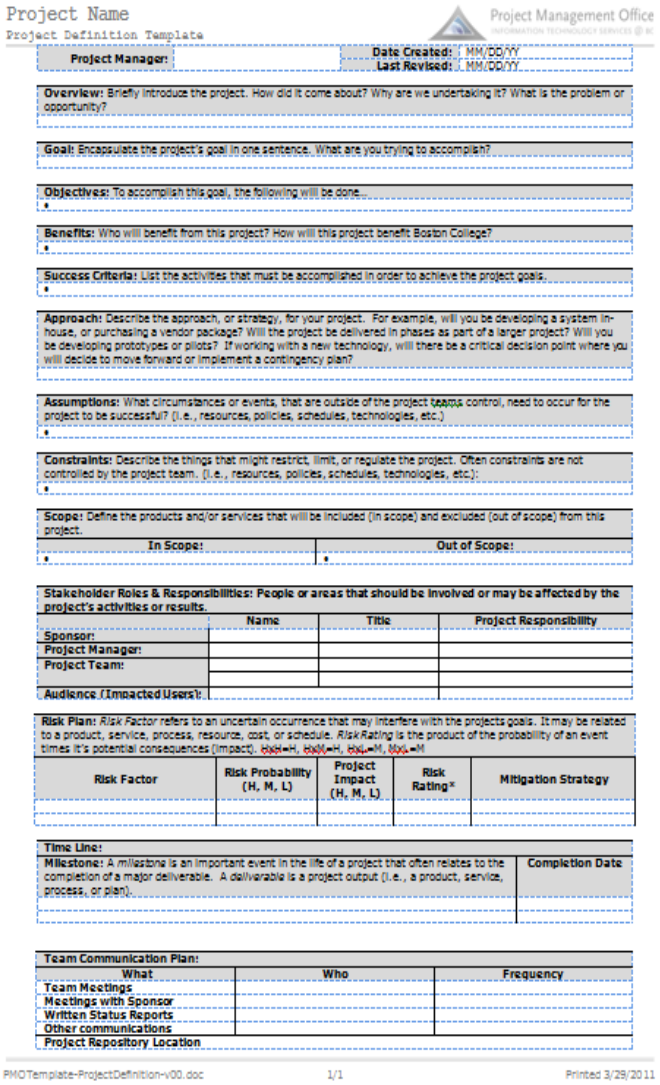
- Project Charter / Project Definition / Business Case
  - What are you doing?
  - What are you NOT doing?
  - Why are you doing this?
  - How will you know when you're done!

- Project Kickoff

Initiation – Project Charter

- Overview
- Goal
- Objectives
- Benefits
- Success Criteria
- Approach
- Assumptions
- Constraints
- Scope (in / out)
- Stakeholders
- Risks
- Milestones
- Communications
- Approval

Project Charter – Examples



Project Name

Project Definition Template

Project Management Office

Project Manager:		Date Created: MM/DD/YY Last Revised: MM/DD/YY

Overview: Briefly introduce the project. How did it come about? Why are we undertaking it? What is the problem or opportunity?

Goal: Encapsulate the project's goal in one sentence. What are you trying to accomplish?

Objectives: To accomplish this goal, the following will be done...

-

Benefits: Who will benefit from this project? How will this project benefit Boston College?

-

Success Criteria: List the activities that must be accomplished in order to achieve the project goals.

-

Approach: Describe the approach, or strategy, for your project. For example, will you be developing a system in-house, or purchasing a vendor package? Will the project be delivered in phases as part of a larger project? Will you be developing prototypes or pilots? If working with a new technology, will there be a critical decision point where you will decide to move forward or implement a contingency plan?

Assumptions: What circumstances or events, that are outside of the project teams control, need to occur for the project to be successful? (I.e., resources, policies, schedules, technologies, etc.)

