



**Project Management Unit**  
Planning & Development Department  
Government of the Punjab

# **Project Management in Pakistan Government**

**Originally Published as a Part  
of 2005 PMI Global Congress Proceedings – Singapore**

**Author: Khalid Ahmad Khan, PMP - Head of PMU**  
**Co-Author: Rizwan Amin Sheikh, - Chairman PITB**

**Last Update Date: January 10, 2005**

**Project Management in Pakistan Government**  
**Khalid Ahmad Khan, PMP - Project Director, PMU P&D Department**  
**Rizwan Amin Sheikh, MBA - Chairman Punjab Information Technology Board**

**Abstract**

This paper looks at reforms that are being introduced in Pakistan in the way government projects are managed from inception to execution. It looks at existing practices that lead to project problems and how these are being changed. In addition, it looks at the change in role of the government from passive participation to active participation in the management of projects.

Some of the ideas discussed include basics like using work breakdown structures (WBS) to improve definition of scope, preparation of schedules at inception for better time and cash flow estimation, use of earned value to gauge project performance, the use of skilled project management practitioners to fill posts of project managers/project directors and the creation of dedicated project management units (PMU) for managing large projects.

**Introduction**

Punjab is Pakistan's largest province with a population of 72 million. The public sector development portfolio for Punjab is approximately \$4 billion (US). Major development sectors are civil infrastructure, irrigation system, education and health. Public spending has increased by almost 30% since 2002 under the administration of Chaudhary Pervez Elahi, Chief Minister Punjab. This increase in spending is challenging the present capacity of the government to effectively plan and execute the over 1,200 projects in the public sector portfolio.

A top level review of exiting project management practices was carried out in July 2003 to identify bottlenecks in the development process. In response to the findings of the review committee a set of recommendations were developed which are being implemented as the Chief Minister's Project Management Initiative (CMPMI). This initiative aims at introducing modern project management practices in the development process to help improve project outcomes in the public sector.

**The Challenges**

**Public Sector Development Process**

Public sector projects are in many ways more challenging than private sector projects in terms of constraints. Lets look at the project inception process. Once a project need is identified, it is formulated in the form of a project proposal (PC-1) by the sponsoring department. If a detailed feasibility is required then the funds for this study are allocated through a feasibility study request (PC-2 document), otherwise the department will use its existing manpower to prepare the project proposal. Often the new project will be similar to what the department has already executed before (i.e. primary school building, rural road, etc) and hence existing data can be used to prepare a fairly accurate proposal. In cases where there is no prior reference project the department will have to create a broader scope with an indicative budget. Ideally a consulting firm should be engaged for preliminary feasibility and design using a PC-2 but in reality, this is not done to avoid the 3-6 months that this step will add to the project. Sometime departments can use consultants to help with PC-1 preparation on a pro bono basis with the understanding that the consultant would be engaged as the designer when the project is approved, a practice that generally does not serve the interests of the client.

Once the project proposal is ready it has to be approved by a forum that is determined by the value of the project. If the project is up to PKR 100 million it is approved by the Departmental Development Sub-Committee (DDSC). This committee has the representation of the provincial Planning & Development and Finance Departments. Above PKR 100 million and under PKR 1000 million the project is approved by the Provincial Development Working Party (PDWP) which is headed by the Chairman of the Planning & Development Department. Projects over PKR 1 billion go to the Federal government to the Central Development Working Party (CDWP) headed by the Chairman of the Planning Commission. The highest approval body is the Executive Committee of the National Economic Council

(ECNEC) which is headed by the Federal Finance Minister and approves major projects with substantial loan components. Approval at higher level requires prior approval at the preceding level – so if the project is to be approved by the CDWP then it has to be approved by the PDWP and the DDSC. The time taken for approval can range from a 2-3 weeks for DDSC to 4-5 months at the ECNEC level.

Once approved, project spending can exceed the original budget by 10% due to change in scope and 4.5% due to increase in item costs. Any increase beyond this amount has to be sanctioned through a project revision (revised PC-1) at least at the level of the forum where it was originally approved. For larger projects this can be a 4-5 month process. Most development projects involve large civil infrastructure components. Budget estimates for civil works are done on the basis of item rates that are published by the government (Schedule of Rates). The Schedule of Rates (SOR) are updated by the government on a quarterly basis. Rates for volatile items like Fuel, Cement, Steel can sometimes cause problems. If the impact for price change on the project budget is more than 4.5% during the time it took to approve the project then the project can end up in revision before even getting started.

