



CM Dashboard for State of Jharkhand



Jharkhand Agency for Promotion of Information Technology

(An Autonomous body under Department of Information Technology, Govt. of Jharkhand)

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CM Dashboard for State of Jharkhand

Objective:

- Provide advisory Services to CM Secretariat
- Design, Develop and prepare a State vision plan document for industrial and physical infrastructure, incorporating all the sectors being identified and selected by GOJ as key sector
- Provide vision implementation assistance and develop monitoring systems
- Design and implementation of CM dashboard management system.

SCOPE OF WORK AND CONDITION OF CONTRACT

The following are the scope of work covered under this Project and Services

Component I:

Part 1: Advisory Services to Chief Minister Secretariat (48 months)

Part 2: Design, Develop and Prepare a State Vision Plan Document for Industrial and physical Infrastructure, incorporating all the sectors being identified and selected by the Government of Jharkhand as “Key Sector” and provide Vision implementation assistance and develop monitoring systems (48 months)

Component II (Design and implementation of CM Dashboard Management System):

Component I - Part 1:

Consulting and Advisory Services provided to Chief Minister Secretariat

- Consulting agency needs to deploy agreed resources on site at Secretariat, Ranchi, Jharkhand from the day one of the start of the project.
- All resources (onsite team) need to carry their own laptops, charger and data card with internet connection.
- The sitting space and furniture will be provided to the onsite team at Secretariat, Ranchi, Jharkhand by CM Secretariat.
- Printer and consumables such as cartridge and paper etc. will be provided to the onsite team by CM Secretariat.
- The consultancy agency shall deploy additional resources, in case need arise, on written request of employer. The payment for additional deployment shall be made on pre- agreed rate card.

The following services are required by the Consulting Agency through their Onsite Support Personnel.

Consulting agency will work under the Chief Minister Secretariat through a Minimum Team of 5 consultants (One Senior Consultant, Two Middle Level Consultants and Two Junior Level Consultants) to provide Advisory Services to CM Secretariat and assist in preparation of concepts note, new idea, Strategy, Business plan and Policy making on best practices adopted by various government organization nationally and internationally.

1. Assisting in Government reforms, policy and planning (but not limited to):
 - Identification of new reform opportunities
 - Periodic report on reforms undertaken by various State and Central governments
 - Assist the government in framing economic policies
 - Drafting of reforms policy
 - Drafting of reforms strategy for different units/organizations
 - Evaluation of reforms undertaken
 - Drafting whitepaper on government reforms
 - Advising the government to articulate its reform policy
 - Advising government on policy initiatives
 - Policy advocacy
 - Advising in creation of state government's policy agenda
 - Drafting whitepaper on government policy
 - Assisting in data collation and analysis to aid in policy making
 - Formulating policy adoption strategies
 - Formulating policy implementation strategies
 - Analysis of policy initiatives at state, central and international governments
 - Advising government articulate its position on different policies
 - Drafting concept notes
 - Policy evaluation
 - Assessing regulatory policies
 - Advising government on critical matters related to mining and environment

2. Planning (but not limited to):
 - Baseline review reports
 - Gap analysis
 - Periodic review reports
 - Assisting in data collation and analysis for planning
 - Development planning
 - Capacity building
 - Change Management
 - Integrated planning
 - Framework development

3. IT, e-Governance and mobile-governance (but not limited to):
 - Enterprise architecture development
 - Monitoring and evaluation of e-governance and m-governance projects
 - Drafting new e-governance and m-governance opportunities
 - Formulating e-governance and m-governance policy

- Advising/ assisting government in articulating its e-governance and m-governance policy
4. Finance (but not limited to)
- Advising on matters related to transition from VAT to GST regime
 - Advising Chief Minister Secretariat in Budgeting, Budget reforms and best Budgeting practises
 - Advising in data collation and analysis of financial data
 - Gap analysis
 - Periodic reports on government income and expenditure
 - Advising government on revenue and tax collection
 - Advising government on finance processes
 - Advising government on Tax regulation process
5. Infrastructure Advisory and Public Private Partnership (but not limited to)
- Advising government on PPP projects
 - Drafting concept notes on PPP
 - Analysis of PPP projects at state, national and international level
 - Structuring of PPP projects
 - Feasibility reports
 - Review of Detailed project reports

The above team will be supported by Sector / Subject Matter Experts who will be provided on need basis. The list of sectors where expert advisory or implementation of programs identified at the CM secretariat are given below.