-

Constraints: Describe the things that might restrict, limit, or regulate the project. Often constraints are not controlled by the project team. (I.e., resources, policies, schedules, technologies, etc.):

-

Scope: Define the products and/or services that will be included (in scope) and excluded (out of scope) from this project.

In Scope:	Out of Scope:
•	•

Stakeholder Roles & Responsibilities: People or areas that should be involved or may be affected by the project's activities or results.

	Name	Title	Project Responsibility
Sponsor:			
Project Manager:			
Project Team:			
Audience (Impacted Users):			

Risk Plan: *Risk Factor* refers to an uncertain occurrence that may interfere with the projects goals. It may be related to a product, service, process, resource, cost, or schedule. *Risk Rating* is the product of the probability of an event times it's potential consequences (impact). HxH=H, HxM=H, HxL=M, MxL=M

Risk Factor	Risk Probability (H, M, L)	Project Impact (H, M, L)	Risk Rating*	Mitigation Strategy

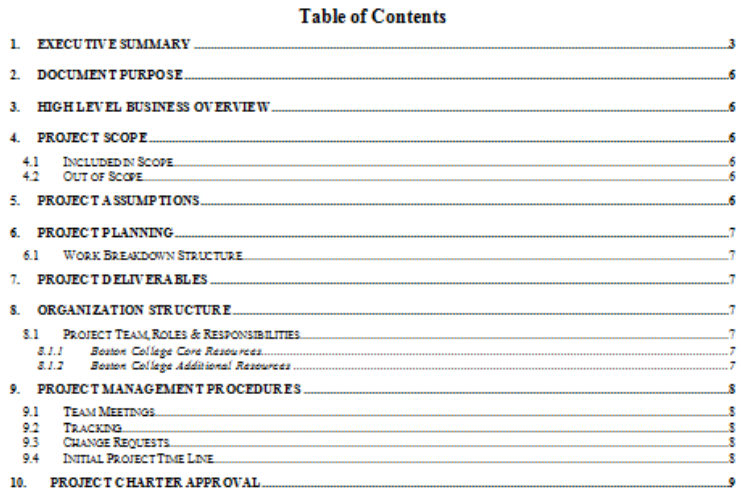
Time Line:

Milestone: A milestone is an important event in the life of a project that often relates to the completion of a major deliverable. A deliverable is a project output (I.e., a product, service, process, or plan).	Completion Date

Team Communication Plan:

What	Who	Frequency
Team Meetings		
Meetings with Sponsor		
Written Status Reports		
Other communications		
Project Repository Location		

PMOTemplate-ProjectDefinition-v00.doc 1/1 Printed 3/29/2011



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Concepts – Project Lifecycle

Project Management Processes

1. Initiating
2. **Planning**
3. Executing
4. Controlling (and monitoring)
5. Closing

Techniques – Project Planning

Expand Project Charter to greater detail

- How are you going to complete your project?
  - What steps or actions are required
  - What resources are required
  - What is the timeline
  - What is the cost
  - What might derail you (risks)

