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Project Management Fundamentals

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Presentation Outline

- Presentation Assumptions
- Project Management Overview
- Project Initiation
- Project Planning
- Project Control
- Project Completion
- Project Management Summary

Presentation Assumptions

- Objective is to review the fundamentals of Project Management and provide a high-level overview of a standard Project Management methodology
- A Project Management methodology provides the framework for understanding the Phases and Steps to use when managing a Project as well as when to use them
- Every Project (IT or otherwise) will include some variation of the Phases outlined in this Presentation
- Not all Steps will always be needed nor will each Step necessarily be executed the same way for each Project
- Bottom line, no methodology should be used as a “cookbook”; each Project needs to be organized consistent with the Client’s environment and the type of Project

Project Management Overview - Definition

“A disciplined approach to planning, organizing, directing, and controlling the necessary resources to complete a project”

OR

“The art of [Project] Management consists of issuing orders based on inaccurate, incomplete, and archaic data;...To meet a situation which is dimly understood and which will not be what was visualized;...Orders which will be frequently misinterpreted and often ignored;...To accomplish a purpose about which many of the personnel are not enthusiastic”

Project Management Overview - Rational

- Software Projects are Complex
- New Software Development Risky
- Package Implementation Costs can run 2 to 3 times software cost
- Project Resources usually “Multi-Tasking”
- Diverse Organizational Structures
- Difficulty Estimating and Scheduling
 - Increased Probability of Cost Overruns and Slippage

Project Management Overview - Benefits

- Disciplined Application of SDM
- Fixes Roles and Responsibilities
- Identifies Tasks and Dependencies
- Measures Progress
- Spots Potential Problem Areas
- Provides Trade Offs / Permits Re-Scheduling
- Provides Historical Bank of Project Data

Project Management Overview – Major Activities

- Planning
- Organizing
- Estimating
- Controlling
- Delivering

Project Management Overview - Process

- Project Initiation
- Project Planning
- Project Control
- Project Completion

Project Initiation - Introduction

- Projects consists of two broad categories of activity; 'Doing' and 'Managing'
- Management Activities consists of three distinct types; 'Point in Time', 'Task Management', and 'Project Leadership'
- The larger the Project in terms of Effort Hours (hours of work), Duration (calendar time), or Number of Resources (FTEs), the more time will need to be spent on Project Leadership activities

Project Initiation – Key Questions

- How hard are the tasks involved (I.e. do we have experience with Projects of this type?)
- How experienced is my team in terms of people, tools, and equipment?
- What checkpoints are needed?
- Most important, what are the client's expectations?

Project Initiation – Activities

- Identify Core Team (including Key Client resources) in conjunction with Project Sponsor, Resource Managers, and/or Steering Committee
- Develop Project Agreement including identification of Objectives, Scope, and High Level Requirements
- Develop Baseline Project Plan and Budget
- Hold Kick-Off Meeting (review Project Agreement, Project Plan, and Budget)
- Make arrangements for Training, Acquisition of Tools, Facilities, etc. as needed

Project Initiation – Project Agreement

- Project Agreement is a two to four page document that identifies a variety of initial assumptions
- Written by the Project Manager in conjunction with the Project Sponsor and reviewed by the appropriate Stakeholders
- Includes identification of tools, standards, techniques, and procedures to be used
- It is not a Project Plan in that it does not indicate specific costs, resources, or dates

Project Initiation – Project Agreement

- **Section 1: Authorizing Signatures**
 - Project Sponsor, Resource Manager, and/or Steering Committee signatures indicating understanding and agreement with Project Agreement contents
- **Section 2: Project Definition**
 - Situation Review
 - Project Objectives
 - Scope and Approach
 - Out of Scope Items
 - Deliverables
 - Completion Criteria
 - Assumptions

Project Initiation – Project Agreement

- **Section 3: Project Organization**
 - Participants and Roles
 - Responsibilities Definition
 - Management Controls
- **Section 4: Project Plan and Budget**
 - Baseline Plan and Budget generally attached to Project Agreement but are created as part of the Planning Phase

Project Initiation – Summary

“Projects aren’t successful; People are!!!”

