

Training report of Sri B.C. Tripathy, Executive Engineer-II, P.M.Unit on Project and contract Management (March 21-25, 2011) at ASCI, Hyderabad.

As per Government approval vide Govt. Letter No. EAP (Cell) 5341 dt...3.02.2011 and Chief Engineer (World Bank Project) Letter No. 8725 dt.25.02.2011, I attended the above training programme at ASCI, Hyderabad from March 21-25, 2011.

1.0 Background of the training programme:

In developing countries , a large number of projects are being implemented not only to increase the existing capacities but also to create additional infrastructure and improve the technological capabilities of companies in all sectors of the economy.

The projects once initiated, need to be completed on time, within the budgeted cost, and to a desired level of quality. To achieve this, conscious and deliberate decisions have to be taken to plan, monitor and control the elements of time, cost and quality, through an effective blend of organizational, commercial and systems oriented method. This approach helps to examine a project in its totality and in a holistic manner.

This programme was structured to expose the project executives to the concepts, tools and techniques of project and contract management , with a view to broaden their outlook on projects and thereby sharpen their skills to address the critical parameters of a project. The programme focused attention on the sharing of experience and ideas relating to projects among the participants, with a view to give them a broader perspective on project situations in India, and the tact and discipline required in systematically planning and managing projects and contracts.

2.0 Participants:

There were 22 participants from Government and private sector, DRDO, BHEL, Coal India, Hyderabad metro and other organization . It was an effective platform for sharing experience , particularly learning lessons in problem- solving through project management techniques and practical approach.

3.0 Faculty:

Prof. Vilash Shah directed the programme and guided in project work trained in MS Project, Project Risk Management, Project cost Management, Project Critical Chain mgt and EPC contracts. Prof. BVN Sachendra trained us in Project Schedule Management, Prof.Viswanath in leadership, Prof. KVS Sharma in Legal issues in contract management and Mr. P. Bhaskara Mohan in Arbitration and Conciliation Act, 1996.

4.0 Key lessons Learnt:

4.1 Project Schedule Management: Activity analysis begins with work breakdown structure (WBS). Net work diagram shows in dependent paths and identifies areas of top level management attention on critical activities and critical activities and critical path. At times non-critical activities can turn to be critical under lax/co placement attitude or turn of events. The essence is to hold the network together, under check and control, until the project is completed. Floats in

network diagram are useful for the leveling of resources. Total float is important for the project manager. Critical activity is that activity where total float is Zero.

4.2 Leader ship: Leadership is crucial in Project Management . A leader should have the virtues of learning, energy, adoptability, doing meaning ful and purposeful activity, empathy and responsibility. The ideal aim should be a combined state of high task and high relationship

4.3 Nine Knowledge Areas of Project Management:-

- 4.3.1 Project Scope Management
- 4.3.2 Project time/Schedule Management
- 4.3.3 Project cost/Budget Management
- 4.3.4 Project Quality Management
- 4.3.5 Project HR Management
- 4.3.6 Project Communication Management

- 4.3.7. Project Risk Management

- 4.3.8 Project Procurement Management

- 4.3.9 Project Integration Management

4.4 Important Points in Project Management:

4.4.1 Project Manger should control the scope of Project, not budget or schedule. If the scope expands , so do budget and schedule . it is important to have clearly defined scope of the project.

4.4.2 It is important to think ahead of time rationally and consciously to forecast risks and assess their impact on the project and account for in the Project Management.

4.4.3 Proper and effective documentation is an important requirement of project management . Documentation leads to enhanced accountability and confidence of employees and enables Project Manager to take reasonable risks. Documentation helps early resolution of disputes by Disputes Redressal Board. SAP-ERP system helps in effective Project Management documentation . Regular progress meeting must be held and minuted.

4.4.4 Projectized organization structure performs better than functional organization.

4.4.5 Time indicator for a reasonably successful project.

Initiating Project (Feasibility Analysis, Alt. Analysis, Benefit cost Analysis)

Planning of the Project (DPR, SOW, Budget, Scheduled, PMP, RMP, MPP etc)---20 to 25% time.

Executing / Implementing of the Project ---50% time

Monitoring / Evaluation of the Project---10% time

Closing the project—5% time.

