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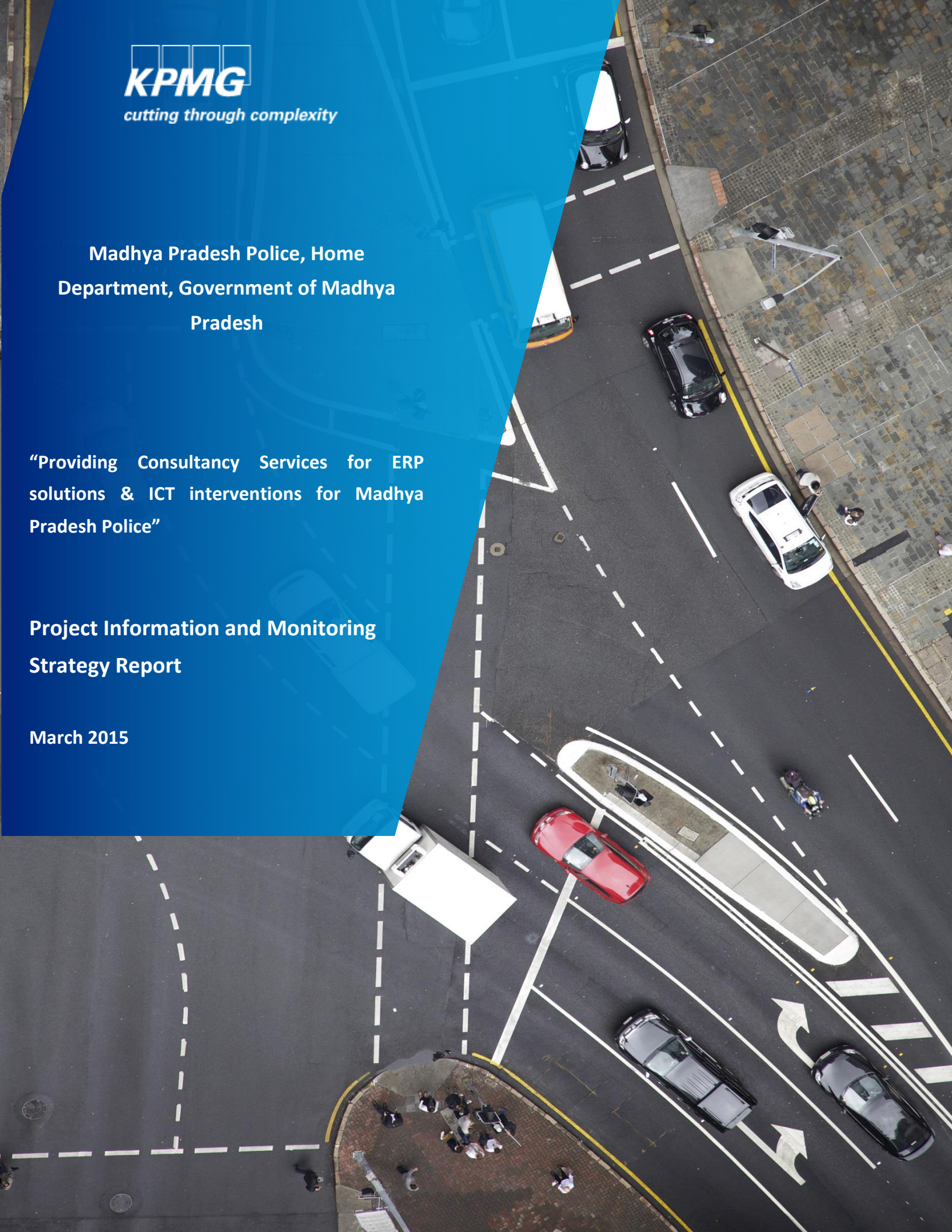*cutting through complexity*

Madhya Pradesh Police, Home Department, Government of Madhya Pradesh

"Providing Consultancy Services for ERP solutions & ICT interventions for Madhya Pradesh Police"