Remember: a Project Manager’s most important job is to eliminate obstacles that prevent the team from delivering a high quality result on budget and on schedule

Project Planning - Introduction

- Project Planning process should begin immediately and never end
- During Planning, the Project Manager balances Objectives, Schedule, and Resources (People and Dollars)
- Project Planning is critical if any or all of the following are present
 - If it is a large Project
 - If it is a complex Project
 - If the Project Team is inexperienced
 - If the Project is under a tight deadline

Project Planning – Major Activities

- Describe the Project by Identifying Activities and Tasks (Work Breakdown Structure)
- Identify Roles Required to Perform Project Activities (Work Responsibility Definition)
- Identify Dependencies between and within Projects (Precedence Analysis)
- Develop Time Estimate for Each Task (Duration)
- Prepare Project Schedule (GANTT Chart, etc.)
- Prepare Project Cost Estimates (Implementation Resources, HW / SW Requirements, and Post-Implementation Costs where appropriate)

Project Planning – Work Breakdown Structure

- Work Breakdown Structure (WBS) is an organized list of Tasks to be completed
- WBS is generally based on Phases, Activities, and Tasks identified in an SDM
- In general, WBS identifies the Project Phases, Key Results, Activities, and Tasks
- Can be created using a Top Down, Bottom Up, or Combination Approach

Project Planning – Work Responsibility Definition

- Work Responsibility Definition (WRD) takes each Task and identifies the extent of Resource involvement (People)
- For each Task, one Resource is identified who is responsible for its completion (although other Resources may also be involved in its execution)
- Also identifies degree of involvement on the part of other Resources for a given task (I.e. active involvement, sign-off responsibility, etc.)

Project Planning – Dependency Definition

- Precedence Analysis identifies dependencies between Project Tasks
- Each Task should have one or more Predecessor and/or Successor Tasks
- Objective is to identify situations where Loops or Bottlenecks exist
- Will facilitate identification of Critical Path
- Same approach can be used to identify dependencies between Projects

Project Planning

- Estimates should reflect both Effort and Duration
- Estimate hours in Person Hours and estimate Duration in Calendar Days
- Unless precise hours are known, generally best to estimate in half day increments with no single Task exceeding 40 hours
- Good estimates also include Assumptions and Risks
- Estimates can be arrived using either a Top Down or Bottom Up Approach
- Every Project Estimate should include Contingency Time

Project Planning – Scheduling

- Duration Estimates can be translated into Elapsed Time Estimates through use of GANTT and PERT charts
- Duration Estimates should show Elapsed Time for both Tasks and Resources
- These estimates and related documentation represents the Baseline Plan
- Baseline Plan is necessary at all times and is refined during each Phase of the Project

Project Planning – Budgeting

- Once the initial Plan is completed, Costs can be estimated including Resource, Hardware, and Software Costs
- Resource Costs can be translated into Internal and External FTEs as well as into Implementation and Post-Implementation FTEs as appropriate
- Hardware and Software Costs include License Fees (for purchased software) as well as any Hardware or Operating System Upgrade Costs
- These estimates and related documentation represents Budget

Project Planning - Summary

**“You can’t force a person (or Project) into an unattainable schedule.
It will remain unattainable!”**

Remember: most Projects fail because of poor Project Planning.
Plan effectively but Plan honestly!

Project Control - Introduction

- Project Control involves understanding where a Project stands at any point in time
- Controlling the Project represents the “Management” in Project Management; it is the primary activity a Project Manager performs on a day-to-day basis
- Project Control includes
 - On-going discussions as well as reports and presentations from and to Team members, Sponsors, and other interested Stakeholders
 - On-going review of Project Deliverables
 - On-going management of expectations across all Project participants, particularly the Project Sponsor

Project Control – Major Activities

- Tracking Task Status (e.g. those already completed and those necessary to successfully finish the Project)
- Tracking whether or not a Project is meeting its Objectives, Scope, Budget, and Requirements
- Managing Project Expectations and the actions taken to maintain communications with all relevant parties (Change Management)
- Monitoring the quality and consistency of Project Deliverables (Quality Assurance)
- Knowing what it will take to end the Project

