



**A REPORT
ON
“PROJECT MANAGEMENT
TECHNIQUES FOR
ACADEMIA”**

**GREAT TEACHERS ARE GREAT PROJECT
MANAGERS**

**HELD ON 7TH -8TH MARCH, 2015,
SATURDAY- SUNDAY**

AT

**GUJARAT TECHNOLOGICAL UNIVERSITY
NR. VISHWAKARMA GOVERNMENT ENGINEERING
COLLEGE**

NR. VISAT THREE ROADS,

**VISAT - GANDHINAGAR HIGHWAY
CHANDKHEDA, AHMEDABAD**

GUJARAT - 382424

Under the visionary leadership of Honb. Dr. Akshai Aggarwal, Vice chancellor of Gujarat Technological University (GTU), GTU has built a solid foundation of project management knowledge, techniques and tools in this hands-on activity that covers the entire project life cycle. In continuation to strengthen Faculty knowledge in the area of Project Management, two day workshop was organized by the PG Research Center on Project Management in Chemical Engineering on 7th and 8th March, 2015.

DAY-1

Introductory Speech by Ms. Jignasha Acharya, Program coordinator and Assistant Professor at GTU. At the Inaugural session Mr. Naresh Jadeja, convener and Deputy Director at GTU explained the objectives and importance of the workshop of project management in all branch of engineering. Shri J. C. Lilani, patron, I/c Registrar of GTU delivered the welcome speech and suggested that all the participating faculty members should take maximum benefit of the expert who had come from project management institute (PMI), Bangalore. Ms. Reema Parekh, Program coordinator and Assistant Professor at GTU delivered a brief introduction about the Instructor, Mr. Saurabh Parikh.

Technical Session were delivered by Mr. Saurabh Parikh, president of PMI Mumbai Chapter and Lead trainer.



Below listed technical topics were discussed. .

1.1 ICE Breaking Session:

Faculties are getting to know each other by giving their introduction and discussed their point of view on Project management.

1.2 Difference between projects and operation:

Projects	Operational Work
Unique	Repeated
Finite duration temporary	On going
Objective oriented	Operation oriented
Require cross functional skills	Require functional skills
Value measured	Volume measured Subsequent to Projects

1.3 Why Project Management is required???

1. Enhance the probability of project success
2. Focus on objective - Scope, Time, Cost, Quality & Risk
3. Effective response to rapid changes
4. Manage effective utilisation of resources
5. Address stakeholders interests
6. Manage risks effectively
7. Achieve project goals
8. Stakeholders Delight
9. Achieve Financial Efficiency
10. Meet Objectives
11. Minimize Risks
12. Lessons Learnt
13. Create re-usable data and information for future use

1.4 Knowledge group :

1. Integration Management
2. Scope Management
3. Time Management
4. Cost Management
5. Human Resources Management
6. Quality Management

7. Communication Management
8. Procurement Management
9. Stockholder Management

1.5 Process Group:

1. Initiating
2. Planning
3. Executing
4. Monitoring and Controlling
5. Closing

1.6 Role of a Project Manager

- Understanding of Tools and Techniques (best practices) for effective project management
- Domain specific skills
- General Management skills
- Should acquire three dimensions of project management competency
 - Knowledge: About project management
 - Performance: Ability to achieve project objectives
 - Personal: Behaviour of project manager that includes attitude, personality characteristics and leadership – for guiding project team for achieving project objectives

1.7 Success factor for the project

- A strong and well enforced planning processes and a plan
- Clearly defined expectations and scope
- A motivated team
- A willingness to say no to unneeded changes, unreasonable requirements and unrealistic expectations
- A well-defined and well managed change management process
- A risk management process that is supported by entire team
- A specific method for project closure to ensure that all deliverables have been provided and accepted

1.8 What is Project Charter?

- The Document that formally authorizes Project
- Authorizes PM to apply organizational resources
- PM assigned at the earliest feasible, should always be assigned before start of planning /during charter development
- Initiator /Sponsor external to project organization at a level appropriate to funding the project

1.9 What Project Charter should contain?

- High Level Requirements of customer, sponsor, stakeholder
- Business needs, project justification, strategic plan
- Assigned PM and authority level(some resources are pre-assigned)
- Measurable project objectives and related success criteria
- Summary milestone schedule
- High Level Risks
- Summary budget

1.10 Stakeholder Analysis:

- It is a process of systematically gathering and analysing quantitative and qualitative information to determine whose interest should be taken into account throughout the project.
- It identifies interests, expectations and influence of the stakeholders and relates them, to the purpose of the project.
- It identifies stakeholder relationships that can be leveraged to build coalitions and potential partnerships to enhance project's success.
- Multiple classification models could be used like:
 1. Power /Interest grid
 2. Power /Influence grid
 3. Influence /Impact grid
 4. Salience model