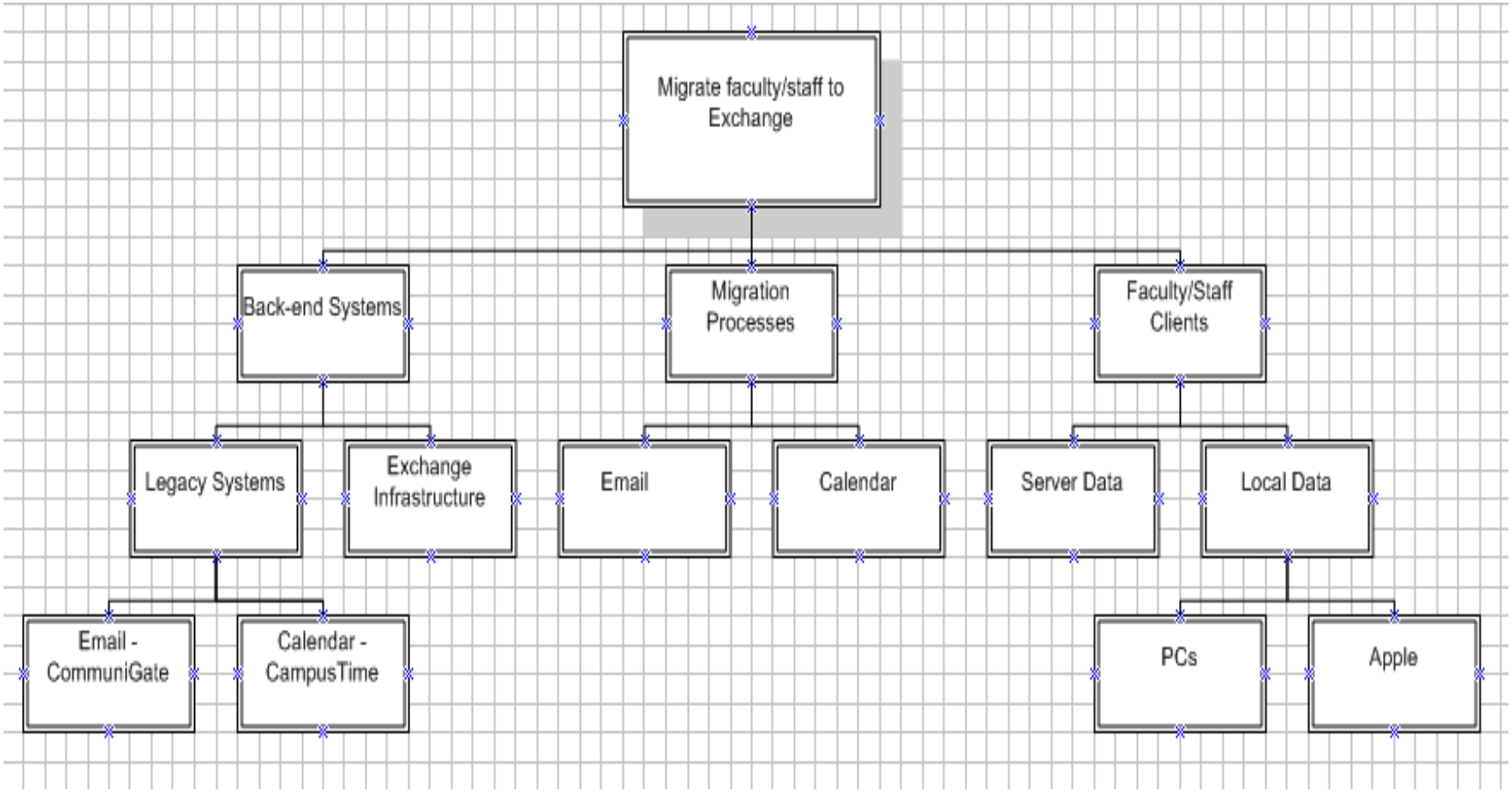
Planning – WBS

What steps or actions are required?

- Work Breakdown Structure (WBS)
  - Addresses total scope of project
  - Divides work into manageable components
  - Scope decomposition – start at the end
  - Hierarchical depiction

Defines High-level Tasks

WBS – Example


Migrate faculty/staff to Exchange
Back-end Systems
Migration Processes
Faculty/Staff Clients
Legacy Systems
Exchange Infrastructure
Email
Calendar
Server Data
Local Data
Email - CommuniGate
Calendar - CampusTime
PCs
Apple

Planning – Resource Plan

What resources are required?

- Resource Plan (project team)
  - Roles and skill set
  - Timeframe – start / end date
  - Demand – full-time vs. part-time (fte)
  - Location – local /co-located vs. remote / virtual

Defines what skills are needed when - and ultimately who

Resource Plan – Example

ITS Resource Plan
Project Name
Date

Name	Project Role	Project Responsibilities	% of Project time	Project Backup	Start Date on Project	End Date on Project	Other Roles	% of Other time	Total
							• Project • Operations / Support		
Sub-team1									
							• Project • Operations / Support		
							• Projects • Operations / Support • Training / mentoring		
Sub-team2									
							• Project • Operations / Support		
							• Project • Operations / Support		

Planning – Project Schedule

What is the timeline?