Project Information and Monitoring Strategy Report

March 2015

Contents

Document Review Table

Document Title: Providing Consultancy Services for ERP solutions & ICT interventions for Madhya Pradesh Police

Document Status: First Draft

Document Scope: Project Implementation and Monitoring Report

Document Review and Approval:

Revision History:

Version	Author	Date	Revision
1.0	Atul Sharma	05/03/2015	First Draft

This document has been reviewed by:

S. No.	Reviewer	Organization	Date Reviewed
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Acknowledgement

We are grateful to the Madhya Pradesh Police and Government of Madhya Pradesh for assigning KPMG, for "Providing Consultancy Services for ERP solutions & ICT interventions for Madhya Pradesh Police". We are highly grateful to Shri Anvesh Manglam, IPS, Additional Director General of Police-Telecom, MP Police, Shri R.K. Arusia, IPS, Ex-SSP(Radio), Shri R. A. Choubey, IPS, SSP(Radio) and Smt. Monika Shukla, SP(Radio) for extending their continuous guidance, relentless support & co-operation without which the completion of the As-Is Report would not have been possible.

Finally, special thanks are due to Shri R.C. Arora, IPS, Ex-DGP, MP Police and Shri A.K. Soni, IPS, Ex-IGP MP Police for their active involvement in this project and valuable inputs and timely support.

About the Project

The Madhya Pradesh Police Department intends to introduce automation and e-Governance by leveraging ICT to streamline and improve upon its functioning in order to bring efficiency, transparency and accountability. In this context, M/S KPMG has been selected by MP Police Department for providing consultancy services for Enterprise Resource Planning (ERP) solutions & Information and Communication Technology (ICT) interventions.

The following project goals and objectives are envisaged:

1. Increase Operational Efficiency by:

    a. Reducing the necessity to manually perform monotonous and repetitive tasks.

    b. Improving the communication e.g. Messaging, email systems, etc.

    c. Automating back-office functions, and thereby release the police station and other staff for greater   focus on core police functions.

2. Improve service delivery to the public/ citizen/ stakeholders

    a. Access to services in a citizen-friendly manner

    b. Provide alternate modes of service delivery such as internet (for general requests such as NOC, copies of documents, character verification reports, summons etc.

As part of the scope of work, "As Is" report has been already submitted which describes a number of processes being carried on in various MP Police branches/ officer.

The "To Be" report has been prepared and submitted with the objective of defining the future process flow in the envisaged Enterprise Resource Planning (ERP) solution. For each of the process, activity/decision points recommended for ICT intervention were been identified. Moreover, specific ERP modules applicable for the processes were also been recommended in the same.

The Functional Requirement and Technical Specification document has also been prepared which states various functional requirement from different ERP modules and technical requirement of the ERP solution.

The change management and capacity building report has been prepared which states the training requirements and recommendations from the change management point of view.

Additionally, Detailed Project Report (DPR) has been prepared covering all the key aspects of the project.

About the Report

A project like ERP implementation which is of the state wide scale not only requires high level of planning but also monitoring of planned activities. The objective of this document is to set a strategy for implementation and monitoring of the ERP Project.

The report identifies involved stakeholders both internal and external to the organization, sets out timelines for the activities to be performed and proposes a project monitoring framework for ensuring project success.

1. Key Stakeholders

The envisaged ERP project of the state wide scale is expected to impact the functioning of each Madhya Pradesh Police Unit and Officer/ Personnel. The stakeholders for the project may be classified into two categories:

Category | **Stakeholders**

Internal Stakeholders | All police Officers/ personnel are stakeholders but below officials have been identified as key internal stakeholders

S. No.	Rank	Sanctioned Strength
1	DGP	1
2	Spl. DGP	2
3	ADGP	13
4	IGP	29
5	DIG	11
6	IG Range	11
7	DIG Range	15
8	SP	50
9	Commandant	22
10	AIG S.B General	1
11	SP Radio	1
12	SRP	3
13	Training/ Leave/ Junior Reserve	31