4.4.6 **Project Closure-** Every Project should have formal closure. The formal project closure procedure should be established, Without formal closure various problems rise including liability.

As an example, 20% of the projects in Government from the 1970s are not formally closed and are still on the Govt. books.

4.5 Project Risk Management:

Positive risks create opportunities and negative risks create adversity for the projects. No project is without risks. Rejecting an acceptable level of risk may lead to a blind alley in Project Management. Every organization has a risk attitude which is dynamic. Risk management is necessary for better change management, service delivery, decision making, reduced waste and fraud, innovation and management of contingent activities. Risk management should be a policy of the organization and not be left for ad hoc decision.

A risk register should be maintained with the following suggested format (to be modified for Project specific needs)

1	2	3		4		5
ID	Risks	Consequence		Likelihood		Rating
		Current	Target	Current	Target	<u>Level of risk</u> (Extreme High/Low etc.)

Risk monitoring and control becomes a requirement for project management for which various techniques/tools are available.

4.6. Project Scheduled Management by Computer.

MS Project is preferable to Primavera because of the former's independent availability of training books. It is user friendly. MS Project helps to monitor Project cost, resources and critical activities quickly. Update facility helps appraisal.

4.7. Project Cost Management:

Four aspects are equally important:

4.7.1 Resource Planning

4.7.2 Cost Estimates

4.7.3 Cost Budgeting

4.7.4. Cost Control

Cost estimates involve collecting, predicting the cost. Past experience, planning horizon, use of new technology, people factor and project structure affect the cost estimates. Padding of estimates at every stage and at individual level should be avoided as it duplicates the overall contingency of the project. For a project of longer duration hybrid approach of cost estimate has been suggested. For early limited period micro estimation is resorted to and the remaining period macro estimation is resorted to along with description of assumption/factors. The latter is refined in implementation stage.

4.8. Task time estimation- The higher the confidence level the higher is the probability of a project being completed on time. If a project has 20 activities and each activity has 90% probability of being

completed on time, then the project has 12% probability of being completed on time . If the confidence level is increased from 90% to 95% then the project probability goes up to 36%.

4.9 Chain management:- The objective is to take out contingency (time) from each activity and provide at the end of the project. In chain mgt, HR approach needs change; must be aware of the tight estimate of each activity. Activity which otherwise would have been enjoyable to the employee becomes stressful if he works constantly under deadlines. In chain mgt, the stress level is less. Buffer should be disclosed to the employees and there should be regular buffer management meeting.

5.0 EPC Contracts:

E= Engineering (Design, Specs, Integrate).

P = Procurement (Equipment Resources).

C= Construction (Installation).

Applicable:

The owner does not want/have to hire and maintain to execute the project. The owner does not know the technicalities of large and complex project technicalities of large and complex project.

Basic requirement:

Guaranteed price

Guaranteed time

Performance to a specific level.

Terms

Lumpsum, fixed payment , Contractor assumes major/almost all risks

Initially heavy losses to contractor are analyzed ; over come later costly insurance.\

Advantage:

Fixed completion date and price . Single Point responsibility if consortium all entities jointly and severally responsible.

Packaging

It a no of packages in EPC contracts is unavoidable, incentive is to be provided for the smallest/lowest package for its early completion.

Penalty

The State can impose disproportionate compensation. The Pvt. Companies can only recover their damages.

6.0 Legal Issues in contract Management

Promise is an agreement. An agreement enforceable by law is contract. Agreement should not be opposed to public policy . Contract should provide “notice to be issued” for special damages.

S.D can not be forfeited.


EMD can be forfeited.

While sanctioning EOT, “EOT is granted withholding the right to compensation”. Price list can not be challenged in court. Contract clause can not be amended by violating the statute. Acceptance must be by the offeree and non else. Power of Attorney is to be registered.

7.0 Arbitration and Conciliation Act, 1996

In regular court high time lag occurs due to application of Evidence Act. Arbitration is faster. Parties choose their judge. Once time barred, it is not entertained by Court.

If one party is not satisfied with the arbitration during arbitration proceedings he has to apply to the arbitrator with reasons. If arbitrator quits, it is ok but if he/she continues the party must attend the arbitration proceedings. Finally the party may challenge in Court.



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