- Project Schedule – MS Excel (.xls) or Project (.mpp)
  - Task
  - Resource
  - Dependencies
  - Start Date & End Date (duration)

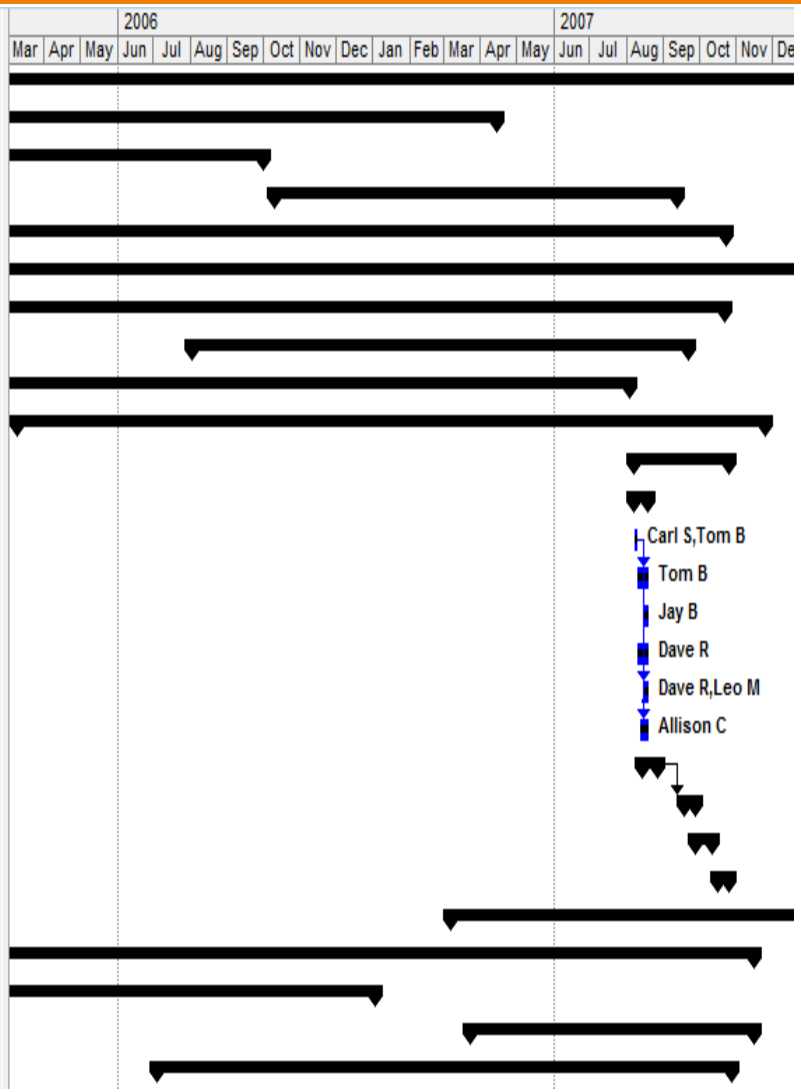
Resolves constraints based on WBS, activity sequence / duration, and resource plan; defines critical path