	Total IPS Officers (not including Central/ State reserve)	189
	Subject Experts	
14	A.D.F	1
15	F.O.	2
16	S.T.O	2
17	A.D.P.O	2
	Grand Total	**197**

External Stakeholders

This category includes stakeholders external to Madhya Pradesh Police Department as listed below:

- System Integrator's team

- Pensioners

- Directorate of Pension

- Home Department, Government of Madhya Pradesh

- Finance Department, Government of Madhya Pradesh

- Medico Legal Institutes

- Various Training bodies external to MP Police

- Project Management Consultant's team

2. Project Scope, Implementation Roadmap & Timelines

2.1. Project Scope

MP Police envisions implementing an Integrated IT solution for automating end to end business processes of the organization. The proposed Integrated IT Solution for MP Police would, among others, include Construction Project Management, the development of a Portal for MP Police, Document Management System, Geographical Information System, and Customized Business Applications for Finance, HR, Payroll and Self Service Module and Office Management & Automation System etc.

The proposed Integrated Information System of MP Police includes the development and implementation of reliable packaged based solution or an equivalent developed integrated system which would be delivered in a timely and cost effective manner to meet MP Police's business objectives and system performance objectives in a consistent manner.

The envisaged outcomes of the engagement would include establishing optimized IT Infrastructure, making better decisions of IT investment, developing capabilities for inherently agile IT workforce – learning, growing and changing as the requirements of MP Police evolve to unlock and leverage maximum value from IT function

The overall scope of the work of the vendor can be divided under the following heads:

A. Application Customization and Implementation

1. Development of the Project Implementation plan

Designing a project implementation plan is very important step as once the systems are implemented the changes are very expensive. While developing a project implementation plan, first step is to define the project objectives. The consent of all the stakeholders

(members, staff, everyone) shall be obtained on all the project objectives and benefits. Measurable success indicators would be defined to monitor the progress. A project team shall be established which will be involved in preparing the plan and overseeing the implementation, interacting with external developers, consultant, members and other stake holders. Tasks required to attain each objective shall be identified. Also the risk areas shall be identified and various measures would be considered to minimize risk. References to other key documents shall be defined such as risk assessment document, training plan, and software testing plan etc. The main requirements of the system shall be identified i.e. hardware, operating system, access levels, usability requirements. A backup system shall be established so that if something goes wrong with the new system during these phases, no data would be lost and cooperative organizational operations will continue to operate smoothly. A training plan shall be developed for staff and members. The project plan shall be prepared and budget shall be defined. A participatory monitoring and evaluation system shall be established to monitor the project implementation performance.

2. Supply, Installation, Configuration & Customization of ERP Solution

The vendor would supply, install, configure and customize the ERP solution as per the requirements of MP Police. Configuring an ERP system is largely a matter of balancing the way the organization (MP Police) wants the system to work with the way it was designed to work. ERP systems shall include many settings that modify system operations as per the requirement of MP Police. The complete solution should be customizable as per the requirement of MP Police. Customization of ERP solution would improve user acceptance.

3. Application Testing

Once the application/solution is developed, the SI would prepare all necessary Test Plans (including test cases), i.e., plans for Unit Testing, Integration and System Testing and User Acceptance Testing. Test cases for UAT would be developed in collaboration with

domain experts/consultants identified by MP Police. The Test Plans should also specify any assistance required from MP Police and should be followed upon by the SI. The SI should have the Test Plans reviewed and approved by MP Police or its authorized representative. All test reports shall be shared with MP Police for necessary perusal.

4. Third Party Audit

The ERP solution shall be tested/audited by Third Party agency appointed by MP Police. Third party audit can be carried out any time in the life cycle of the project by auditing what has been done until that time and what is planned for the future. Ideally the audit would involve review either on a continuous basis or at several points during the project's life cycle. To this end the Third Party Auditor would need an audit framework that addresses the most critical implementation areas where often major risks are hidden, for instance: Project management, Quality management, Benefit management, Risk management, Change management. Audit of ERP solution would also provide assurance covering the area of application security, Infrastructure integrity, process integrity, implementation integrity, reporting etc.