1	Energy /Power
2	Finance/ Tax Regulations/ Planning
3	Panchayat and Rural Development
4	Agriculture, Irrigation, Food & Public Distribution
5	Infrastructure road and Transport
6	Mineral Resource and Mining
7	Skill Development and Livelihood promotion
8	Drinking water & sanitation
9	Urban Development
10	Health
11	Information Technology / e-Governance / Citizen services and Biotechnology
12	Social Sector Welfare
13	Education (Primary/ Secondary/ Higher/ Technical)
14	Commerce , Industry and MSME sector development
15	Tourism
16	Forest/ Environment/ Irrigation
17	Cultural & Sports
18	Governance and policy reforms
19	Branding and Promotion related services
20	Bid Process Management/ PPP Transaction Services

The subject matter experts will have at least 10 years of relevant professional experience.

Services of these Subject Matter Experts will be provided either at CM Secretariat OR various Government Departments in Ranchi by being on-site OR from the selected consulting organization respective offices. In addition to this, note the following:

- a) These Subject Matter Experts (SMEs) will provide Back end support to Onsite consulting Team in their respective field from the day one of the deployment of onsite team.
- b) The Subject Matter Experts (SMEs) will advise and provide consultancy in Dashboard Implementation for various scheme.
- 2) Consulting and Advisory Services provided to CM Secretariat through Experts On Site
 - a) CM Secretariat / JAPIT hold the discretion to call to Experts onsite as per requirement basis to Ranchi or anywhere in India.
 - b) CM Secretariat / JAPIT will inform successful bidder 10 days in advance to schedule the visit of Expert to Ranchi or anywhere in India.
 - c) The man-day cost of SME will be calculated based on the man-month rate quoted for the Consultants in Table B of the Annexure III of financial proposal. For clarity, the applicable man-month rate for SMEs will commensurate with the years of experience and will be equal to rate of one of the three categories (i.e. Senior Level Consultant, Mid-Level Consultant and Junior Level Consultant) as per the years of experience of the individual SME. Cost related to travel and stay will be paid as per actual by JAPIT.
 - d) The qualification and experience of Experts will be as per criteria mentioned in this Tender document.
 - e) The CVs provided under Experts in this bid and approved by CM Secretariat/ JAPIT will be final.
 - f) In case the proposed Expert is not available than an Expert with an equal or higher qualification and experience needs to be deployed after approval from CM Secretariat/ JAPIT.

Component I – Part 2:

Phase I: Preparation of State Vision Plan document for Industrial and physical Infrastructure (06 months)

With a view to provide advisory / execution services for State Vision plan document and its execution, Consulting agency will provide the following services through an on-site team of 5 consultants (One Senior Consultant, Two Middle Level Consultants and Two Junior Level Consultants)

- Identify Indicators: Identify social and economic indicators and indices that are essential for achieving inclusive growth and development in the State and will ensure achievement of the Vision targets.
- Current state assessment: Identify key programmes, projects, schemes, policies and initiatives for the phase-wise implementation across key sectors for realizing high value-added investments and employment-generation projects to yield maximum financial and social returns; and Develop “As-Is” understanding of existing regulatory framework, policy linkages and re-alignment across key sectors
- Gap assessment: Conduct gap analysis while comparing the current situation of the projects, programs, policies, tasks and policies in order to derive an estimated budget for the implementation of vision plan; and Highlight challenges and opportunities based on the gap analysis
- Alternate Strategies: Develop alternate strategies to address gap.
- List of projects: Identify social, economic, infra projects. Innovation and Optimize existing Government schemes.
- Assess Public Finances: assess the position of public finances in the state and compute and forecast its trajectory for 2022.
- Economic/ Financial Mode: Identify innovative and flexible economic / financial models that can be used to finance of the vision: debt financing, pooling, management contracts and public private partnerships.
- Action Plan: Develop short, medium and long-term implementation steps, milestones and key performance indicators (KPIs) for the same; Assess and prepare budgetary requirements/funding for identified projects; and Develop strategy for targeted communication outreach.
- Vision document: Based on the findings, frame a Vision Document for the state incorporating all the sectors for the state of Jharkhand.