Project Schedule – xls Example

Task	Planned start date	Planned finish date	Resource requirements	Resource managers consulted
Research/Analysis/Database and System Design and Development	7/1/2006	8/31/2006	2 Enterprise systems developers for 2 months each; 1 DBA for .5 month	Manager 1, Manager 2
Installation of new hardware and software environments	9/1/2006	9/22/2006	1 System admin. for .5 month; 1 DBA for .75 month	Manager 3, Manager 1
Common components--prototype development and unit testing	9/23/2006	11/7/2006	3 Developers for 1.5 months each	Manager 1
OSP components--prototype development and unit testing	11/8/2006	2/22/2007	3 Developers for 3 months each	Manager 1
ORC components--prototype development and unit testing	2/23/2007	7/7/2007	3 Developers for 4.5 months each	Manager 1
Implementation of OSP validations and enhancements not directly covered in migration	7/8/2007	8/22/2007	3 Developers for 1.5 months each at 50% of their time	Manager 1
Implementation of ORC validations and enhancements not directly covered in migration	8/23/2007	10/7/2007	3 Developers for 1.5 months each at 80% of their time	Manager 1
Integration of new system with existing systems	10/8/2007		TBD	
Other budgetary considerations				
Hardware	$50,000 for server to house new systems			
Software	No software costs; all software to be developed in-house			

Project Schedule – Gantt example

	Task Name	Dur	%	Start	Finish	Predeces	Resource Names
1	St. Clement's Relocation Project	811 d	95%	1/1/04	2/2/07		
2	ITS DataCenter Requirements / Recommendations	548 d	100%	3/10/04	4/14/06		
21	Capital Projects / Design & Engineering (EYP) -per 2/18	380 d	100%	4/19/04	9/30/05		
54	Capital Projects / Construction (LKCO) -per 06/16/	241 d	100%	10/11/05	9/12/06		
138	Project Planning	694 d	100%	3/1/04	10/22/06		
161	Information Technology Serv (ITS) - Infrastructure & DataCen	639 d	92%	8/30/04	2/2/07		
162	Datacenter Relocation Planning	563 d	100%	8/30/04	10/21/06		
220	Systems Prep - O'Neill 5th	298 d	100%	8/2/05	9/21/06		
264	Networking Prep - O'Neill 5th	414 d	100%	1/1/05	8/3/06		
295	Datacenter Relocation Prep - St. Clement's	452 d	77%	3/9/05	11/24/06		
379	Datacenter Relocation Moves	62 d	100%	8/7/06	10/25/06		
380	1a) Perform Unit Testing	10 d	100%	8/7/06	8/18/06		
381	Verify cabling for unit test move	3 d	100%	8/7/06	8/9/06		Carl S,Tom B
382	Continue network performance testing	7 d	100%	8/10/06	8/18/06	381	Tom B
383	Continue SRDF performance testing	5 d	100%	8/14/06	8/18/06		Jay B
384	Move Linux & test (dolphin)	7 d	100%	8/10/06	8/18/06		Dave R
385	Move AIX/vmware & test (McDingo) - need VM Mux	3.5 d	100%	8/10/06	8/18/06	381	Dave R,Leo M
386	Move Windows & test (abbott)	5.5 d	100%	8/10/06	8/18/06	381	Allison C
387	1b) Move 1/2 cluster: AD/DNS/DHCP/LDAP	10 d	100%	8/14/06	8/27/06		
394	1c) Pilot Test - 6 racks/40 sys	8 d	100%	9/18/06	9/27/06	387	
401	2) Columbus Day Wkend Move - 20 racks/140 sys ++	12 d	100%	9/28/06	10/11/06		
409	3a) Oct 20-22 Move (remaining servers) - 5 racks/25 sy:	10 d	100%	10/16/06	10/25/06		
417	Datacenter Relocation Post-Oct Move Events	243 d	35%	3/7/06	2/2/07		
438	Information Technology Serv (ITS) - Staff (N Wing, flrs 1-4)	754 d	100%	1/1/04	11/15/06		
439	ITS Space Planning / Program	523 d	100%	1/1/04	1/2/06		
445	Staff Relocation	174 d	100%	3/23/06	11/15/06		
469	Campus Co-location - subset of ITS remaining on Main campus	349 d	89%	7/4/05	10/27/06		



Planning – Project Budget

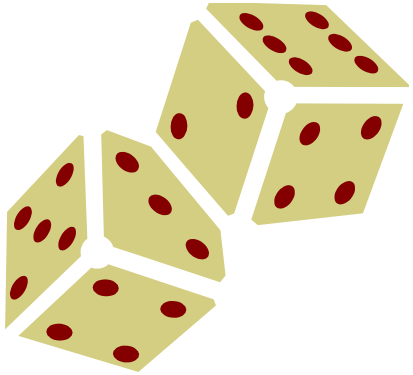
What is the cost?

