# **GLOBAL PROJECT MONITORING SYSTEM**

A Comprehensive Integrated Global Project Monitoring System (GPMS) is essential, wherein projects being executed across the municipalities in the state can be tracked digitally online. To collect project information using advanced GPMS mobile technologies. The system aims to create a platform for systematic, effective and efficient monitoring of projects to ensure compliance, leveraging the latest in distributed data processing, cloud computing, E-Mail/SMS communication, Geographical Information Systems and the best practices in project management & monitoring.

GPMS-CRMS for citizen, complainant, company, correlating, countries, communication and task management monitoring system, for getting inputs for Matrix management system, document management system, for data validation, annotation, indexing and moving this data information on real-time into the GPMS cloud with secured access from anywhere. This enables for organization for communicating directly with the employees for capturing specific project related information.

GPMS with REMS, A Project Management Framework for Project monitoring, an end-to-end solution for any Government/Private Corporation to manage their project's online, to get real time information updates from all their stake holders that also acts as a Multi-Jurisdictional investigations system that helps to track progress of public funded projects from conception to completion. World's best practices on how to get things done are used for processing the information, as it gets validated, collated, analyzed for transforming to actionable intelligence.

**GPMS-E-File Management** for document management, Tagging, Indexing and correlation through digitization from scanned images etc. and moving files online for comments or approvals and for tagging the additional evidences extracted from the unstructured images or documents or videos or audio's etc. that could provide more processed information for action as the information continuously gets collated and analysed and presented to domain experts for their inputs and interventions.

**GPMS-WIKI** a Public page integrated with Face Book for any Government department to display their project status for public to view, send their feedback, comments, complaints or upload the photos, videos, audio's, documents, etc. as it serves as a knowledge management portal through which capacity and skill building interventions for all stakeholders are made possible

**GPMS-Task Management** for accessing from any mobile devises or phones for Project monitoring from site online through Mobile phone to assist task teams supervision and also makes it easier for citizens to hold governments and private actors accountable.

**GPMS- Tally integration** for any Government department to scan and upload their vendor bills online, digitize and post to Tally for generating various Tax compliance reports or mismatch tax wise reports etc. and tax compliance reports

**GPMS-Beneficiary Monitoring System** for online application forms and approvals of central/state/ Govt. employees and this enables a single view or this individual specific all scanned documents including medical reimbursements records, to be uploaded or viewed online.

GPMS-Project Vigeye for complaint management system for any Government Project / Citizen participation in the project that enables evidence capture and transmission from site that also empowers citizens to keep an eye on the corruption taking place in their neighbourhood or geopraphical locations enabled to capture Geo-stamped information on corruption and pass them onto a central server in the cloud and then central processing then takes over after acknowledging and giving a complaint ID to the sender for tracking progress achieved in processing the information and the citizen can keep track of the complaints online

**GPMS- Online Survey System** for any Project feedback for conducting Implementation Impact Analysis Studies integrated with Latitude / Longitude captured automatically, from Hand Held/Mobile Devices to Capture Data from Ground;

**GPMS-Team one World** for global stake holders participation using this advanced Information & Communication Technology in improving Vigilance and Public Works Monitoring with the active involvement of concerned global citizens and to build up an international case on-line with inputs directly coming from participative countries' vigilance officers & citizens as voluntary or mandatory participation.

Finally this will be the **Central Repository** for Collection, Collation, Analysis and Actionable intelligence for action and feedback for loop Convergence of ideas from GPMS, Cloud computing, crowd sourcing, financial accountability, actionable intelligence, data is converted into information for action, when compliant is converted into actionable intelligence became knowledge as the integrated reports can be generated for comparing original project schedule and result of analysis by searching of metadata across multiple sources.

## The GPMS has two basic features

- a) To collect and transmit information from field in real time to a central server.
- b) Information from field will be collected using hand held devices/ mobile phones.
- c) Information collected can be a photo, video, audio, note or a survey/ inspection form.
- d) Information collected is to be stamped with Geo Coordinates and time.
- e) Information collected will be encrypted and instantly transferred from the device to the centralised server using network connectivity of the device.
- f) Information can be captured and transmitted by Field officers, inspection teams, Volunteers, NGOs etc.

