

Software Project Management

COMP2140 – Lecture 04

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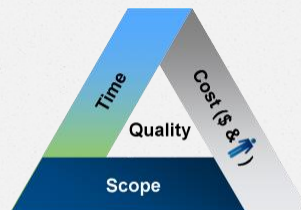
Project & PM

- Project
- Temporary endeavour to create product, service or result
 - Definite beginning and end
 - Need or objectives met (success)
 - Need or objectives cannot be met (failure)
- Project Management
 - Activities geared towards delivering objectives within time, budget quality and scope.

Knowledge Areas

1. Integration Management
2. Scope Management
3. Time Management
4. Cost Management
5. Quality Management
6. Human Resource Management
7. Communications Management
8. Risk Management
9. Procurement Management
10. Stakeholder Management

Triple Constraint



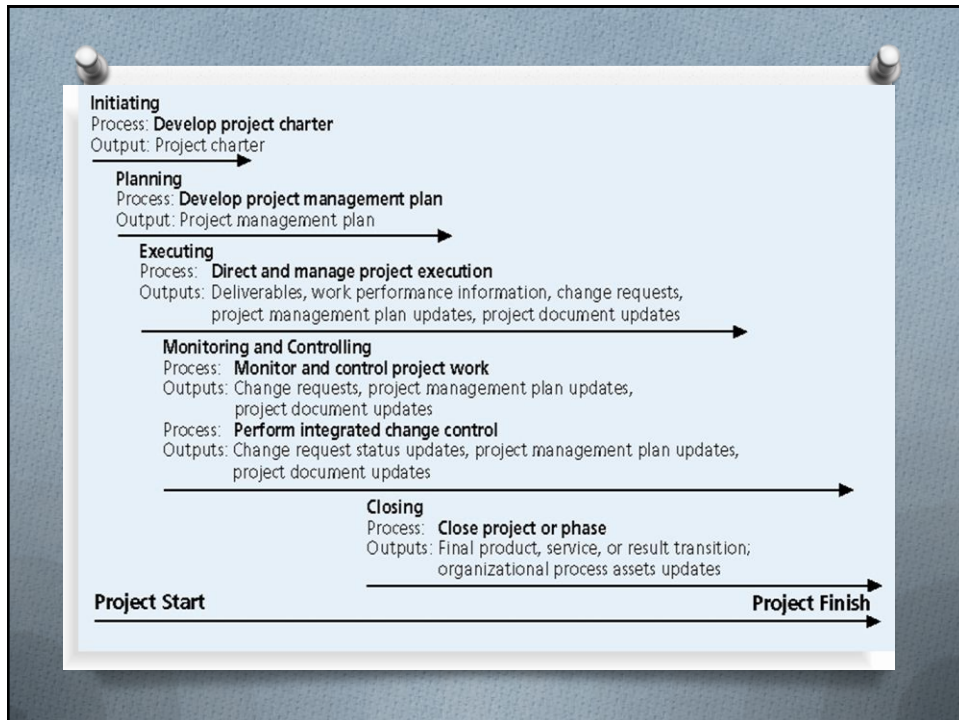
A change in any of the three
(Time, Cost, Scope) will impact
the other two and Quality

Process Groups

- o Initiating processes
 - o Activities to start the project
- o Planning processes
 - o Determine how things will be done
- o Executing Processes
 - o Get the planned work done
- o Monitoring and Controlling processes
 - o Monitor and manage the work as it is done
 - o Ensure compliance with the plans
- o Closing processes
 - o End project and deliver product/service/result
 - o Release staff, document lessons learnt

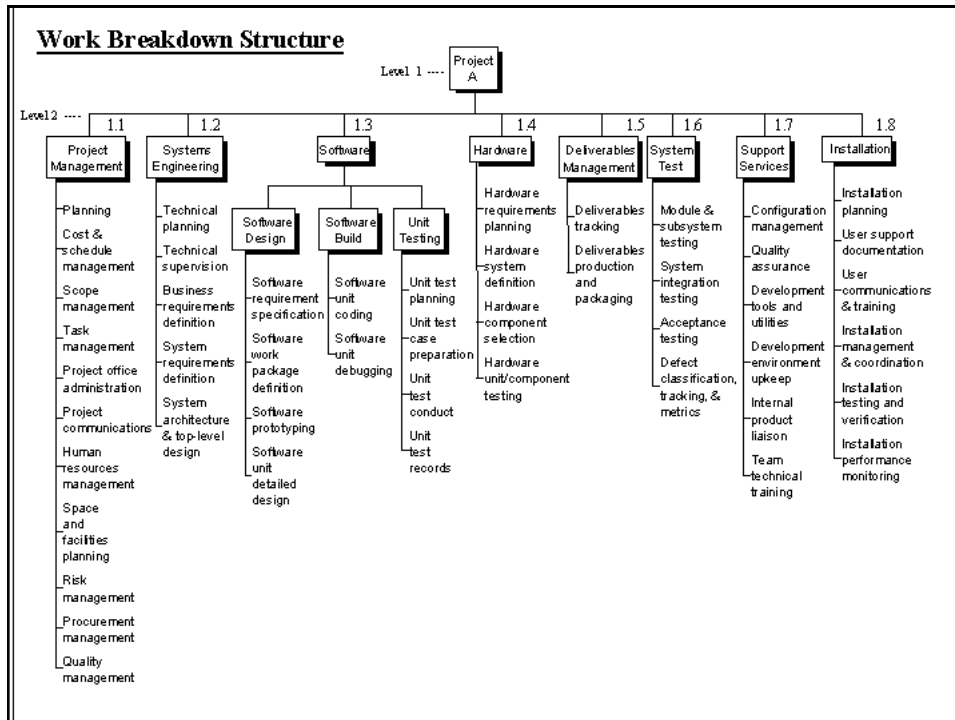
Initiating

- o Develop Project Charter
 - o Officially authorizes the project
 - o Management Signoff
- o Identify stakeholders
 - o All persons with an interest in the project outcome
 - o Identify influence



