PROJECT AND TECHNOLOGY MANAGEMENT FOUNDATION

(A non-profit Organization)

Website: http://www.ptmfonline.com/

Mission of PTMF

The mission of PTMF is to create a dynamic network of professionals, practitioners, academics and students to exchange ideas, disseminate knowledge and provide training and accreditation in the area of project management and programme management by organising conferences, workshops, publications and arranging on line courses.

PTMF Overseas Associates

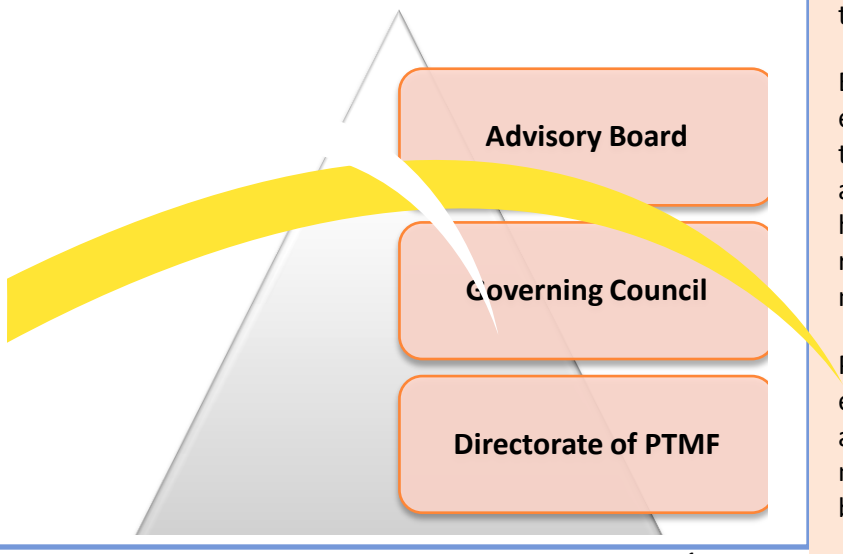
- LENS LIVING LABORATORY, Slovenia

  To support creativity, development and performance of virtual professional communities and provide professional, innovative services for the needs of knowledge workers, knowledge based companies, organizations, collaborative business networks, professional platforms and their open innovation environments.

- NETLIPSE , Netherland

  Network for the dissemination of knowledge on the management and organisation of large infrastructure projects in Europe

PTMFOrganizational Structure



Editor's Note

Ramesh S. Tyagi

We have pleasure in presenting the second issue of the News Letter of PTMF.

The foundation has inducted eleven new members during this period. This includes two corporate members. The foundation has also initiated proposal for collaborative on-line course in the discipline of project management and is in the process of formulating an International Advisory Board for both academic council as well as for the journal.

Project Management is a crucial practical management discipline. No other management discipline draws so much attention as project management. During the last forty years, lot of progress has been made in development of tools and techniques for effective management of projects.

Many in the project management community believe that once you have learnt the techniques and have the tools, you can manage any project.

Every project is unique and no two are quite alike. In essence, systems and methodologies should be tailored to suit particular functions using innovative and creative approachEffective project management happens when tools and techniques areused by the right people who have experience and insight to manage the projects.

PTMF lays great stress on research, case studies and experience sharing and training particularly in the areas of Project definition, best practices, and methodologies.People, their experience and behaviour are critical for success of any project.

PTMF

Advisory Board

1. Dr JyotiBhat, Joint Secretary and advisor, Department of Scientific & Industrial Research, Ministry of Science & Technology, Government of India
2. MrB.P.Muktieh, Chairman& Managing Director, North Eastern Development Finance Corporation Ltd
3. Dr. U. Venkateswarlu, IAS, Joint Secretary, Ministry of Food Processing Industries, Government of India
4. MrT.K.Ananth Kumar, Director -Finance, Oil India Ltd (A Govt of India Enterprise)

Governing Council

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3. Prof. S.S. Yadav, DMS, IIT Delhi
4. Prof. D.K. Banwet, DMS, IIT Delhi.
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10. Mr. V.G. Rao. Director (Projects), Tecnimont ICB, Mumbai.
11. Mr.Amal Shankar Roy,Former Executive VP-SCM, Shreyas life Sciences, Mumbai
12. Mrs.Sapna Subramani, Program Manager, Nokia Siemen Networks,Bangalore

Prof Rajat Baisya, President , PTMF had a meeting with Prof Dr Arun P. Kulshreshtha Director and Executive Head Centre for Science & Technology of the Non-Aligned and Other Developing Countries (NAM S & T Centre – An Inter- Governmental Organisation) at their office in New Delhi on 16th February 2012 for exploring the possibility of having collaborative work in the areas of common interests. Holding conference and **training workshops**

Discussions are being held with prospective partners to run collaborative academic programme. PTMF proposed to collaborate with University in India and abroad for offering certificate, diploma and degree programme in the discipline of project management on on-line distant mode.