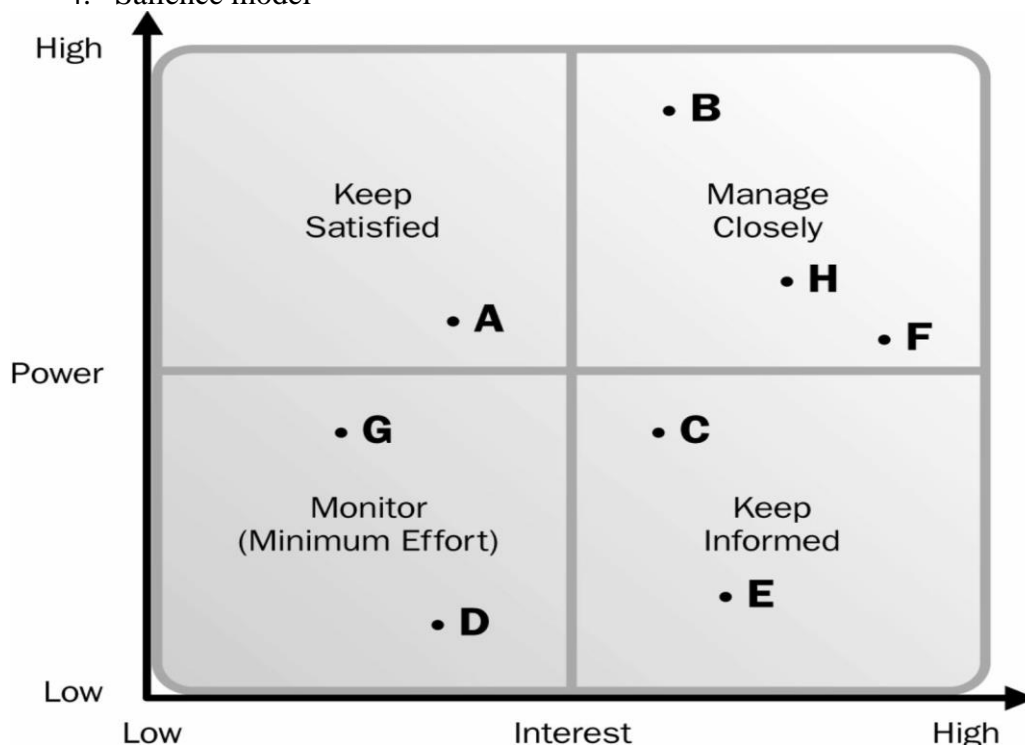


Figure 10-4. Example Power/Interest Grid with Stakeholders

A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Fourth Edition.
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PANEL DISCUSSION
ON
**“EMBEDDING PROJECT MANAGEMENT TOOLS IN THE
FRAMEWORK OF GTU’S IDP & UDP PROJECT.”**

Date: 7th March (Saturday), 2015

Time: 6 pm to 8 pm

Twenty experienced faculties from different GTU affiliate colleges along with Mr Sanjay Desai, CEO of RBD Engineering and Mr Saurabh Parikh of PMI Discussed possibility to embedding Project Management Tools in the Framework of IDP & UDP to strengthen student’s knowledge in Project Management.

Outcome of the panel discussion are below:

- Student should learn project management while doing their projects. They should learn this through Microsoft Project Management tool as it is easily available.
- Time line of each task should be very well defined.
- We should implement project management tool in to IDP/UDP at least start with 20 colleges.
- Faculty also need to follow the time limit for the correction part of the submitted report by students.
- As quality management is main concern we should improve the quality of report by giving them different templates of reports.
- Try to eliminate study projects and focus on working model/implementation of application while selection of project.
- Indication of late submission should be there so will help us to do progressive assessment during one year of project.

DAY-2



2.1 Project Management Plan

- Subsidiary Plans :
 - Scope Management Plan- What must be done
 - Schedule Management Plan – When should it be done?
 - Cost Management Plan – How much will it cost
 - Quality Management Plan – How good should it be?
 - Human resources management Plan – who will do the work
 - Communications Management Plan – How will information be delivered?
 - Risk Management Plan – what problems may be encountered?
 - Procurement Management - what materials, supplies, talent and equipment must be obtained?

2.2 What is “Scope”?

- The sum of the products and services to be provided as a project.
- The work that must be performed in order to deliver a product, service, or result with the specified features and functions
- The features and functions that are to be included in a product, services or result

2.3 Product Scope vs. Project Scope

Product scope	Project scope
The features and functions that characterize a product, service, or result.	The work that needs to be accomplished to deliver a product, service or result with specified features and functions.
Completion of the product scope is measured against the product requirements.	Completion of the project scope is measured against: <ul style="list-style-type: none">– Project Scope Statement– Associated WBS and WBS Dictionary

2.4 How to define scope?

- Define Scope is the process of developing a detailed description of the project and product
- It builds upon major deliverables, assumptions and constraints that are documented during project initiation
- Existing risks, assumptions and constraints are analysed for completeness
- Additional risks, assumptions and constraints are added as necessary

