Managing Urban Infrastructure Projects

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Managing Issues

• Internal
  – Project team
  – Time
  – Money
  – Contractors
  – Consultants

• External (*beyond Project Director’s administrative competence*)
  – Land
  – Local bodies
  – Other departments
Managing Project Team

• Structuring Project
  – Need for sufficient depth
  – Effective delegation and clear accountability
  – Clarifying role vis-à-vis local bodies

• Capacity building
  – Technical
  – Contract management

• Involvement
  – Full technical responsibility
  – Cross learning
  – Open reviews

• Sustainability
  – documentation
Managing Time

• Robust information system
  – Status
  – Capture issues that impinge on projects
  – Pre-planning

• Reviews
  – Structured and Regular
  – Inspections

• Project Design
  – Flexible to compensate for delays and failures
Managing Time

Learning from past

% of contracts awarded

% of project time elapsed

-40% -20% 0% 13% 20% 25% 38% 40% 50% 60% 63% 75% 80% 88% 100% 120% 140% 160%

NKUSIP 2nd tranche tenders awarded
NKUSIP 1st tranche tenders awarded
KUDCEMP Tenders awarded
NKUSIP overall (projected)
Managing Money

• DPRs
  – High level intense technical review
  – Accountability
    • Consultants penalize for unprofessional errors
    • Engineers

• Funding
  – Dovetailing schemes

• Bidding
  – Strong signals to discourage high premiums
  – Failure analysis and corrective action

• Effective cash management
  – Reduce surplus cash
  – Control time cycle for releases and payments
Managing Money

![Bar chart showing percentages for different locations and tranches.]

- Raichur UGD
- Haveri Water
- Raichur Water
- Hospet Water

- 1st call vs 2nd call
- 1st Tranche vs 2nd Tranche
- UGD vs Water

- Tender premium
- Tender amount
Managing Contractors

• Fundamental part of project team
  – Involvement of contractors in the monthly review meetings.
  – Strategic escalation of issues
• Predictability
  – Non-discretionary adherence to the contract conditions like work plans, milestones and liquidity damages.
• Accountability
  – Highly segregated, clear and recorded responsibility matrix
• Transparency
  – Fixed time limit for every stage of bill clearance
  – Web based on line procurement management system
  – Direct payment to the contractor’s account through RTGS
Managing Contractors

• Development of market
  – Contractors’ conference
  – PQ conditions- UGD contracts and PSP contracts

• Encouraging performance
  – Inclusion of bonus clause (*necessary safeguards needed*)

• Contractors’ capacity
  – Labor intensive technology for sewerage works
  – Ability to place technically qualified manpower in remote work locations
  – Poor top management capabilities- information, detailing, supervision systems, cash flows.
Managing Consultants

• Situation of scarcity
  – Frequent change of team leaders and other professionals
  – Inability to mobilize quality manpower at project places
• Poor systems of contract management
  – Weak hands-on professionals
  – Inadequate quality controls
  – High turn-around time
• Involvement
  – Starting point of any review
  – Encouraging supervisory levels to join reviews
  – Simplifying systems for bills clearances
  – Advance payment for deliverables pending verification
  – Penalty for non-professional errors and non-application
Managing Consultants

Average tenure of team leader in NKUSIP is 8.5 months and that of deputy team leader is 13.5 months. Each change is a beginning.

Comparison of delays

<table>
<thead>
<tr>
<th>Location</th>
<th>Delay due to contractor</th>
<th>Delay due to consultant</th>
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</thead>
<tbody>
<tr>
<td>Haveri UGD</td>
<td>40%</td>
<td>60%</td>
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<tr>
<td>Nippani WS</td>
<td>30%</td>
<td>70%</td>
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<td>Yadgir WS Hospet WS</td>
<td>50%</td>
<td>50%</td>
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<tr>
<td>Raichur WS</td>
<td>45%</td>
<td>55%</td>
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<tr>
<td>Gangawati UD</td>
<td>55%</td>
<td>45%</td>
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<tr>
<td>Jamkhandi UGD</td>
<td>60%</td>
<td>40%</td>
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</tbody>
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Each change is a beginning.
Managing Land

- Requirement of land is assessed in all details before DPR stage and procurement process is initiated in parallel.
- Government lands are allotted before tender is called.
- Wherever private land is required, it is ensured that 6 (1) notification is issued before inviting the bids.
- Direct purchase of land has been permitted to hasten the process. All but one towns have gone for either direct purchase or consent award.
Managing Local bodies

• Empowerment and insistence on ownership
  – The Commissioner, ULB has to countersign the condition survey
  – The council approves the concept report, STP/WTP technology and the DPR
  – Commissioner is the employer; PIU works under him

• Transparency
  – Presentation on project status in monthly council meeting
  – PMU officers to meet local representatives in each visit

| Time taken for approval of concept report was 147 days |
| Two towns - Bijapur and Elgaum have taken 481 days respectively |
| Other average 50 days |

| Local bodies have taken initiative to meet shortage of funds by providing | and... |
| Local based water supply project approved took 167 days |
| Other local bodies have come forward or... based |
Managing other departments

- Requirements of clearances from various departments is identified at DPR stage itself and advance action is taken to obtain the clearances from line agencies.
- Intensive follow-up
- Absence of any ownership by the other departments
- Lack of objective, time-bound and transparent systems for clearances
Transforming a Problematic Project - KMRP

- Lack of compensation for delays
- Lack of depth of PMU and weak field level supervision
- 54% of project is with agencies where there is a hierarchical conflict vis-à-vis Project Director
- Urban mapping component

### Proportion of contracts awarded

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracted Amount</th>
<th>No. of works awarded</th>
<th>No. of works awarded - MIC</th>
<th>Contracted amount-MIC</th>
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<tbody>
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<td>2010</td>
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</tbody>
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W. component of \(-\) experience of analyzing failures and intensive monitoring

Urban mapping component - systemic approach
25 review meetings in 30 months
Technical advisory committee annual preparation
PSP contracting

• Challenges
  – Ideological
  – Vested interests- threat to domain
  – Lack of correct risk perception
    • Due to long period of contract
    • Understanding need for its clear allocation
    • Performance requirement
  – Lack of standard bidding processes
  – Weak market of suppliers
  – Funding viability gap
  – Absence of regulator
Thank You