Public Works Management System for Corporation of Chennai – Case Study

Manu Srivastava

eGovernments Foundation

Technology for Social Change
Introduction

- Public Works Management System as a Solution for managing the public works of Government Bodies
- Solution was partially rolled out in 2010
- Full Rollout in Corporation of Chennai in April 2013
- Discussion on Corporation of Chennai implementation
Agenda

- The Solution
- Timelines
- Usage & Benefits
- Impact
- Future
- Challenges & Learnings
Works Management System

Proposal /Estimation → Tendering & Work Order → Works Monitoring → Post Implementation Maintenance

Efficiency & Effectiveness

Financial Management

Reporting & Analytics

GIS & Mobility

Transparency, Accountability & Collaboration
Public Works Management System - Overview

**Estimation**
- Detailed Estimate
- Abstract Estimate
- Technical Sanction
- Administrative Sanction

**Tendering**
- Tender Notification
- Tender Response
- Tender Evaluation
- Tender Negotiation
- Agreement

**Work Lifecycle**
- Work Order Issue
- Record Measurement Book
- Track Milestones
- Generate Contractor Bill
- Issue Completion Certificate

**Service Lifecycle**
- Create Service Order
- Track Milestones
- Generate Contractor Bill

**Fund Management**
- EMD/Security Deposit Refund
- Retention Money Refund

**Integration**
- Financial Management System
- Asset Management
- EProcurement System

**Master Data**
- Schedule Of Rates
- Earnest Money Deposit
- Fixed Security Deposit
- Overheads
- Milestone Template
- Works Types
- Works Sub Type
- Estimate Template
- Service Order Template

**Reporting**
- Work Progress Register
- Abstract Estimate Report
- Work Progress Abstract Report
- Milestone based Project tracking
Timelines

- All Estimates and Contractor Bills in System – April 2010
- April 2013 – All Measurement Book readings in the System
- Aug 2013 – Complete Process in the system
Usage

Data from Implementation in Chennai FY13-14

- 19,310 estimates amounting to 2,646 crore approved
- 14,423 Measurement book entries recorded
- 10,645 work orders amounting to 2,928 crore generated
- 971 crore payments approved from the system
- Used by over 750 employees across 20 locations
Benefits

**Estimate**
- Correct & Consistent schedule of rates
- Automatic Budget Appropriation and Budget Control

**Tendering**
- Contractor Analysis

**MB**
- Control against the Work Order Quantity and Value
- Efficient Measurement book Management

**Payments**
- Centralized concurrence for the payment with sequencing avoids any out of line payments
- RTGS payment advice to Banks

**Monitoring**
- Complete visibility on works progress
- Asset Accounting
The Impact  Data from Implementation in Chennai  
FY13–14

- Average estimate approval cycle reduced from 7–10 days to 1–2 days
- Over manual 1500 budget control registers eliminated
- Reduction in measurement book management from 2 hours to 15 minutes
- Road Cut process works online

Efficiency Gains of 80 man years. Equivalent to adding that effort in planning, decision making and ensuring quality work or adding 80 more engineers. The impact of real time availability of accurate information used to make key executive decisions is difficult to measure.
Replication

- Nagpur Municipal Corporation went live in 3 weeks
- Proof of concept for a major water supply and sewage board in one week
Future

- In Progress
  - Tender Analysis: Link to Market Rates
  - Open data to Public for Transparency & Accountability
  - Tablets/Mobile: POC completed
  - Road cut works reengineering

- Later
  - Public Works Coordination between agencies
  - Preventive Asset Maintenance: Implementation schedules
  - Participatory Democracy: Decision Making
Challenges

- Change in Leadership
- Resistance
- Capacity Building
- Making the change permanent
Learnings

- Commitment from the top
- System should aid in improving the efficiency of the end users
- Executives should rely on the system for their decision making
- Incremental rollout – Depending on the org. readiness
- Standard practices across different government departments – Product based approach will work
Thank You

Let’s have a conversation.