

Introduction of e-Tools in Management of Construction Projects

Background, Key Issues and Challenges

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1. Construction Industry Challenges

- Exponential growth in portfolio of Implementing Agencies due to planned Infrastructure Investments (\$1 Trillion)
- Increasing pressure on agencies to deliver project within time and costs and with value for money.
- Complexities of projects is increasing – multiple stakeholders now involved.
- Limited Human Resource available
- Infrastructure project often associated with cost and time overruns, disputes, lack of transparency and real/perceived fraud and corruption risks.
- A report by Federation of Indian Chamber of Commerce and Industry (FICCI) states that out of 1032 infrastructure projects completed in India from April 1992 – March 2009, 42% faced cost over runs and 82% faced time over runs.



2. Project Implementation Challenges

- **Lack of proper planning and risk assessment**
- **Inadequate Preparation and Quality of Engineering Design**
- **Procurement Issues**
- **Pre-construction Activities:** Delays and coordination issues
- **Resource constraints for monitoring of projects and contract management**
- **Slow approval/decision making resulting in frequent disputes**



➤ **Poor Quality of Supervision**

- Ineffective documentation and record control; lengthy time taken in finding, validating and accessing project information
- Increased project risks with multiple sources of project information in physical form and upkeep challenges
- Ad-hoc decision making in absence of a reliable and structured decision support system



- Inconsistent project information and deliverables
 - Undue discretion available to supervision consultant staff and absence of adequate internal control and monitoring mechanisms to examine their quality of supervision.
 - Ineffective implementation of quality assurance plan
- **Inadequate performance monitoring of bidders**



- **Inadequate Reporting and poor Communication:** Poor regular reporting to management resulting in key issues developing on site not being addressed quickly at an appropriate level.
- **Lack of participation by benefiting communities, end-User and Citizens** leading to lack of support for the project.



➤ **Program (Portfolio) Management challenges/Issues relevant to senior management**

- Lack of effective monitoring of overall Progress (physical and financial) on projects
- Budget Control, clearance/approval of Projects
- Quality of works
- Citizen Involvement
- Timely response to Assembly/ Legislative Questions
- Program Reporting
- Impact evaluation



- Many management research studies have shown that Public Sector Agencies lack project management capacity and use of ICT tools are limited, in comparison with other industry e.g. IT , Manufacturing, Automobile, Banking and Tourism/ Private sector
- Real time availability of data and information



3. Opportunity....

- Renewed focus/attention on better project management of construction projects and application of professional project management techniques.
- The growth of the Information and Communication Technology (ICT) sector has opened up opportunities for improving project management processes for infrastructure projects and has led to the availability of a plethora of e-tools in the construction industry.



- Availability of New technologies such as GIS, CAD, RFID and handheld devices (such as tablets and smart phones) make it more efficient and convenient to collect, manage, analyze and visualize data and to convert it into meaningful information.
- Although some progressive public-sector agencies including public works departments have initiated introduction of ICT tools in construction projects, largely these remain absent.



4. The Study....

- The Bank undertook a study “Introduction of e-tools in Management of Construction Projects” under the DFID-World Bank Partnership for India, Phase III Trust Fund.
- The objective - To introduce and enhance the use of IT based interventions/solutions in the management of construction projects and programs to enhance efficiency, transparency and governance in delivery, thereby increasing their success and impact potential.
- The Output – The Guidance note for IAs



5. The Guidance Note...

- The Note provides a broad framework and roadmap for how IAs, regardless of their current level of computerization, can initiate a structured approach for introducing or improving their usage of E-tools.
- The Note provide information on the availability, options, risks and implementation process for e-tools that they can opt for and the likely benefits



- The Guidance Note does not recommend a particular e-tool or approach to a specific project, program or agency, considering their unique mandate, scope, objectives and scope.



6. The Workshop...

Objective –

1. Orientation to senior management regarding benefits and opportunities provided by e-Tools
2. To seek feedback on Guidance note
3. Suggestions for Way Forward – How Bank/DEA can help IAs in implementing e-Tools

Agenda -

- Seven Live Demos of case studies
- Open Discussion and knowledge sharing



Thank You..