Phase II: Preparation of implementation roadmap, Implementation assistance and development of monitoring systems (42 months)

- Implementation Arrangement: covering institutional structure, human resource requirement and programme management systems for a vision management. It will also assess the institutional and human capacity of the concerned government departments and agencies

- Vision Implementation Roadmap: Preparation of a detailed Vision Implementation Plan for all the identified sectors; Develop a structure to support and implement the Plan; Identify and design metrics such as accountability, responsibility and timelines to ensure successful implementation; and Suggest road map and implementation plan for development of key projects, programs, tasks and policies.
- Resource Mobilization: strategies and plans for mobilization of resources both financial and human from all available sources such as public, private and philanthropic.
- Forecast for Infrastructure Demand, Identification and Prioritization of Projects:
Identification of critical infrastructure projects in sectors (pre-identified) to be implemented; Demand supply gap and assessment of project future requirements; Preparing infrastructure forecast; Identification of inter sectoral linkages to promote cluster development; Identification of 'driver projects' and 'linkage projects'; Development of project funding strategies for timely implementation through Private Sector Participation (PSP); Analysis of present legislation and policies pertaining to PSP in various sectors; Prioritization of projects based on multi criteria and suggest on implementation strategy and action plan for development of priority projects.
- Transaction Advisory Service for the identified PPP/EPC projects: Identification and conceptualise the projects and its structure; Assistance in procurement of required feasibility studies through outsourcing; Finalisation of project structure and feasibility report; Finalise the bidding documents; Conducting proactive project marketing to potential investors; and assistance in bid process management.
- Capacity building including technical expertise: Advice to the concerned departments for key projects, related actions and policies; Capacity building across Departments for effectively project implementation; Identification of appropriate Subject Matter Experts (SMEs) in consultation with the nodal departments and identify the need for deployment, Prepare Job Description, roles and responsibility, deliverable and timeline of SMEs; Assistance in selection and hiring the SMEs and Ensure the delivery from SMEs.
- Monitoring System: Design and develop a robust monitoring system towards monitoring the progress in implementation of the state vision plan.

Component II: Design and Implementation of CM dashboard Management System

The dashboard Management System shall be comprised of four modules:

- i. State at a Glance module for providing overall view of current scenario viz-a-viz the vision and mission of the state,
- ii. Initiative view module for depicting overall condition of the initiatives, challenges, KPIs etc. and
- iii. Decision support system module for providing parameters and data for taking decisions and actions.

- iv. District Scorecard: For creating the district scorecard to monitor and track performance of districts on the basis of various KPIs and Indexes such as healthcare, crime, revenue, Education, Employment etc.

All the above modules shall work hand in hand to achieve various objectives of the Dashboard. It is envisaged that the “Jharkhand Dashboard” could benefit the Government of Jharkhand in the following ways:

Benefits of the ‘State at a Glance’ Module:

- A holistic view of the State of Affairs in the individual Departments in the form of a balanced scorecard like view on a timely basis
- Well defined Key Performance Indicators which will act as true indicators. Quantification of performance standards and benchmarking with respect to the similar sectors
- Help identify the bottlenecks in the system with a comprehensive drill-down facility and use appropriate tools to identify the real constraints
- Creating a transparent appraisal system for the Government employees-by identification of the Performers and non-performers upto a grass root level
- Devising a merit based evaluation with a human face to incentivise the people
- Good Governance through monitoring of Citizen Friendly Performance Indicators of Individual Departments
- Measures for improving the Fiscal Health of the State

Benefits of the ‘Initiative View’ Module:

- Helps identification of critical projects / areas
- Creation of a real time alert system (Red Alerts for critical items)
- Helps in taking proactive preparatory measures for an emergency situation
- Aiding the government in becoming more citizen friendly
- Facilitating quick and convenient data retrieval from multiple departments
- Improvement in coordination and operations of departmental performance benchmarking
- Helps in identifying the bottlenecks in the system with a comprehensive drill-down facility and use appropriate tools to identify the real constraints and resolve them
- Creating a feedback mechanism to qualify whether a particular strategy is effective or not and to lead to a corrective strategy

Benefits of the ‘Decision Support System’ Module:

- Scenario Analysis
- Variations (targets vs. Actual) analysis
- “Root Cause” and “What-If” Analysis”
- Forward looking analysis such as “forecasting of Domestic Wheat consumption”

or “forecasting of Child Mortality rate” or “Rollout of schemes etc.”