5. Data Digitization and Migration

The vendor would be required digitize all the existing data so as to meet the requirements of MP Police. All the verified and digitized data will then be migrated into the new computerized system by the vendor. Additionally MP Police may also decide to migrate data from other existing systems operational in the state.

6. Product Documentation

The vendor would be required to prepare product document that describes the new product/ERP solution to its users. It may consists of the product technical manuals and online information (including online versions of technical manuals and help facility descriptions).

7. Integration with Legacy systems

The vendor would be required to establish legacy system integration with new system, new technologies, web applications, mobile applications as well as in the cloud. Legacy systems are old, inflexible technologies put into place to resolve previous business challenges. These systems, because of their long lifespans, tend to be fragile, obsolete, and difficult to integrate with new cloud and web-based services. The established legacy systems remain in use by organization because legacy system replacement is an extensive and expensive process.

B. Training and Capacity Building

Training and Capacity Building is a highly critical component of MP Police. The objective of MP Police Training and Capacity Building (CB) initiatives is to equip the direct users and other stakeholders of MP Police with the right skills, and knowledge to optimally use the IT solution being implemented. The detailed scope for training is given in section 4.3 above. The training and capacity building shall also include:

1. Conduct of Workshop/ Hands on training
2. Preparation of Online training modules
3. Imparting of regular refresher trainings

C. User Support and Maintenance of ERP application for 5 years

1. Application monitoring and Compliance to SLAs

The vendor/implementation agency shall monitor the new application on continuous basis and shall maintain compliance to all the SLAs (Service level agreement) as per the agreement between implementation agency and MP Police.

2. Application support including modifications and integration with future systems

The implementation agency shall provide the required support for any modification/customization in the new system. It should also ensure its integration with the future systems/technologies so as to meet the requirement of MP police.

3. Bugs / Fixes Management

The implementation agency would be required to identify and fix the bugs in the application. One of the most common applications of bug fixes is a technical protocol that is used to identify various types of bugs, so they may be effectively resolved. The type of system used in many organizations is known as an "open ticket" system, where a bug is identified with a certain number, and a record is "opened" on that particular bug. Accurate documentation requires filing any changes or events that relate to the open ticket until it is eventually resolved with a bug fix. Such record keeping helps in resolving technical issues that can plague the new product or new system during its journey from early development to eventual release.

4. Software Change and Version Control

The implementation agency shall establish software change and version control system/mechanism for the new developed solution. Software change and Version control systems are essential for any form of distributed, collaborative development. Whether it is the history of a large software development project, the ability to track each change as it was made, and to reverse changes when necessary can make all the difference between a well-managed and controlled process and an uncontrolled 'first come, first served' system. It can also serve as a mechanism for due diligence.

5. Maintenance of Configuration Information & System documentation

The implementation agency shall be required to update and maintain the configuration information and system documentation so that it can be referred/used in future, if required.

C. Data Center hosting, Collaboration and Networking

The implementation agency shall be required to establish the following:

1. Hosting at Data Center and Disaster Recovery Center

2. Redundant Network connectivity from Data Center to DR and MP Police offices

3. Provision of security infrastructure including IDS/IPS/ Antivirus etc.

4. Provision of Video Conferencing Solution

5. Provision of mailing solution

6. Provision of Enterprise Asset Management including help desk software

D. *Operations and Maintenance*

The implementation agency shall be required to perform various activities as part of operations and maintenance those include:

1. Data Center and DR operations including security, backup and storage management.

2. Network Management

3. Physical Infrastructure Management and Maintenance services

4. Support Services such as Help Desk, eTendering,

5. Facility Management Services

2.2. Project Phasing Strategy & e-Governance Roadmap

Following activities would be performed for project execution.