- Project Budget
  - Hard dollars ($)
    - Hardware, software, vendor / consulting services, travel
    - Funding: capital vs. departmental
    - Don't forget operating costs
  - Soft dollars
    - BC resources

Based on project schedule

Planning – Project Risk

What might derail you (risks)?



- Project Risk
  - What could happen?
  - What is the likelihood of it happening?
  - What is the impact if it did happen?
  - For high priority items, define risk strategy / approach
    - Accept, mitigation, contingency

Identify risk, action strategy & trigger (if applicable)

Project Risk – Example

Risk Plan - Project Name													
	Date												
Risk #	Risk Class	Date Raised	Risk Description	Risk Probability	Risk Impact	Risk Rating	Risk Response Strategy	Risk Response Plan	Risk Owner	Review Date	Curent Status	Previous Review	Previous Status
Open / Current Risks													
Closed / Passed Risks													

Concepts – Project Lifecycle

Project Management Processes

1. Initiating
2. Planning
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5. Closing

Techniques – Execution / Control

Implement the Project Schedule & control the project

- Manage reality
  - Scope changes, scope creep, scope misunderstandings
  - Resource changes, resource unavailability, resource skills
  - Estimates are incorrect, tasks are missing
  - Risk events occur

"No battle plan survives contact with the enemy"

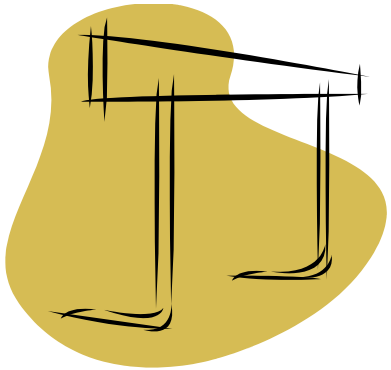
– Colin Powell

Project Execution / Control

- Tracking
  - Progress against Project Schedule
  - Risks
- Change Control
  - Manage change process
- Communication
  - Update team and stakeholders

Project Execution – Tracking

Implement the Project Schedule



- Project Tracking
  - Schedule – % complete
  - Risks – monitor triggers, address new risks
  - Issues / Actions Log – new or missed items, items preventing task completion

Make it happen

Project Issues/Action – Example

Project Name
Project Manager:
Meeting:
Repository:

Project Management Office
INFORMATION TECHNOLOGY SERVICES @ BC

Issues List

Issue #	Issue Description	Assigned To	Date Identified	Planned Date	Revised Date	Resolution/Comments	Current Status	Actual Resolve

Actions List

Action #	Action Description	Assigned To	Date Identified	Planned Date	Revised Date	Resolution/Comments	Current Status	Actual Close

Project Execution – Change

'Manage' the Project Schedule

- Project Change
  - Recognize change
  - Accept / manage change
  - Assess impact
  - Approve & implement change (or not)

Integrate change, update project plan, communicate revised plan

Project Change – Example

Change Log - Project Name

Date

Baseline document / contract / sow & date.

#	Request Date	Requested By	Change Description	Change Assessment / Impact	Assessed Date	Assessed By	Change Decision	Decision Date	Decided By	if approved, Change Next Steps

Project Execution – Communications

Keep the team & stakeholders informed

- Project Communications
  - Stakeholders – manage expectations, tailor message
  - Meetings – effective (agenda, monitored, summary)
  - Email – targeted and tagged
  - Files – standard naming convention
  - Reporting – status reports

The right information at the right time to the right people

Project Status – Example

Project Name
Monthly Status Report

Project Management Office
INFORMATION TECHNOLOGY SERVICES @ BC

Project Manager:		**Date Created:**	
		Reporting Period:	**From:** **To**

Project Health: Place an "X" in the appropriate box for the overall health of the project.