It is proposed to hold international conference in New Delhi on Management complexities of Large Capital Infrastructural Project On 17th and 18th November 2012. Details will be announced shortly. We solicit your active participation.

We welcome the following new members

Corporate Life Members

1. Strategic Consulting Group Pvt Ltd,

2. Oil India Ltd (A Public Sector Undertaking)

Individual Life Members

1. Dr S. Prakash Tiwari FNAAS, Former Vice Chancellor- SK Raj AgriUniversity, Former Director General(Edn) ICCA, Former Director , National Academy for Agri. Res. Management (NAARM), ICAR
2. Mr ArvindGautam, BE, MBA, LLB, Head of Operations, Caparo Engineering India Ltd,,Gurgaon
3. Mr VaibhavPisal , B.Tech, Engineer, IsoluxCorsan India Pvt Ltd , Gurgaon
4. Dr(Ms) AnuradhaDafal , B.Sc, MBBS, MD (Radiology) , Bhopal
5. Ms Mrinalika Singh Dev, MBA , Strategist, Google Online Pvt Ltd
6. Mr SiddarthTiwari, MBA, Program Manager (Training & Development),Google Online Pvt Ltd
7. Mr MrinmoyKanti Das, BE, MBA, Senior Manager (Materials Management), ONGC, Khartoum, Sudan
8. Ms Susmita Paul, BE, MBA, Assistant Professor(Operations Management),Jaipuria Institute of Management , Noida

Individual Member

9. Dr SomnathChakrabarti, BE, MBA, Ph.D , Associate Professor (Marketing) IMT Ghaziabad

Most common reasons cited for time and cost overrun:

- Unrealistic estimates of time and cost
- Delay in land acquisition;
- Issues related to rehabilitation;
- Delay in environmental clearances;
- Poor law and order situation;
- Paucity of financial resources;
- Poor performance of vendors and contractors
- Contract disputes and court cases;
- Changes in the scope during construction

Highlights of infrastructure projects in India

Thirteen projects in road transport are expected to have cost overruns of...61 per cent

The flash report for the month of October 2011 tracks the progress of 583 projects in different sectors. Out of these...235 are delayed... Maximum number of projects delayed relate to road transport and highways (90)

The survey said that as against the estimated public and private-sector investment of about Rs 1,52,201 crore during the 11th Plan (2007-12), the total investment requirement during the 12th Plan in the central sector for roads would be about Rs 6,11,344 crore

(SOURCE: MyDigitalFC.com | Financial Chronicle 2012-03-15 11:17:00)

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The Road Transport and Highways sector is yet to achieve its target of building 20 km of roads a day due to delays in land acquisition and green hurdles besides poor performance of contractors (the Economic Survey 2011-12)

A few critical Issues in Contract Management for large Capital Overseas Project

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A typical Mega Project takes considerable time span – from 12 months to 10 years and may have financial implications from a few millions to billions of US dollar. The Mega Projects undertaken in Petroleum Sectors are also vast – from construction of pipelines to refineries. The complexities of the projects increase with the geographical locations, political and socio-economical situation, resource availability and most importantly provision of the required fund for the project. Sticking to the Project Schedule is always the most challenging task for the Company as well as the Contractors. The uncertainties related to economics and policy changes coupled with unavoidable and unpredictable operational difficulties make execution of mega projects tougher and tougher. The Project Manager is not only expected to meet the milestones in a time bound manner but also in a cost effective way. A small judgemental error at any stage in the entire decision making process or in execution may lead to delay of the project and/or cost overrun which cannot be compensated and put a threat to even feasibility of the entire project.