Stage	Activity Type	Descriptive
Phase I	Analysis and Design	• Planning and Requirement Analysis (SRS) • System Design – High and Low Level Design • System Design – Detailed Test Plan

Stage	Activity Type	Descriptive
Phase II	System Development and Testing of Portal, DMS, HR, KM and Finance Modules	• System Development – Portal and DMS • System Testing – Portal and DMS • System Development – HR/Payroll/KM • System Development – Finance • System Testing – HR, Finance, KM • Partial DC/DR Implementation for hosting Portal & DMS • System Testing – HR, Finance, KM, DMS, Portal Integration testing and UAT
Phase III	System Development, Testing and Deployment of Application with all modules	• System Development – PM and all other modules (e.g. GIS) • System Testing – Unit and Integration • DC/DR Implementation

Stage	Activity Type	Descriptive
		• Pilot PIU/Remote office hardware Implementation • System testing – User Acceptance and Security • Pilot acceptance
Phase IV	Handholding and Post GO live support	• Remaining PIU/Remote office hardware Implementation • Go-live and Deployment • Submission of Documentation • Handholding Period • Post Go-live Support • User Training

2.3. Data Digitization and Migration

The existing data of MP Police would need to be migrated to new computerized system. It would primarily include master data (e.g. employees, assets, chart of accounts, existing events and tour plans, etc.).

The process of data migration would cover:
• Extraction of data from the source system

- Data cleansing (e.g. standardization of coding structure / codification across MP Police, elimination of duplicate / redundant codes etc.)
- Transforming data to the format required by the target system (for this the appropriate queries / programs may be written either at the source system level or at the target system level)
- Loading data into the target system

The overall steps for performing data migration would include:

- Selection of the existing database table / files
- Selection of fields for which data to be transferred
- Selection of the proposed database table
- Mapping of existing database fields & field types with the proposed database fields / types
- Verification of existing data structure
- Transfer of data to the proposed database tables
- Verification of transferred data

Note: Please refer "Data Digitization and Migration Strategy" report for details

2.4. Project Timeline & Implementation Plan

Sl. No	Activity/Task	Timelines
1.	RFP Release and Invitation of Bids	RFP Release Date
2.	Receipt of Bids	RFP Release Date + 4 Weeks
3.	Project Award & Contract signing between MP Police and successful bidder	Project Start Date (RFP Release Date + 16 weeks)
4.	Project Planning	Project Start Date + 3 Week
5.	System Requirement Specification	Project Start Date + 14 Weeks

Sl. No	Activity/Task	Timelines
6.	System Design – High and Low Level Design	Project Start Date + 16 Weeks
7.	System design – Detailed Test Plan	Project Start Date + 17 Weeks
8.	System Development- Finance/Accounts/Admin	Project Start Date + 24 Weeks
9.	System Testing – Unit and Integration testing- Finance/Accounts/Admin	Project Start Date + 26 Weeks
10.	Partial DC/DR Implementation	Project Start Date + 28 Weeks
11.	Data Digitization & Migration	Project Start Date + 32 Weeks
12.	System Development – HR/Payroll/KM	Project Start Date + 28 Weeks
13.	System Development – HR/KM/File Management	Project Start Date + 30 Weeks
14.	System Testing – HR/Payroll/KM	Project Start Date + 29 Weeks
15.	System Testing – HR/KM/File Management	Project Start Date + 30 Weeks
16.	System Development – PM/All other modules	Project Start Date + 32 Weeks

Sl. No	Activity/Task	Timelines
17.	System Testing – Unit and Integration testing of all modules	Project Start Date + 40 Weeks
18.	DC/DR Implementation	Project Start Date + 40 Weeks
19.	Pilot PIU/Remote office hardware Implementation	Project Start Date + 40 Weeks
20.	System testing – User Acceptance and Security and start of Pilot	Project Start Date + 48 Weeks
21.	Pilot acceptance	Project Start Date + 56 Weeks
22.	Submission of Documentation	Project Start Date + 56 Weeks
23.	Remaining PIU/Remote office hardware Implementation	Project Start Date + 60 Weeks
24.	Go-live and Deployment	Project Start Date + 62 Weeks
25.	Handholding Period	Project Start Date + 84 Weeks
26.	Post Go-live Support	60 months after the final acceptance of the application
27.	User Training	As per requirement during entire duration of the project

Implementation Plan

The implementation will happen in two phases. The pilot phase and the rollout phase. All modules will be developed in parallel and all the modules will be implemented in the Pilot Phase before rolling out to the entire organization.