After approval the project proposal becomes the project charter and is returned to the sponsoring department that formally accepts the approved proposal, sometimes with revision in scope or budget, by according an Administrative Approval. A detailed budget of the project is now prepared prior to the commencement of the solicitation process. This approval is called the Technical Sanction (TS) and it forms the basis of the Bill of Quantities (BOQs) in the bid documents. If the contractor bids are within the 10% scope limit and 4.5% cost increase limit of the project budget then the contract can be awarded otherwise the project has to be either re-tendered or sent into revision.

Funds are released by the Finance Department on the basis of the phasing requested by the department. If sufficient funds are not available then releases are made based on prioritization between competing projects by the Planning & Development and Finance Departments. Funds released during the financial year have to be used by the project in that year or surrendered back to the Finance Department. Allocation of funds in the subsequent years is based on the project's fund utilization history. If a project was unable to use more than 50% of its PRK 100 million allocation for the first year it is unlikely to get the PKR 200 million requested in the next year unless it can clearly show that the factors that contributed to the earlier low utilization have been satisfactorily addressed.

During the execution of the project, departments are required to report progress on monthly/quarterly basis using the reporting format (PC-3) provided by the Planning & Development Department. Progress reports include information on the funds allocated, utilized and major milestones. At the end of the project, departments are required to prepare a close out report (PC-4). After the project is complete and the product of the project is operational, departments are required to file annual review reports on the benefits of the project (PC-5) for up to 5 years.

## **Process related problems**

Typical strategies used by public sector managers to address the process constraints:

1. Avoid project revisions: Sponsors have little control on change in prices during the approval period. However, the overall price impact can be masked by overestimating quantities because the 4.5% cost increase limit applies to the overall project cost and not to individual items. The estimation process is invariably on the liberal side because of the higher project risk (revision) associated with underestimation. The level of buffer will generally be higher for projects in which there is less historical data available to guide the estimation process.
2. Lower Funding Requests: Fund release process can take up to a quarter so execution will typically be limited to 3 quarters. Phasing in the original proposal is based on an overestimated budget. The objective of the project team is to utilize all the allocated funds hence the demand for funds tends to be on the conservative side. It is better to request for additional funds during the year (excess) than to have to release (surrender) funds at year end. A conservative estimate can sometimes lead to delays because of the time it takes to get additional funds but this risk is more tolerable than surrendering funds.
3. Performance measured on financial progress: Project progress is primarily reported to the Planning & Development Department in terms of funds utilized. There is an underlying assumption that financial progress is generally inline with physical progress. In reality the absence of a mechanism to link physical

progress with financial progress can send the wrong signal to decision makers. Lets say a project was allocated PKR 60 million in its first year to complete 50% of the budgeted work. If the project reports 100% utilization of funds at the end the year it will be considered on track until it is discovered that only 45% of the budgeted work was completed. Or the project could have reported 85% utilization of funds and considered to be in trouble while it had completed 55% of the budgeted work. Monthly/Quarterly project progress reports sent to the Planning & Development Department will generally have physical progress reported in qualitative terms and hence provide very little early warning of project problems.

4. **Scope Revision:** The limit on project budget due to scope and cost are on a project wide basis. Internal scope changes can be undertaken by the departments so long as the upper limit is not crossed. It is possible for the project scope to be adjusted down in response to item cost increases in ways that alter the key deliverables without going into revision. The specification of one deliverable can be reduced to compensate for increase in cost of a deliverable considered more important. There is generally no scope verification exercise at the completion of the project to ascertain that project deliverables were completed as originally specified.
5. **Liberal time estimates:** The overall approval, award and funding process can lead to delays in the start of the project as well as its completion time. A project that exceeds its stipulated timeframe has to go through a lengthy revision process with a negative reflection on the performance of the department. Managers therefore tend to be liberal in proposing completion times for their projects keeping in view the possibility of delays at various stages and the tendency of the approving authorities to allocate shorter times than originally requested. During execution the project could have two schedule baselines, an internal one for the department and an external one that is based on the approved project duration. Since the external timeline is always longer the external agency will often find out about project delays much later than the executing department.