X	**Green**	*(project is on track)*
	Yellow	*(issues or problems may impact completion date, cost, or scope)*
	Red	*(project won't be completed by scheduled date, will exceed projected cost, or won't meet established scope*

Health Explanation: Provide a few sentences regarding the overall health of the project.

Accomplishments: List the activities that have been completed since the last status report.

-
-

Planned Activities: List the activities that will be completed by the next status report.

-
-

Issues/Risks: List any outstanding items of concern as well as any uncertain occurrences that may interfere with achieving the project.

General Comments: Enter any important remarks/observations relevant to the project and its status.

Key Project Milestones

-
-

Project Meetings:

-
-

Project Repository:

Concepts – Project Lifecycle

Project Management Processes

1. Initiating
2. Planning
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4. Controlling (and monitoring)
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Techniques – Project Close

Achieved your project's objective

- Project Transition
  - To support / operations
- Project Closeout
  - Lessons learned / continuous improvement
  - Celebration / thank you

"Insanity: doing the same thing over and over again and expecting different results" (attributed to Albert Einstein)

Close – Project Closeout

- Project Summary
  - Description, size, complexity, resources
- Metrics: baseline vs. actuals (variance)
  - Schedule, cost, scope and variance explanation
- Lessons Learned
  - PM Project Lifecycle
  - Process and product related
- Project Repository
- Outstanding Tasks

Project Closeout – Examples

ITS Project Inventory - Mini Project Closeout Sheet

Project Name:	insert Project Name here

1. Project Closeout - Summary

Provide a high level description of the project - what was the result or delivered value (new functionality/service, modified functionality/service, removed functionality/service, etc.).

insert summary text here

2. Project Closeout - Metrics

Compare the baseline values against the actual results to determine the variance against plan; explain the variances or if no variance, the method used to meet cost, schedule or scope..

2.1 Baseline vs Actual (cost, schedule, scope)

	Baseline	Actual	Variance	% Variance
Start Date	<mm/dd/yyyy>	<mm/dd/yyyy>	#VALUE!	#VALUE!
End Date	<mm/dd/yyyy>	<mm/dd/yyyy>	#VALUE!	#VALUE!
Budget ($)	<$000,000.00>	<$000,000.00>	#VALUE!	#VALUE!
Resources (fte)	<000.00 fte>	<000.00 fte>	#VALUE!	#VALUE!
Scope	text	text	text	text

Note: Variance & %Variance columns contain formulas

2.2 Description

Explain the variances or if no variance, the method used to meet cost, schedule or scope, ie. 1) was the end date met by a) decreasing project scope and/or creating a phase 2 or b) by adding resources/cost; 2) was the scope met by a) extending the end date or b) increasing resources/cost; 3) was the cost met by a) decreasing project scope and/or creating a phase 2 or b) accelerating the timeline.

2.2.1 Cost	insert cost variance text here
2.2.2 Schedule	insert schedule variance text here
2.2.3 Scope	insert scope variance text here

3. Project Closeout - Key Takeaway

Document the project's key takeaway - what was the most important lessons learned (significant new understanding for next project); information on project performance (requirements, scope, cost, resources, schecule, etc.), risk, quality, vendor, etc.

insert takeaway text here

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TECHNOLOGY TOOLS

Project Management

Project Repository – MyFiles@bc

- Web-based file-storage system
- Access at bc.edu/myfiles
- Faculty, staff, and students have accounts
- Share files with other members of the team
- Keep track of different versions of the same file
- Receive reports when files are viewed or changed
- Use a consistent convention when naming project-related folders and files