Benefits of “District Scorecards”

- Evaluation of the district performance against the set “Target KPI”s
- Identification of the top performers and the bottom performers, and analysis of the reasons for the same
- Identification of the problems specific to districts e.g. district A is good in crime statistics but not doing very well in revenue generation
- Analysis of the trends of district performance and taking of corrective actions before it degrades below a certain threshold
- Measurement of the State overall progress and contribution by districts/ Departments
- Gap analysis of target KPIs vs Actual performance and root cause for suboptimal performance

Component II: Functional Specifications for CM Dashboard

Data Access, Cleansing and Transformation

Consolidate data from different departments. Perform data quality profiling on the data to understand the completeness and quality of data. Design the data cleansing and standardization plan. Design Appropriate Data Marts for creating multiple CM Dashboard views. Create a metadata dictionary for mapping department data with respective Data Marts. Design and build appropriate data transformation and load data marts

Role based Dashboards, Scorecards and Reports

Analyze the needs for different departments. Design and build dashboards for different departmental views. Solution should cater to drilling into detail if required to understand the underlying reasons.

District scorecard should consider predefined KPIs for designing the performance dashboards.

Departmental Analysis – Departmental Analysis will constitute of one or more reports for each department which can be called through a link on the “Master Dashboard”. These reports will contain detailed analysis about the department.

- For Ex: What is actually happening at the department at a higher level?
- Which district is having the most healthcare issues, in which areas?
- How many issues are open in the utilities department for each district etc?

Forward Looking Analysis – Bring out some patterns/insights which will eventually provide some futuristic view to the CM on the department/scheme/state. Also provide capability for root-cause Analysis . For Ex:

- Why agriculture revenue is down from a district?
- What will the “wheat production next year”
- Why the mortality rate is so high in a region? Etc

Data Exploration and Adhoc Analysis –The system should have provision to perform adhoc analysis to be able to answer adhoc questions. This analysis should be easy to perform and should provide capability to slice and dice data across multiple dimensions to be able to provide the answer.

Component II: Technical Specifications for CM Dashboard

The CM dashboard application would be hosted in the State Data Centre and all required infrastructure components not limited to hardware and software like servers, bandwidth, network, database, storage, OS, anti- virus, mailing etc. would be provided by JAPIT as per the specifications proposed by the bidder during the project

The software and hardware specifications of CM Dashboards must meet the following requirements:

Mandatory Features:

- The proposed solution should be COTS based solution and not an open source or Freeware.
- The proposed solution has to be supported by OEM for entire tenure of the project.
- The proposed solution should be an Enterprise solution with no restriction on number of users.
- The Proposed solution should provide ETL/ELT capabilities.
- The Proposed ETL solution should provide statistical function support, in order to calculate the KPI based on statistical formulas or functions
- The proposed software should have a seamless integration with other solution components like ETL, BI and analytics
- The BI application needs to have the BI capabilities like Drill down, Slice and Dice, Multi-Dimensional Analysis, Ad-Hoc analysis, Auto charting and interactive reporting The tool should provide analytical capabilities such to the end users correlations , regression, unstructured text analysis, visualization, decision tree and enhanced forecasting etc.It would be preferred if the proposed solution is being used for a similar requirement for any of the Government department in India
- The proposed software needs to have capability to extend or integrate with components like advanced and unstructured data analytics as may be required in the future
- It would be preferred if the proposed application can be extended / scaled to manage big data needs as it may be required in the future
- The proposed application needs to have capability to integrate with multiple different databases and operating systems.
- The proposed BI solution should allow the users to access reports, receive alerts to update report over web, on the network and on mobile devices
- The proposed solution should have capability to generate graphical reports using

charts like pie charts, bar charts, line charts, bubble charts, tile charts, speedometers etc.