### **Project Management problems**

In addition to the above there are some capacity problems which are specifically related to project management:

1. **Part time Project Teams:** Smaller project team have a part time involvement in the project. They have to balance time between their operational responsibilities and one or more projects. Project over PKR 100 million are now required to have dedicated project teams.
2. **Project Manager:** Project Managers are often selected on the basis of seniority within the department essentially on the basis of operational experience. There are no formal skill development programs for training managers to take up project management assignments.
3. **Assignment of Project Manager:** Normally a project manager will be assigned to a project after it has been approved. Timelines and deliverable approved in the project are usually finalized in the absence of project manager's inputs. Project Managers are often changed during the course of longer projects, hence personal ownership of projects is low. The importance of early assignment of a project manager with necessary empowerment is supported in project management literature (Kerzner et al, 2003).
4. **Schedule Ownership:** There are generally three parties in the project, Government as the client, a consulting firm for engineering and the contractor. The consulting firm is assigned the task of design and supervision. The supervision role generally covers the schedule but is compromised by the fact that the consulting firm is itself responsible for a key deliverable, design, that can be the cause of project delays.
5. **Lack of Standards:** In the absence of defined standards, the client, consultant and contractor each may use their own plans which are often not compatible. More often than not contractors have limited planning capabilities and will generally operate with the very basic systems.

## **Reform**

Overall project performance in the public sector has been less than satisfactory over the years, a fact that is readily acknowledged by public sector planners (ADB 2002). Various attempts have been made in the past to revamp the development system to improve project outcomes with mixed success. The current efforts have had better success because of the ownership of the reform at the highest level by Chaudhary Pervez Elahi, Chief Minister Punjab. The Chief Minister's Project Management Initiative (CMPMI) is based on an approach that targets both individual projects of high importance as well as a system wide measures designed to improve overall capacity. Under this strategy individual project performances have seen spectacular improvement with the Communication & Works Department now regularly completing two lane underpasses in 90 days versus 18 months in the past. On the other hand there are now well established institutional mechanisms in place to carry out reforms in the way projects are managed by improving processes, standards and skills in the public sector.

### **Intitutional setup for reform**

Project Management driven changes to the development process cut across departmental line and hence the requirement for creating ownership for the reforms at the highest level in all the concerned departments. The need for project management standard was realized and after a review of available standards a policy decision was taken for the adoption of PMI's PMBOK as the project management standard for the Government of the Punjab. Two bodies have been created to implement the Chief Minister's Project Management Initiative.

#### **Provincial Steering Committee for Project Management (PSCPM)**

Institutional level reforms were started in July 2003 with the formation of a Provincial Steering Committee for Project Management (PSCPM) headed by the Chief Secretary (senior most bureaucrat in the province). Members of this committee include all the key decision makers who are involved in the development process including Chairman Planning & Development, Secretary Finance, Secretary Communication & Works, Secretary Irrigation & Power, Secretary Implementation & Coordination, Secretary Information Technology and Head of Project Management Unit (PMU).

The PSCPM is established for the primary purpose of assisting and facilitating the implementing of modern Project Management practices and technology for the management and control of development projects by the Punjab Government. Furthermore, it is to provide leadership, guidance and recommendations to the Punjab Government consistent with the framework of the following objectives:

1. Guide the adoption of Project Management Institute standards in government.
2. Provide a framework for managing development projects in compliance with project plans and requirements, ensuring that modern project management practices are being used.
3. Provide a structure for project oversight to ensure development projects are appropriately tracked, monitored, and guided to achieve defined success factors and obtain expected results.
4. Promote capacity building in departments through the development of policy guidelines for the hiring, training and use of professional project managers for executing large/complex projects.
5. Select projects for conducting periodic performance management reviews on the basis of proposed best practices.

