

CPET 581/499 Cloud Computing: Technologies and Enterprise IT Strategies

Lecture 5 Project Management IT Cloud Services Project

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A Specialty Course for Purdue University's M.S. in Technology
Graduate Program: IT/Advanced Computer App Track

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References

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2. Information Technology Project Management, 4th Ed, Kathy Schwalbe, Thomson Course Technology
3. Project Management: A Systems Approach to Planning, Scheduling, and Controlling, Harold Kerzner
4. Project Management: Strategic Design and Implementation, 4th Ed, by David L. Cleland and Lewis R. Ireland, McGrawHill.

Project Management Terms and Definitions [1]

What is a Project?

- **A Project is a temporary endeavor undertaken to create a unique product, service, or result.**
- **Temporary**
 - Has a definite beginning and a definite end
 - Most projects are undertaken to create a lasting outcome
 - Project also may often have intended and unintended social, economics and environmental impact that far outlast the projects themselves

Project Management Terms and Definitions [1]

What is a Project?

- **A Project is a temporary endeavor undertaken to create a unique product, service, or result.**
- **Temporary**
- **Unique Products, Services, or Results – a project creates unique deliverable**
 - A product or artifact that is produced, is quantifiable, and can be either an end item in itself or a component item
 - A capability to perform a service, such as business function supporting production or distribution
 - A result, such as outcomes or documents. For example, a research project develops knowledge that can be used to determine whether or not a trend is present or a new process will benefit society

Project Management Terms and Definitions [1]

What is a Project?

- A Project is a temporary endeavor undertaken to create a unique product, service, or result.
- Temporary
- Unique Products, Services, or Results – a project creates unique deliverable
- **Project's characteristics**
 - Performed by people
 - Constrained by limited resources
 - Planned, executed, and controlled

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Project Management Terms and Definitions [1]

What is a Project?

- A Project is a temporary endeavor undertaken to create a unique product, service, or result.
- **Examples of projects**
 - Developing a new product or service
 - Effecting a change in structure, staffing, or style of an organization
 - Designing a new transportation vehicle
 - Developing or acquiring a new or modifies information system
 - Constructing a building or facility
 - Building a water system for a community
 - Running a campaign for political office
 - Implementing a new business procedure or process
 - Responding to a contract solicitation

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Project Management

- Project Management
 - Planning, scheduling and controlling project activities to meet project objectives
 - Objectives include budgets/costs, performance and time goals
 - Measuring Progress/Controlling Cost
 - Risk Management
 - Risk Evaluation
 - Risk Mitigation
- Resources
 - Equipment, manpower, money, facilities, materials, and information/technology required to execute a project

Projects and Strategic Planning

- Projects are a means of organizing activities that cannot be addressed within the organization's normal operational limits
- Projects are often utilized as a means of achieving an organization's **strategic plan**, whether the project team is employed by the organization or is a contracted service provider

Projects and Strategic Planning

- Projects are typically authorized as a result of one or more of the following **strategic considerations**
 - A **market demand** (example: build a new refinery in response to chronic gasoline shortages)
 - An **organizational need** (to create a new program in order to increase the enrollment and meet the demands)
 - A customer request (an electric utility – build a new substation to serve a new industrial park)
 - A **technological advance** (a software firm authorizes a new project to develop a new generation of video games after the introduction of new game playing equipment by electronic firms)
 - A **legal requirement** (a paint manufacturer authorizes a project to establish guidelines for handling a new toxic material)

The Project Management Knowledge Areas [1]

- **Core Knowledge** Area
 - Project Scope Management
 - Project Time Management
 - Project Cost Management
 - Project Quality Management
- **Facilitating Knowledge** Area
 - Project Human Resource Management
 - Project Communication Management
 - Project Risk Management
 - Project Procurement Management
 - Project Integration Management

Project Management Job Functions [2]

- Define **scope** of project
- Identify stakeholders, decision makers, and escalation procedures
- Develop detail task list (work breakdown structure: **WBS**)
- Estimate time requirements
- Develop initial project management flowchart
- Identify required resources and budget
- Evaluate project requirements
- Identify and evaluate risks

Project Management Job Functions [2]

- Prepare contingency plan
- Identify interdependencies
- Identify and track critical milestones
- Participate in project phase review
- Secure needed resources
- Manage and change control process
- Report project status

IT Project Lifecycle [2]

- Traditional IT Project Life Cycle
- Project Feasibility
 - First Phase: Concept (deliverables)
 - Management Plan
 - Preliminary Cost Estimate
 - 2-Level WBS
 - Second Phase: Development (deliverables)
 - Project Plans
 - 3+ level WBS
- Project Acquisition
 - Third Phase: Implementation (deliverables)
 - Fourth Phase: Clos-out

IT Project Lifecycle [2]

- Traditional IT Project Life Cycle
- Project Feasibility
 - First Phase: Concept (deliverables)
 - Second Phase: Development (deliverables)
- Project Acquisition
 - Third Phase: Implementation (deliverables)
 - Last Work Package
 - Definitive Cost Estimate
 - Performance Reports
 - Fourth Phase: Clos-out (deliverables)
 - Completed Work
 - Lessons Learned
 - Customer Acceptance

System Development Life Cycle (SDLC): Some Popular Models

- **The Waterfall Life Cycle Model**
 - Assume that requirements will remain stable after being defined
- **The Spiral Life Cycle Model**
 - Iterative with various refinements
- **The Incremental Build Life Cycle Model**
 - Progressive development, with each release providing added capabilities
- **The Prototyping Life Cycle Model**
 - Require heavy user involvement
 - Generate functional requirements and physical design specifications simultaneously
- **The Rapid Application Development Life Cycle Model**
 - Require heavy user involvement
 - Use CASE (Computer Aided Software Engineering), JRP (Joint Requirements Planning), and JAD (Joint Application Design) to facilitate RAP and code generation

Project Management