A. Pilot Phase: 48-56 weeks

The pilot phase is expected to start at the end of 48 weeks from Project start date and get completed by the end of 56 weeks. This will include identification and rectification of any bugs or absence of functionality reported during the pilot phase. This will also include the data entry and migration of data from the current Accounting system to new Accounting system. The final application training of all the employees covered under the pilot phase will happen during this phase.

B. Rollout Phase: 56 weeks onwards

At the successful implementation of pilot phase, the project will be rolled out to remaining PIUs. This will include rollout of infrastructure at the remaining PIUs and their final application training.

3. Project Monitoring Framework

The Enterprise Resource Planning (ERP) solution envisage is large and complex, and its implementation would require changes in the way Madhya Pradesh Police Department perform its functions. Introducing and integrating the solution into the organization is not only a significant financial investment but also a significant risk, which requires skills in change management, process redesign, and business project management.
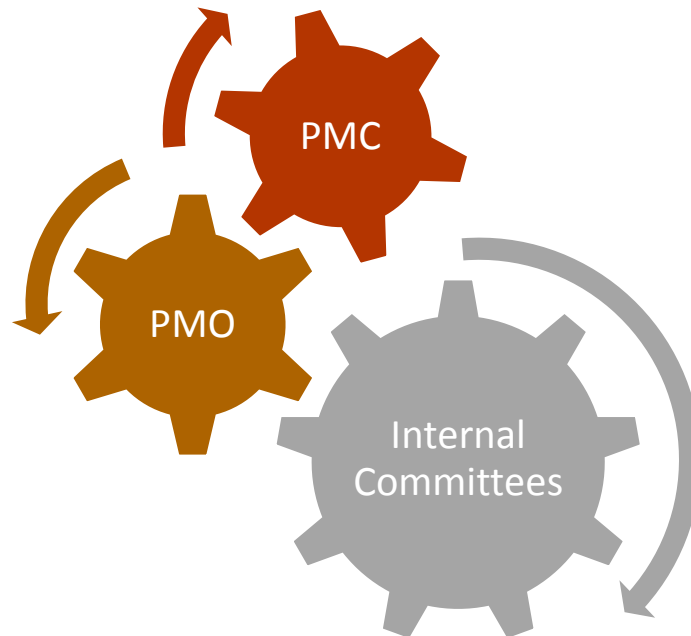
Below entities are recommended to be created for close management and monitoring of project implementation:

Internal Committees: Monitoring Committees are recommended at both PHQ and Zonal Level. Such Committees are to have senior officers as members and DGP/ ADG and IG level officer respectively as head. The PHQ level committee may approve any revisions in project timelines. These committees shall review and approve the deliverables submitted by the System Integrator's team through PMO.

Project Management Office (PMO): The System Integrator is to establish a Project Management Office at PHQ with representative(s) at Zonal Offices. It shall work closely with the internal committees, PMC and shall have the responsibility to adhere to the

project timelines. It shall communicate any risks/ challenges faced with Internal Committees and work towards their mitigation. It shall assign project tasks to the responsible work group(s), with established target dates and deliverables. Key members of this office shall include:

- Project Director
- Project Manager
- Business Analyst(s)
- Technical Expert
- Change Management Expert

Project Management Consultant (PMC): The PMC team shall be from a Project management consulting agency which shall providing support to MP Police Department during the implementation of the ERP project.