Project Control - Tracking

- Primary tracking vehicle is Status Report and/or Status Meeting (Team, Project Sponsor, IT and Business Management)
- For IT and Business Management, Reporting is generally done weekly although it may also be done Monthly and/or Quarterly depending on the level of Management involved
- For Project Sponsor and Team, Reporting is done at least weekly and may be done daily depending on Project Timeline and Phase of Project (e.g. Go Live)
- Reporting includes specifics on Project / Phase including Progress relative to Schedule, anticipated Resource Utilization, relevant Issues, and Budget Utilization where appropriate

Project Control – Change Management

- Changes to Requirements throughout the Project are inevitable
- Objective is to minimize impact of changes on Project Schedule and at the same time insure that Business Needs are being met
- Utilize Walkthroughs of Project Objectives and Project Requirements with the goal of freezing Requirements prior to the Development Phase
- Obtain Sign-offs at critical points in the Project (generally at each Phase break)

Project Control – Change Management

- The traditional Project Planning cycle has included a largely untracked cost grouped under the heading of Maintenance
- Maintenance can account for as much as 80% of the total Project Cost because it traditionally includes changes to the original Requirements
- Release Environment allows better management of both costs and out-of-scope requirements
- Planning for the next Release early on the Project Life Cycle may help to better focus all involved

Project Control – Change Management

- In any event, a process or procedure is needed to handle changes after “Requirements Freeze”
- Document Change Request and analyze impact in conjunction with Project Sponsor, Core Team members, and other relevant personnel
- Decision to incorporate Change Request as well as relative priority is made by the Project Sponsor
- If a decision is made to incorporate a change, update the Project Plan and Budget accordingly

Project Control – Quality Assurance

- Walkthroughs catch discrepancies while there is still time to efficiently correct them
- Objective is validate Correctness and Completeness of the Deliverable
- Work (but not the person doing the work) is “Guilty” until proven “Innocent”
- Conducted for every SDM Deliverable with Sign-Offs obtained at Phase End
- Facilitated Tactfully!

Project Control – Quality Assurance

- Questions to ask when doing a Walkthrough include:
 - Is the Deliverable complete?
 - Is the Deliverable according to specification?
 - Does the Deliverable meet Client standards and guidelines?
 - Is the Deliverable easy to read?
 - Is the Deliverable easy to expand or change?
 - Have all the logical and illogical paths been identified and reviewed?

Project Control - Summary

“If a Project is allowed to change freely, the rate of change will exceed the rate of progress!”

Remember: change is inevitable. However, unmanaged change can quickly result in major delays in Project Delivery or a Project quickly exceeding its designated Budget!

Project Completion - Introduction

- Project Completion involves not only insuring a Project is “completed” but insuring that the lessons learned from that Project are not lost
- Completion Criteria was outlined as part of the original Project Agreement; the Project should be considered completed once these criteria have been satisfied
- If changes or enhancements are needed at this point, these should be packaged and included in a future release
- Prior to the Project being officially closed, it is recommended that a Post-Implementation Review be completed

Project Completion – Post-Implementation

- Post-Implementation Reviews are intended to provide an opportunity for the Team, Sponsors, and others to share successes as well as lessons learned
- The key to a successful Post-Implementation Review is open, honest communication
- As a result, it is important that all participants come prepared to provide feedback independent of individuals; the objective is to evaluate the Project, not the Participants
- Individual evaluations should be done on a person-by-person basis and not as part of the Post-Implementation Review

Project Completion - Summary

“There are many ways to end a Project. In your opinion, what is the best indication of Project success?”

If your answer does not include a reference to satisfied Customers, your Project was Probably not successful. Remember, ultimate success is determined by the Customer!

Project Management Summary – Success Factors

- Get commitment from Business Management and keep them involved throughout the Project
- Success will depend on how well you communicate with your Team and manage Stakeholder expectations
- Be candid – Open, honest feedback is essential
- Involve all relevant Stakeholders in initial Planning and subsequent Change Management efforts in order to insure commitment and support
- Finally, successful Project Managers understand that technology is a means to an end; solving the Business Problem is the first priority

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