Planning

- o Develop Project Management Plan
 - o Plan Scope Management, **Collect Requirements**, Define Scope, Create WBS
 - o Defining Scope
 - o Indicate the inclusions and exclusions of the project
 - o Create WBS
 - o This is a listing of things to be done in the project
 - o Hierarchical / Tabular



Level 1	Level 2	Level 3	WBS Example 2
1 Widget Management System	1.1 Initiation	1.1.1 Evaluation & Recommendations 1.1.2 Develop Project Charter 1.1.3 Deliverable: Submit Project Charter 1.1.4 Project Sponsor Reviews Project Charter 1.1.5 Project Charter Signed/Approved	
	1.2 Planning	1.2.1 Create Preliminary Scope Statement 1.2.2 Determine Project Team 1.2.3 Project Team Kickoff Meeting 1.2.4 Develop Project Plan 1.2.5 Submit Project Plan 1.2.6 Milestone: Project Plan Approval	
	1.3 Execution	1.3.1 Project Kickoff Meeting 1.3.2 Verify & Validate User Requirements 1.3.3 Design System 1.3.4 Procure Hardware/Software 1.3.5 Install Development System 1.3.6 Testing Phase 1.3.7 Install Live System 1.3.8 User Training 1.3.9 Go Live	
	1.4 Control	1.4.1 Project Management 1.4.2 Project Status Meetings 1.4.3 Risk Management 1.4.4 Update Project Management Plan	
	1.5 Closeout	1.5.1 Audit Procurement 1.5.2 Document Lessons Learned 1.5.3 Update Files/Records 1.5.4 Gain Formal Acceptance 1.5.5 Archive Files/Documents	

Planning II

- o Plan Schedule Management
- o Define activities
 - o Identify the activities required to complete items listed in WBS
 - o Activities should be small/large enough to assign to one person
- o Sequence activities
 - o Determine what order activities will be done
- o Estimate activity resources
 - o What will be required to accomplish the activities in the given sequence?
 - o Programmers, solution architects etc.

Planning III

- o Estimate activity durations
 - o Required effort vs. Elapsed time
- o Develop schedule
 - o PM Software tool
- o Plan Cost Management, estimate costs, determine budget
- o Plan Quality Management
- o Plan human resource management
- o Plan communication management
- o Plan risk management, identify risks, perform risks analysis, plan risk responses

Executing

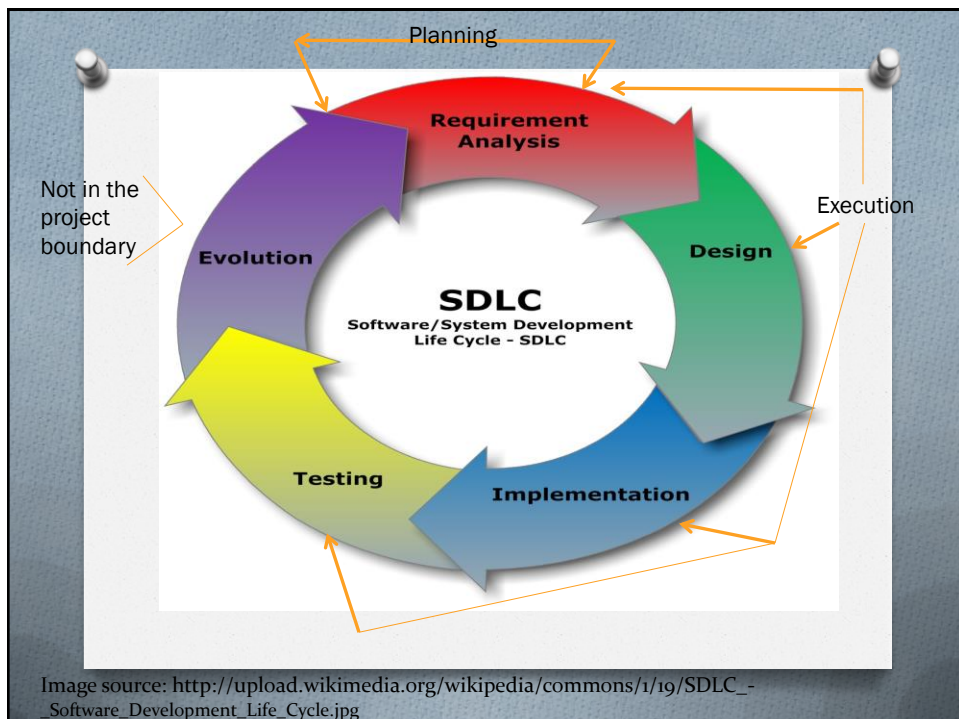
- ◊ Direct and manage project work
- ◊ Perform quality assurance
- ◊ Acquire, develop and manage project team
- ◊ Manage communications
- ◊ Conduct procurements

Monitoring and Controlling

- ◊ Control schedule
- ◊ Control costs
- ◊ Control quality
- ◊ Control communications
- ◊ Control procurements

Closing Processes

- Close project or phase
- Close procurements



PM & SDLC

- Initiation
 - Authorize project
- Planning
 - Plan all aspects of project, cost, time etc.
 - Requirements Specification
- Execution
 - Start the work
 - SDLC – Design, Implementation, Testing
- Closeout
 - Release team, contracts
- Evolve the product
 - each change can be a separate project

Further Reading

- Software Engineering – Ian Sommerville (9th Edition)
 - Chapter 22 – Project Management
 - Chapter 23 – Project Planning