The PMC will be responsible for:

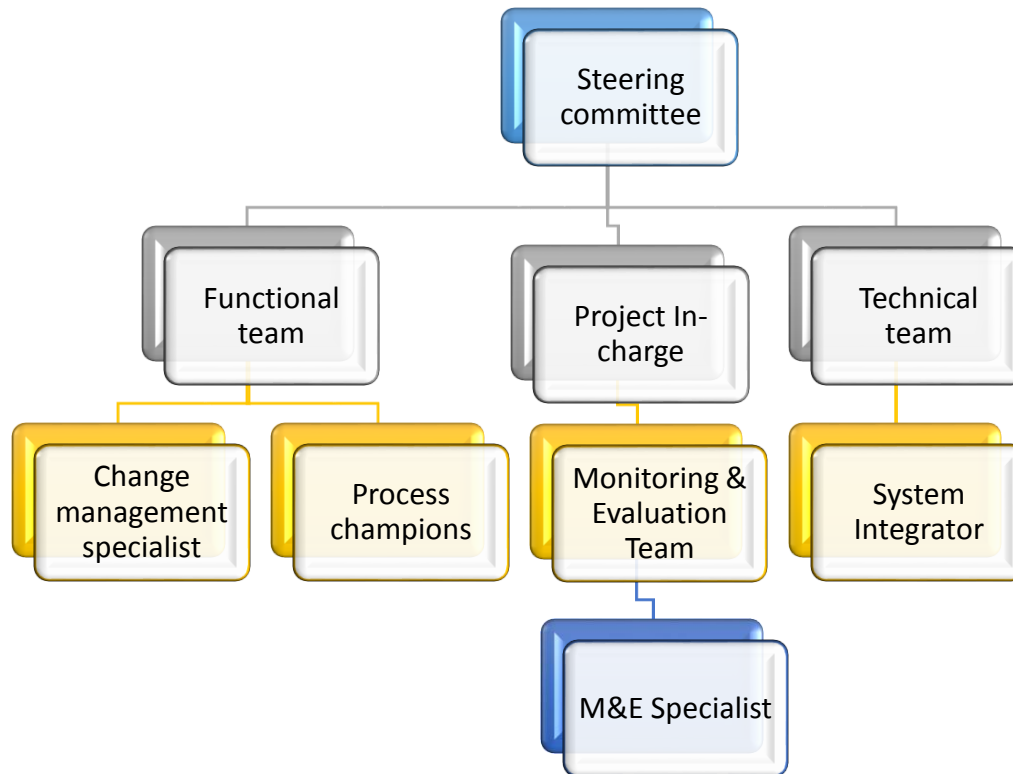a) Monitoring the Installation, Commissioning and Testing of ERP Solution by System Integrator;

b) Monitoring and Enforcement of SLAs during operational period;

c) Scrutinizing the reports & bills and recommending imposition of penalties and payment of bills etc.

The Project Management Consultant team shall include:

- Project Manager
- Solution Architect
- Information Technology Expert
- Consultant(s)

Proposed Governance Structure at district level:

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                          ┌──────────────┐
                          │   Steering   │
                          │  committee   │
                          └──────┬───────┘
          ┌──────────────────────┼──────────────────────┐
  ┌───────────────┐      ┌───────────────┐      ┌───────────────┐
  │  Functional   │      │ Project In-   │      │  Technical    │
  │     team      │      │   charge      │      │     team      │
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┌──────────┐ ┌──────────┐ ┌──────────────┐      ┌──────────────┐
│ Change   │ │ Process  │ │ Monitoring & │      │   System     │
│management│ │champions │ │  Evaluation  │      │  Integrator  │
│specialist│ │          │ │    Team      │      │              │
└──────────┘ └──────────┘ └──────┬───────┘      └──────────────┘
                                 │
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                          │ M&E Specialist│
                          └──────────────┘
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The team will be responsible for the following:

- Setting strategic direction for ICT initiatives
- Provide guidance for ICT project delivery
- Provide approval for new ICT initiatives
- Resolve conflicts/ issues
- Provide recommendations on project approaches and strategies and opportunities for project planning and implementation
- Review and appraise the progress of ICT initiatives
- Review the fund requirements for various ICT initiatives and take decisions on fund allocations

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