#### **Project Management Unit – Planning & Development Department**

The PMU was established for the primary purpose of identifying, developing and implementing modern Project Management practice and technology for the management and control of development projects undertaken by the Government of the Punjab. PMU operates under the supervision of the PSCPM for the achievement of the objectives given below.

1. Properly plan and organize the transition to project management on a life-cycle basis to facilitate a successful change.
2. Identify and promote the use of international project management best practices consistent with Project Management Institute standards that can be adopted by the government to enhance its project management capacity for managing all types of development projects.
3. Review and revise existing project performance management parameters used in the management and control of development projects to enhance project tracking and forecasting.
4. Identify, develop and promote the establishment of processes consistent with Project Management Institute standards in the planning, monitoring and control of development projects.
5. Carry out the collection and dissemination of project performance information from a selected list of development projects to improve progress reporting, and forecasting.
6. Promote capacity building in departments through the transfer of project management knowledge, technology implementation and development of templates and revision of existing project documentation to bring them up to date with modern practices.
7. Provide project management assistance to administrative departments that are currently managing projects and require support in planning, scheduling, and control.

## **Specific Measures**

### Improve Scope Definition

Basic measures like the creation of a Work Breakdown Structure during the project proposal preparation stage are being implemented to improve the definition of scope. Many medium to small sized projects are replicas of existing projects (primary school buildings, police highway petrol centers, etc) permitting the development of standard scope decomposition templates that can speed up the planning process. Better scope definition is permitting better tracking of physical progress and hence improved project performance measurement.

Pinto and Slevin found that a clear mission or scope statement is a predictor of more than 50 percent of project success in the concept, planning and execution stages of the project (Pinto et al, 1988).

Ashley et al, found that outstanding, successful projects exhibit clear scope and work definitions (Ashley et al, 1987).

### Work flow automation

A substantial period of the projects life cycle is spent in the approval process. This process (described earlier) involves inter departmental exchange of information that can often be time consuming. The development process is currently being studied to cut down the dead time (time lost in movement of information in the shape of files and documents) through the use of work flow automation.

### Major Provincial Projects

Projects in excess of PKR 200 million have been designated as Major Provincial Projects (MPP). Formal use of project management techniques and tools are required in MPPs. This includes the preparation of detailed project schedules with a minimum resolution of 1 activity/PKR million spent for monitoring purposes. In addition the consultant and contractor are required to deploy project managers with PMP certification. Finally, the project closeout process will include third party review for objective evaluation of project performance and recording of lessons learned.

### Faster Consultant Selection process

The present consultant selection process takes between 3-4 months. Departments generally do not engage consultants at the feasibility stage because of the lead time involved in hiring a consultant. The present consultant selection guidelines are being revised to cut the selection time to under 6 weeks.

### Dedicated Project Teams

Federal guidelines mandate the use of dedicated project teams for projects in excess of PKR 100 million. These guidelines are being implemented through the creation of Project Management Units (PMU) for individual projects. The PMUs for larger projects can fill their post through hiring from the private sector on market salaries. This helps to address skill shortages in the public sector in specialized areas. Large projects like the Barrage Rehabilitation Project, Education Sector Reform, Land Record Automation, and Water course improvement have large project management units with up to a dozen specialized high paid jobs.

### Better Estimation

A new Market Rate System (MRS) has been introduced to replace the Schedule of Rates. MRS is updated on a monthly basis with rates collected from all 34 districts of the province as opposed to the single provincial rate in the old system. High price volatility items are identified and treated independent of the 4.5% limit on price variation. Schedule of Rates system was limited to 1500 items, rates for other items were fixed by project supervisors. The new Market Rate System offers more flexibility with the regular addition of new items to offer better coverage.

### Earned Value Analysis

Studies have shown that earned value analysis can point out project problems as early as 15 to 20 percent into the project (Fleming et al, 2000). A basic Earned Value Analysis (EVA) system is being used for the first time to assess project performance on large projects. Resource and Cost loaded project plans are prepared either by the PMU P&D or the PMU of the project to be used as the baseline for measuring project performance. Project teams have to report the Planning, Actual and Earned Value on a weekly basis. Basic EV analysis such as Cost Performance Index, Schedule Performance Index, Estimate to Complete are used to convey project performance at the highest decision making levels. With the help of these analysis project problems are now being detected earlier.