Project Plan	Project Execution	Project Evaluation
Decision making factors: • Project Schedule • Milestones & target dates • Resource Requirements • Source and cost of Fund • Resource availability • Cost of Resources • Inflation Rate • Exchange Rates • Political and Socio-economical factors	Impacting factors: • Timely procurements & sub-contracting • Timely Fund availability • Timely Resource availability • Fluctuation in Cost of Resources • Inflation Rate • Fluctuation in Exchange Rates • Unforeseen factors impacting project • Changed Political or Socio-economical situation	Evaluating parameters: • Delivered Project • Resources used • Completion Schedule vs. Targeted Schedule • Total Cost incurred vs. Estimated Project Cost • Financial value created • Intangible value created • Time value of Money

Fig 1: Three Phases of Mega Projects

Fig 1 gives an idea of the different phases of a Mega Project from planning to evaluation after execution. The project plan phase takes into its horizon various important decision factors. The impacts of many of these factors on the project schedule and cost are done based on existing scenario, past trends and anticipated future projections. At the same time, as all these contracts for Mega Projects are done through Global Competitive Bidding, there are tremendous pressure on the participating bidders to be the winning bidder by submitting the most economical yet technically qualified and feasible proposal. The cost of failure in Mega Project is very high as this may not only lead to bankruptcy of the company in Arbitration but also doom the entire reputation of the company globally. Even a small fluctuation in exchange rates or prices of key resources can drastically spoil the entire

economics of the project. Companies hedge in future or insure against losses but still the measures do not guarantee protection from failure and they come at an additional cost to the Project.

Once the bid is wonand Project Plan is approved, actions for mobilization of resources, procurements and sub-contracting as per plan are done within shortest possible time. Fig 2 shows the different actions undertaken as part of any project execution plan.

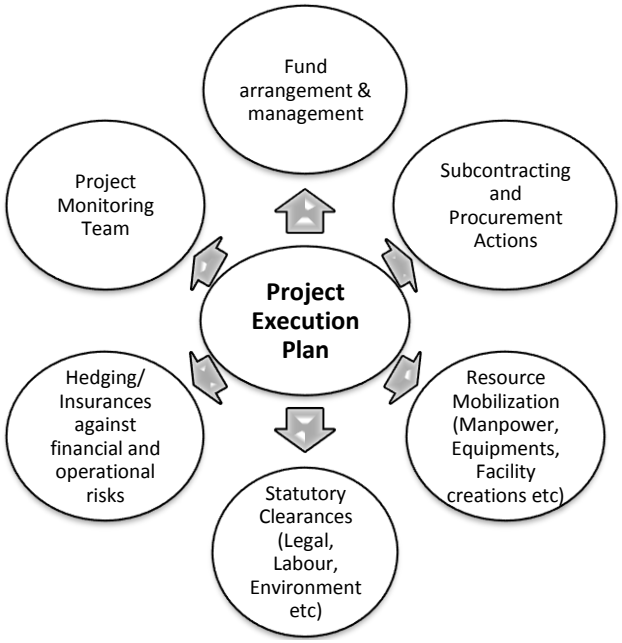

Fig 2: Multi-fold Actions in Project Execution Plan

But following three critical issues seem to always pose immense difficulties in execution and even sometime change fate of an overseas project:

1. Effective Fund Management.
2. Unpredictable Political or Socio-economical situation.
3. Unforeseen factors impacting project.

In most overseas projects, funds are either managed through multiple financing from Banks and Financial Institutes or shared by the co-venture partners. Any issue delaying the cash calls from the partners or financing institutions pose difficulties in achieving the targets. Change in Political scenario can also have significant impact on fund raising impacting the feasibility and cost of a project. For example, delay in raising fund resulted in hike of Project Cost of 1,00,000 barrels capacity oil refinery constructed in an African country from initial estimate of USD 1-2 billion in 2005 to actual cost of USD 5 billion in 2008. The project overran the initial cost estimate by 2-3 times due to unfavourable exchange rates, high inflation and difficulties in securing funds timely for the project[#]. Indian example is in Singur, West Bengal, the socio-economic condition coupled with political vendetta closed the multi-million US dollar ambitious Automobile Project.

Another example of political or diplomatic standoff impacting Mega Projects is the break-down of political understanding between North and South Sudan followed by shutdown order of all Petroleum Operations by the Govt. of South Sudan. The future of various petroleum operations related projects in the tune of billions of US dollars are uncertain and the project costs will likely to increase manifolds due to steep rise in inflation and future operational uncertainties are putting a threat to feasibility of many of these projects.