Project Communications – BCPost

- Email Listserv
- Easily communicate with all members of project team at once via email
- Subscribers can request a digest, containing all the messages from a given time period
- All messages are archived so you have a history of discussions
- Learn more and access BCPost at bc.edu/bcpost

Project Communications – Campus Groups

- A group available for emailing, filesharing (MyFiles@bc), web-based collaboration, and voicemail distribution.
- Good option if you need to use the group for functions other than just email.
- Campus Groups do not have all the functionality of BCPost, for example postings cannot be restricted and/or moderated.
- Access through Agora Portal

Project Communications – Email

- Create folders to store all project-related messages
- Use labels/categories to prioritize
- Learn how to sort messages quickly by sender, recipient, subject, date to find key information quickly
- Use a consistent convention for subject lines
- Use “To” field for calls to action and “CC” for conveying information

Project Templates – Microsoft Office

- Built-in Professional Templates (agendas, calendars, schedules, reports)
- "Track Changes" to collaborate with others
- Compare different versions of same document
- Improved sorting and filtering of Excel data

Learn about These and More…

- ITS Training Classes
  bc.edu/training

- Online Microsoft Classes
  bc.edu/mselearning

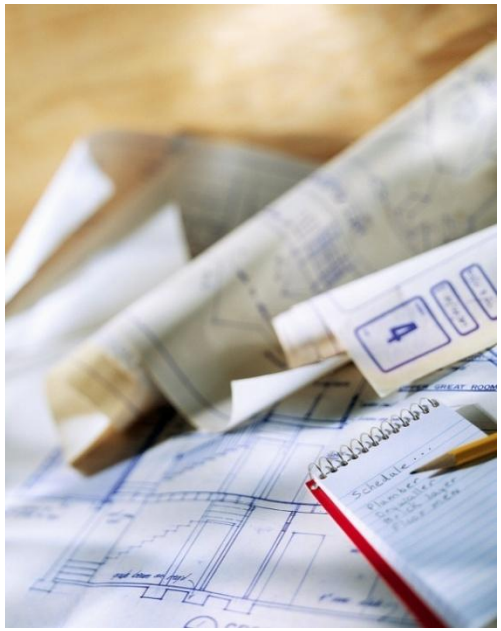
- The Technology Help Site
  bc.edu/help

SUMMARY

Summary

- Projects, project management & you – the "project manager"
- Project Techniques
  - Initiating, Planning, Executing/Controlling and Closing
  - 80/20 rule
  - Apply just the right amount

The more you plan, the luckier you get



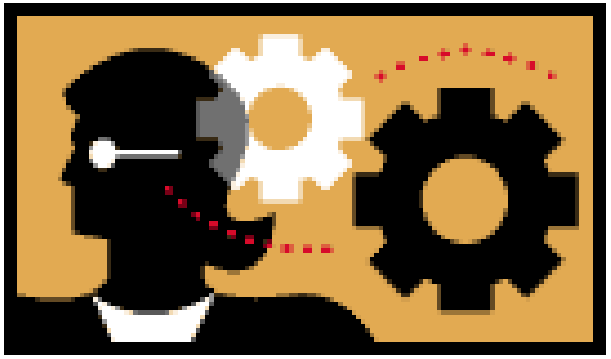
References

- PMI®: www.pmi.org
- EDUCAUSE: www.educause.edu
- Northeast Reg Computing Pgm: www.nercomp.org
- CSOM course: Managing Projects (MD255/MD831)
- BC ITS PMO: www.bc.edu/pmo

- Thank you
- Session Evaluation

Food for Thought

- If it's not written down, it does not exist
- Murphy is alive and well
  - If it can go wrong it will
- And so is O'Malley (alive & well)
  - If it can't possibly go wrong, it will



- 'No news' is not necessarily good news
- Warning: dates in the schedule are closer than you think
- A project becomes one year late, one day at a time

If you fail to plan, you are planning to fail