### Project Management Skills

Project Manager's job has been recognized as a skill based job that requires appropriate training and experience. Punjab Government is developing project management training courses with the help of premier education institutes like Lahore University of Management Science (LUMS), University of Engineering and Technology (UET), Punjab Engineering Academy, etc to train its managers as well as those of consultants and contractors that work for the government in modern project management practices. The basic training course will be followed by training in software tools like Primavera and Microsoft Project and in the PMI standards. Public sector managers will be reimbursed for appearing and qualifying in PMI's CAPM and PMP certifications. An initial target has been set to have 30 PMPs in the Punjab Government by the end of 2005.

### Reference Projects

A few major infrastructure projects have been selected as reference projects where the PMU P&D can provide direct assistance to project teams in the development of project plans and their subsequent monitoring using techniques like EVA. The list of projects currently assigned to the PMU P&D includes Lahore Ring Road, Lower Chenab Canal East Rehabilitation, Taunsa Barrage Rehabilitation and Land Record Automation. The mode of intervention is designed to ensure that the PMU P&D's project managers work with the project teams to jointly develop the project plans to help build their capacity to develop subsequent plans independently. Where possible, reference templates are created to facilitate standardization.

## Access to Information

The Chief Minister has committed to a policy of providing greater information access to the general public in the working of the development machinery. As part of this policy he has directed the creation of a web site for disseminating progress reports of major development projects. A project web site has already been created by the PMU P&D to share information on the projects being monitored by it. Information on this site is updated on a weekly basis and is currently available to government managers as well as a select public audience. This program will be extended to the general public once guidelines have been developed on the level, detail and format of information to be provided to the public.

## Future Plans

One of the key lessons in the reform process has been the importance of ensuring that perceptions of the stakeholders are consistent with the intentions of the reform. Project plan interaction between the PMU P&D and the departments on the reference project highlights the differences as listed in Exhibit 1.

<b>Perception of Departments</b>	<b>Intentions of PMU P&amp;D</b>
Primary objective is Monitoring	Primary objective is better Project Management
Develop plans to improve monitoring	Develop plans to improve project outcomes
PMU P&D owns project plans	Departments own project plans
Plans primarily used to assess performance	Plans used to solve project problems
PMU P&D is a monitoring agency	PMU P&D is a Project Management support provider
Focus on selected projects	Focus on system wide PM improvement

Exhibit 1 – Perceptions versus Intentions

Monitoring generally has a negative connotation hence any action/policy that appears to increase the level of monitoring generates resistance to change. It is important to demonstrate that the primary benefit of project management is to produce better project outcomes. This can best be achieved if there is ownership for the new ideas as well as the willingness to make the necessary changes in existing ways of doing things. It is also important that the departments know that the credit for project success or failure will remain within the department. Finally, no reform can succeed without the active acceptance and support at the highest level in any organization. Studies have shown the importance of addressing these factors to prevent failure in the induction of project management (Kerzner et al, 2003). That is why the active involvement of the Chief Minister Punjab is paramount to the success of the present reforms.

Better project management means better performance measurement. The government has a fiduciary responsibility to ensure that public money is spent in the most effective and transparent manners. US Congress has recognized this responsibility through the Government Performance Results Act of 1993. The logical next step for the present reforms is to create legislation to mandate the use of formal project management policies and practices throughout the Punjab government.

## References

- Kerzner , H. (2003). Project management: a systems approach to planning, scheduling, and controlling. 8th ed. : John Wiley & Sons .
- Jeffrey K. Pinto and Ennis P. Slevin, “Critical Success Factors across the Project Life Cycle,” Project Management Journal, vol. 19, no. 3 (June 1988), p. 72
- David B. Ashley et al., “Determinants of Construction Project Success,” Project Management Journal, vol. 18, no. 2 (June 1987), p.72
- P&D Dept. (August 1980). Planning Manual. 1980 ed. Lahore: Government of the Punjab.
- Fleming, Q. (2000). Earned value project management. 2nd ed. : Project Management Institute.
- ADB. (2002). Mou of ta fact-finding mission – strengthening portfolio performance and monitoring. : ADB.