- The solution should provide central metadata repository to manage flow and traceability of data and structures
- The solution should provide native access to leading RDBMS like Oracle, SQL Server, Sybase, MYSQL and specific data access application to access SAP modules
- The tool should be rich in the set of in-built transformations and functions that should include predefined table and column-level transformations including slowly changing dimensions - type II.
- The tool should support targets which are normalized or de-normalized. The tool should provide specific functionality to support either of these two design approaches.
- The tool should provide pre-build functionalities for the following for Mathematical transformations, financial transformations and statistical computations
- The proposed BI solution should be able to provide basic analytical capabilities like co-relation, time series forecasting etc.
- The proposed solution should have the capability to select the most suitable forecasting algorithm on the basis of data selected for forecasting.
- The License should be core-based and not user-based with no restriction on number of users.

Additional Features:

- The tool should provide Geographical map views to provide a quick understanding of geospatial data.
- The tool should have the ability to use in memory analysis to enable users to conduct fast, thorough exploration and analysis
- The tool should be capable of read and write of comments/annotations on reports and tablets to aid in collaboration
- The solution should provide single integrated metadata and admin interface across data integration , data quality, Business Intelligence and Analytics
- The solution should provide an out-of-the-box transformation to support conditional processing within jobs, allowing distinct portions of a job to be defined to run conditionally
- The solution should have pre-built libraries for standardization of India specific data such as village name, district name, agriculture commodity name, industry types, scheme names etc.
- The solution should be capable of using use fuzzy matching for standardizing and for detecting duplicates if required. E.g. Same district data got uploaded twice etc.

- The solution should enable parsing demographic data into atomic level
- The solution should have India specific vocabulary libraries, grammar rule libraries, standardization rules and libraries, regular expression libraries etc.

The Component II shall be executed in the following phases -

Phase I: Implementation (0 to 12 Months)

The Implementation phase would include the following sub-phases:

- Identification and Analysis
- Design and Development
- Testing and deployment

Identification and Analysis

- Identification of Schemes / Programs / Departments for performance monitoring
 - Identification of 8-10 schemes / programs as per CM's requirements of KPI based monitoring
 - Identification of 5-7 Key departments as per CM's requirements of KPI based monitoring
 - Identification of state level KPIs as per the CM's requirement
- Identification and Definition of KPI's for each of the above identified areas
- Identification and analysis of the reporting /dashboards / Alerts / What-If-Analysis related requirements
- Identification and analysis of the sources of data as required to enable the identified KPIs
- Analysis of the type and level of integration required to source data from the applications
- Creation and submission of detailed Business Requirement Definition document covering all the stated initiatives

Design and Development

- Designing of Flexible Framework for performance monitoring of Schemes/Activities/Initiatives
- Design of Data acquisition strategy as required for performance management of the identified requirements. One may consider direct integration with 4 source systems for pulling the data. For other departments / schemes / initiatives, the data would be provided by respective owners in pre agreed file formats and on daily basis
- Design of the dashboard prototypes
- Perform the data quality profiling, design data standardization and cleansing strategy
- Development of ETL and Data acquisition process including incremental data load on a daily basis
- Design of data models (Conceptual, Logical and Physical) as needed for the application implementation
- Development of required dashboards / alerts / what-if scenarios as identified. One may consider development of minimum 80 dashboards as part of the scope

- Unit testing of all the developed components

Testing & Deployment

- Integration testing
- Provide the following trainings to the users. Consider 2 trainings of each type as stated below:
 - Application training to Senior users on usage and access of Dashboards
 - Application training for Power users to perform analysis
 - Application administration training
- Assist users during User Acceptance Testing
- Deployment of application and Go-Live

Phase II: Post Go-Live Support (12 to 48 Months)

The scope of post implementation support would include the following:

- Level 0 - Provide a telephone contact, a mail ID or a portal where users should be able to lodge complaints / issues related to the CM dashboard application
- Level 1 - 2 resource to provide onsite support for operational support of application, required backups and fixing of bugs / issues
- Level 2 - 2 resource to provide onsite support for any enhancements / development as required for the application implemented