Similarly cross-border movements of all heavy equipments, fuel and facilities between North and South Sudan ceased and many activities undertaken were stopped midway creating total uncertainty of the projects in South Sudan. All consignments which were destined for The Port of Sudan, the earlier Gateway to Sudan for all sea consignments, had to be urgently diverted to the other nearest sea port of South Sudan – Mombasa Port in Kenya - leading to escalation of the cost by almost twice of that was planned.

Thus issues involving the three factors can really take away the dream of the Project Team. Once the project is executed, it's then time for assessment, evaluation, understanding final economics and profitability. It also creates a platform for future learning and growth. Conventionally, the execution is evaluated based on final delivered project, resources used, completion schedule vs. target schedule, actual total cost vs. estimated project cost, profit earned, intangible values like reputation, credentials created. While doing all these, it is also very important that time value of money is taken into account to get clear picture of the actual profit against the projected one. A few practical instances showed that understanding time value (or present value) of money and applying the same while funding and expending helped to control budget considerably.

With world becoming flatter, the world of Mega Project Contractors is also becoming more and more competitive and ruthless, only the fittest ones can survive. There is no excuse for failure or under-performance. The cost of slow-learner is very high and one has to perform better every time. So the Mega Project Contractors must understand various relevant key decision factors and evaluating parameters from the practical perspective to remain competitive and competent. The Critical issues will remain there, but adequate planning in advance can only lead the project to success.

Source http://www.sudantribune.com/Costs-delay-Sudan-refinery-project,27313

COST MANAGEMENT IN LARGE COMPLEX PUBLIC SECTOR PROJECTS IN INDIA

RAJAT K. BAISYA*

Completing the project within the budgeted cost offers significant advantages. Executing projects at a lower cost than a competitor engaged in similar project definitely offers a competitive advantage. Managing cost therefore, becomes a key task for the project managers. Large public sector projects are normally completed with huge cost and time overrun in India resulting into huge drain into national resources. Besides, the benefits are also being derived much later than planned for the delayed projects. Cost benefit analysis as worked out at the time of approval also does not hold any longer.

Industry comes into existence only after execution of a project. Successful project is thus a pre-requisite of a starting point of a healthy and successful industry. Organizations progress through execution of series of projects in its life cycle. Failure in projects thus shortens the life cycle of the organization.

Some of the large infrastructural projects in India were said to have been completed spending three times the original planned and approved budget so much so that planning commission , the nodal agency for monitoring public funded projects are now seriously looking into finding out mechanisms to significantly improve the scenario. The primary reasons being cited for the

delay in getting several clearances such as the bureaucratic hurdles involving multiple agencies in central and state governments including those requiring cumbersome environmental clearances. Careful analysis of those projects , however, will reveal that with appropriate planning and monitoring mechanism for project management in place much of those delays could have been controlled. Some projects even got delayed for the reasons that the large and heavy equipments were found to be impossible to be transported through some sections of the road which were found to be not suitable for carrying such heavy load of these large equipments and the road has to be re-constructed involving different agency to carry out and that too was discovered after equipments have arrived to be transported to project site resulting into huge delay which could have been avoided with proper planning. The large infrastructure projects which are now implemented in PPP (public-private-partnership) mode have better record in terms of managing cost and time overrun. Where government is very keen to see that timely completion is achieved, results were seen to be better.

Every project is constrained by Scope goals, Time goals and Cost goals and it is the project manager's duty to balance these three often competing goals. The levels of effort on the part of project team changes over the period of project life cycle as has been depicted in Fig 1 below. It is therefore, important for the project manager to identify and document the project success criteria and getting the key stakeholders to agree on those criteria and finally keeping a balanced mix of managerial attention to technical tasks and stakeholder management. Managing cost of the project involves meticulous planning of the execution of the project. It may be a better idea of spending more time and effort in the planning phase before embarking upon the execution phase because that will help in better cost control. It can be pointed out here that cost management does not necessarily mean the cost control in each and every activities of the project.