2.5 CREATE WBS (Work Breakdown Structure)

Purpose of WBS

- Simplify a complex project ...a summation of elements
- Planning can be better performed
- Duration, Cost and Budget can be established
- Time, Expenditure and Performance can be tracked
- Network and Control Planning can be initiated
- Responsibilities and Resources can be assigned
- Omission/Duplication of Tasks can be avoided
- Provide a common structure and coding system

2.6 TIME MANAGEMENT

- Define Activities
- Sequence Activities
- Estimate Activity Resources
- Estimate Activity Duration

2.7 SEQUENCING OF ACTIVITIES

- Process of identifying and documenting relationships among the project activities.
- Activities are sequenced using logical relationships.
- Every activity and milestone except the first and last are connected to at least one predecessor and one successor.
- Sequencing can be performed by using project management software or by using manual or automated techniques.

2.8 Estimating Activity Durations

Approximating the number of work periods likely to be needed to complete each identified schedule activity with estimated resources.

- Uses activity scope of work, required resource types, estimated resource quantities, and resource calendars.
- How to Estimate Activity Durations?
 - Expert Judgment
 - Analogous Estimating

- Top-Down estimating: Typically used when little information is available – typically in early stage of project
- Parametric Estimating
- Three-point Estimates (PERT)

- Develop Schedule is the process of analysing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule.
- Entering the activities, durations, and resources into the scheduling tool generates a schedule with planned dates for completing project activities.
- Developing an acceptable project schedule is often an iterative process and it planned start and finish dates for project activities and milestones.
- Schedule development can require the review and revision of duration estimates and resource estimates to create an approved project schedule that can serve as a baseline to track progress.

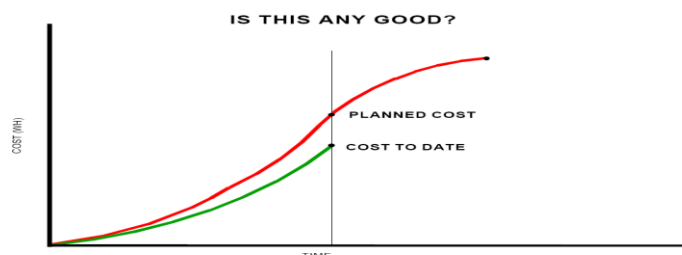
2.9 How to plan communications

- Communication Requirements Analysis
 - Communication Technology (Email, Audio conf, Video conf, Webex)
 - Communication Models (Sender and Receiver)
 - Communication Methods
 - Interactive communications
 - Push Communications
 - Pull Communications
- WHO, WHOM, WHAT, HOW, FREQ

2.10 Monitor and Control your Project

- Monitoring :
Includes collecting, measuring, disseminating performance information, and assessing measurements and trends to effect process improvements.
- Controlling :
Includes recommending and following it up for corrective and preventive actions to control project performance.
- Monitor & Control Project Work:
The process which regulates the project progress to performance objectives defined in project management plan.

2.11 Earned Value Management



- Compare Planned cost & Actual cost
- No idea about work completed
- Actual Cost is not an indication of work progress, only an indication of money spent.”
- Schedule Indicators
- Schedule Variance (SV)
 - “Are We Ahead Or Behind Schedule?”
 - A negative variance means project is behind schedule
 - $SV = EV - PV = \$750 - \$1000 = -\$250$
 - $SV\% = SV / PV = -\$250 / \$1000 = -25\%$
- Schedule Performance Index (SPI)
 - “How efficiently are we using time?”
 - SPI greater than 1 indicates project ahead of schedule
 - $SPI = EV / PV = \$750 / \$1000 = 0.75$

2.12 Evaluate Project

- How familiar are you with the subject matter? Its complexity?
- What lessons have you learned from similar projects?
- What alternative topics and projects can meet the objective?
- Can the size of the project be refined?
- What are the risks?
- Impact on stakeholders
- What are the environmental constraints?
- Are our resources adequate?
- Are resources spread too thin?
- Are our time estimations accurate?
- Are there too many concurrent tasks?
- Is this a proven plan?
- Is the plan realistic?
- Design--how the specifications will be met)
- Implementation--how will you develop the final product
- Integration--are there important components that will need to work together
- Establish project timeline in phases
- Identify each phase's milestone/deliverable and cost
- Prevent runaway projects and scope creep with planning, vision, leadership
- Identify each phase's work units by tasks and approvals
- Identify who is responsible for what if a group project
- Allocate resources especially restraints and control
- Track progress and contingency plans
- Verify all with someone else who you trust

Two day workshop was successfully coordinated by Ms. Jignasha Acharya, Asst Prof - GTU, Ms. Reema Parekh, Asst Prof - GTU and Nidhi Thakore, Admin, - GTU.

Prepared By:

Prof. Reema Parekh

Prof. Jignasha Acharya