KEY STAKEHOLDERS

The key stakeholders and their key responsibilities in given in the table below:

S. No.	Stakeholder	Key Responsibilities
1	Chief Minister Secretariat	Evaluate Frame and Issue Guidelines, Key Policy maker for decisions regarding the project, monitor and assess progress and support the designated agency in getting technical/financial assistance
2	Chief Secretary and Departmental Heads	Appoint Dedicated Nodal officer(s) to closely work with CM dashboard team to discuss and provide the functional and technical requirement, Provide timely inputs and concurrence on KPIs, Provide access rights on existing database server, Provide data in pre-defined format and frequency
3	JAPIT	Overall planning, coordination, monitoring, evaluation and guidance for successful implementation of the project, Provide Infrastructure and other support to the Designated Agency, Take appropriate steps for legal changes required in implementing the project etc.

S. No.	Stakeholder	Key Responsibilities
		<p>Overall Implementation Owner of the Project, Receive and manage funds to ensure timely fund flow to agencies involved, Coordinate and facilitate interactions between the project implementation partners, Department of IT, CMO, SWAN and SDC operator etc.</p> <p>Facilitate integration of the existing ICT enabled/e-Governance services, wherever possible, into the Project etc.</p>
4	Consulting cum Implementing Agency	<p>Conceptualization and planning of the project, will design an efficient and effective end to end service delivery process for each of the Dashboard, Prepare the Design of the Dashboard (Functional Requirement) for implementation, Design and Develop the software for the Dashboard, Prepare the Capacity Building, Change Management & Training plans, identify the legal changes required and assist in drafting and issuance of Government Orders, Monitoring the progress, Provide training to the concerned stakeholders, provide managed IT services and handholding services during and after implementation of the Dashboard.</p> <p>Coordinate with SDC, SWAN operator and any other IT hardware vendor within the project scope</p>

The scope of work of consultancy is to achieve objectives as described below:

Strategy & Assess

The Strategy and Assess Stage will be required to confirm the Government's needs, to assess the selected areas of the current environment for improvement opportunities and to agree upon the opportunities for improvement.

The Strategy and Assess step has the following activities:

- Define Objectives of Dashboard View
- Analyse and advise the leading practices (consultant is expected to provide the list of relevant KPIs based on best practices)
- Identification of priority sectors
- Identification of department to be selected

- Preparation of Business Requirement Definition document
- Preparation of implementation plan and monitoring system
- Identification of stakeholders
- Identification of Data sources and their respective owners
- Identification of performance benchmarks

Design

The Design Stage will be required to design the transformed process/scenario and to explore and develop the implementation strategies

The following activities are involved in designing the Dashboard:

- Define application architecture
- KPI Definition – Mapping of KPIs to the source systems
- Design of Dashboards
- Creation of Dashboard prototypes
- Creation of Data Model based on best industry practices
 - Conceptual Data Model
 - Logical Data Model
 - Physical Data Model
- Design of basic data quality and integrity check during data extraction process
- Design of Data acquisition / ETL (Extraction Transformation Loading) process

Construct

In the Construct Stage the following activities shall take place:

- Application installation and setup
- Development and unit testing of Data Acquisition / Integration / ETL application
- Development and Unit testing of Dashboards
- Application integration testing

Deployment

The deployment stage includes the following activities:

- Training and Enablement of users
 - Application training to Senior users on usage and access of Dashboards
 - Application training for Power users to perform analysis
 - Application administration training
- Assistance for User Acceptance Testing
- Removal / correction of bugs as identified
- Production deployment of the final approved application
- Provide application access to the end users

Post Implementation Operate and Review

The Operate and Review Stage is required for operating the envisaged solution,

delivering the benefits and instigating a culture of continuous improvement. The post implementation consultancy requirement involved in the project is as follows:

- Track Benefits and take corrective actions
- Conduct ongoing live operations and complete post-implementation benefits review
- Conduct operational review
- Prepare and launch continuous development programme
- Renew continuous development programme
- Provide support for Level 0,1 and 2 as defined in the document above