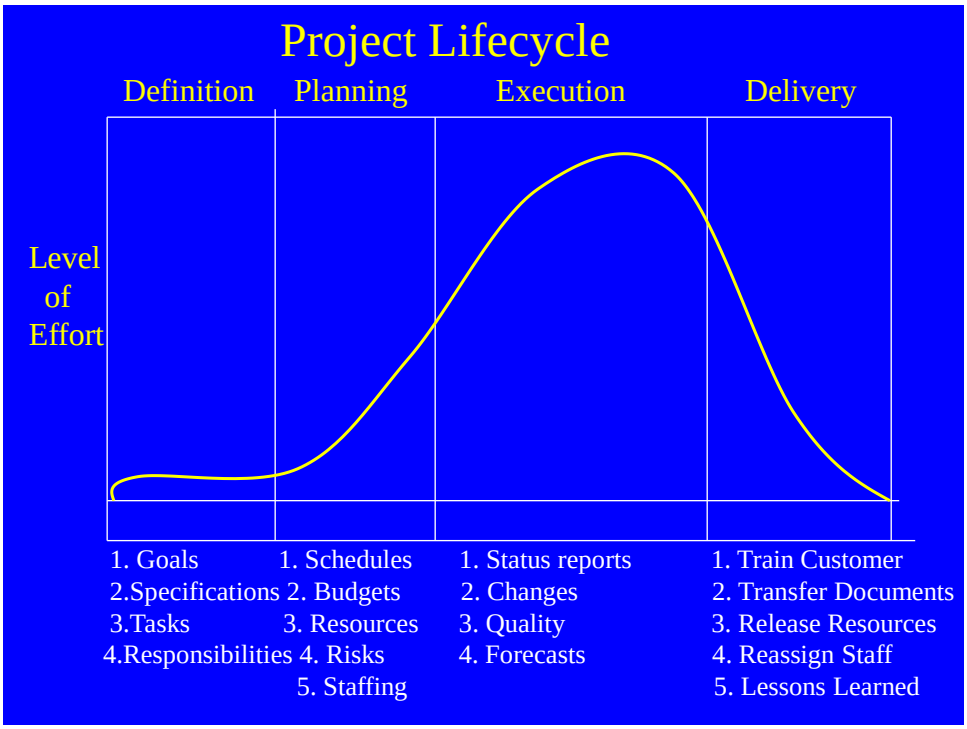

Fig 1: Levels of Effort during different phases of project lifecycle

Managing cost in projects involves giving considerable effort in all phases of the projects and also applying scientific tools and techniques during appraisal, planning and controlling the project activities. During appraisal period due attention to be given for financial analysis as well as project risk analysis. During planning cycle techniques such as work breakdown structure(WBS),

cost- time estimate, scheduling, cost –time trade off (CPM), and other planning tools such as responsibility matrix, PERT etc should be used. The control techniques such as Earn Value Method and problem solving framework etc are required to be used.

It has been seen that if more time is spent on the project definition phase and planning phase particularly to ascertain the risks and causes of delays, cost is managed and contained better. Large part of the project cost escalation arises out of the delay in execution of the project and hence holding the time line of the project is a better method of keeping the cost within the budgeted limit. Adequate attention to planning will help executing the project within budgeted cost criteria.

As Peter Drucker said, cost prevention is always a better way to manage the cost than cost reduction. In project phase there are limited opportunities of cost reduction unless there were incidence of overestimate of cost in certain project activities. Also it makes good sense to close negotiations well within the time frame instead of waiting to get better price or cheaper deal and thereby delaying certain ordering of long delivery of critical items and equipments and also in engaging the contractor for certain jobs. The delay in concluding the negotiations might runs into cost overrun. It should be kept in mind that delay in ordering can cause delay in project schedules and hence an additional cost. These cost elements need to be managed through crashing of activities which has its own implication in escalated cost. Large public sector projects also have other constraints arising out of disputes and litigations due to stakeholders interest being impacted. Such situations need to be visualized in planning cycle itself. For example, for execution of fly over if land acquisition is involved it should be visualized well ahead of time to avoid getting into unnecessary litigation and hence into delays and cost overrun.

For large public sector project stakeholders management assumes significant influence in managing the cost. Even after executing the project, handing over can get delayed if it does not meet the criteria of public acceptance. In such case even a public interest litigation (PIL) can cause the project delay and hence cost overrun. The example in front of us is the BRT (Bus Rapid transport) project executed by the Delhi government. Public are always at loggerhead with the government and planners. Even media and more particularly the press are writing volumes against this project. For a project which is being implemented for the good and convenience of public are not seen by the public (main stakeholders and beneficiary) in that light causing not only lot of embarrassment to the government but also escalating the cost beyond limit.

It is the duty of the project manager to establish agreement of the all stakeholders before getting into the execution phase of the project. Acceptance and agreement of stakeholders of the project will greatly help contain the project cost and deliver accepted results for the project.

- Prof Rajat K. Baisya is the **FounderPresident of Project & Technology Management Foundation**. Comments on the article can be sent to the Editor at : info@ptmfonline.com

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