### 1. To analyze field information

- a) The information collected from the field will be analysed for various parameters designed for cost overrun, time overrun and quality checks.
- b) Exception reporting can be auto generated for senior officers to visualize.
- c) To give specific tasks to collect field information

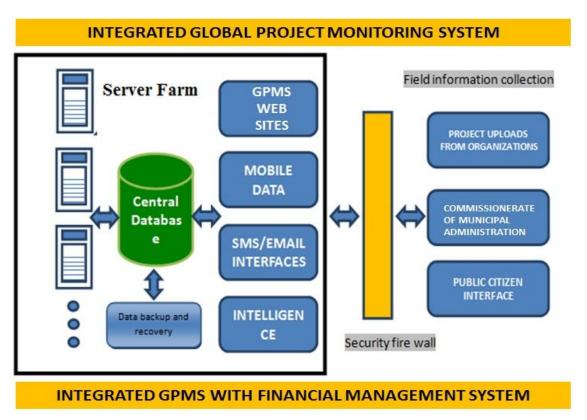
### 2. The other features of GPMS include

- a) **Mobile Task module** in the GPMS provides for a mobile task system, using which the Commissionerate of Municipal Administration can interact with the organization staff, the citizens and stake holders monitoring the project and the CMA office to gather first-hand information through mobile phones and directly upload the same into Integrated GPMS.
- b) GIS module in GPMS where project data can be analysed & viewed in a geographical context. The geo-stamped data coming from the mobile task system, GPMS citizen complaints from GPS-enabled mobiles, geo-stamped data from citizens and stakeholders etc. are mapped into a GIS software such as Google Earth to view & analysis it geographically.
- c) **SMS Communication Module** to facilitate SMS interface in seamlessly integrating into GPMS such that the Municipality engineers, CMS team can send bulk, organisation-level, project-level, team-level or individual-level communication through SMSes.

# **GPMS Cloud Computing Infrastructure**

The proposed system has to process 1000's of projects on a daily basis, from initial data entry to final intelligence analysis, managing diverse communication channels such as websites, mobile data, Email and SMS, providing a seamless and powerful environment for vigilance data processing, communication, monitoring and management.

Such a system of state level scale requires sophisticated and scalable compute infrastructure. The advancements in cloud computing and data centre infrastructure make it possible to meet such requirements. The following diagram illustrates the GPMS-FMS cloud computing ecosystem,



While CMA may effectively scale up the existing internal IT infrastructure to meet the requirements, it may be easier and cost effective to leverage existing nation-wide infrastructure providers such as PSU's ITI data centers. In this model the CMA can utilize the IT infrastructure for GPMS on rental/lease basis, greatly reducing the cost overhead and day to day management.

# **Municipality Organization interface**

The Integrated GPMS provides simple, effective website for each municipality organization to upload their project data online. The website is designed such that the web form, through which the project details are to be entered, is designed specifically for that municipality organization engineers or stakeholders or citizens, making it easier for them to enter the data.

### Some of the GPMS-FMS features include:

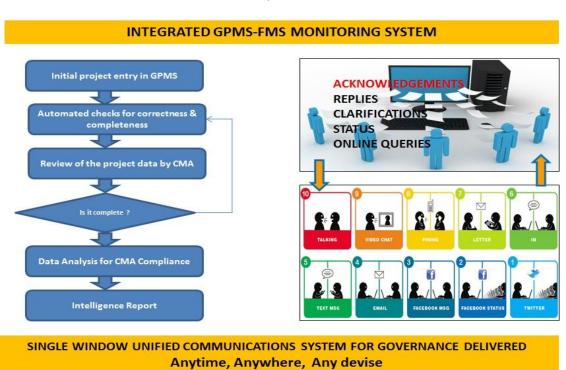
- 1. Work Code / Job code / project code with Geo Tag Information along with Lat long Integration
- 2. Flexible to add forms / including survey forms. For specific department Requirements with database ( Legacy / current online data ) .
- 3. Metrics Management system,
- 4. Stake holder management
- Financial Management (integration with financial package) for trail balance and balance sheet generation with integration of P codes, R codes, Budget heads with provision of Bank reconciliation and integration of payment gateway
- 6. Complaint management system, online help desk, system to escalate to different levels of hierarchy.
- 7. Real time monitoring system to upload photographs, videos, audio with geo stamp information to the respective project.
- 8. Task Management Online ( Web ) or Mobile devices
- 9. Scan and Data Entry for digitisation of unstructured to structured data.
- 10. Beneficiary monitoring system integration for tracking programs and schemes
- 11. System should bring out tax compliance reports , MIS specific to municipalities reports in real time.
- 12. System is be able to bring reports based on physical progress versus financial progress
- 13. System integrated with social media for public participation in governance (Ex Face Book)
- 14. Web Analytics to track visitor's traffic on related municipality public page.
- 15. Flexible User management to provide "n" users online with audit trail capture.
- 16. Customised Source code will be handed over to the respective state CMA
- 17. Capability to integrate Third party Tools , API per municipality requirements like Digital Signature, Biometrics , OTP, encryption tools, GIS etc.
- 18. Capability to integrate multiple department databases format.
- 19. Medical Reimbursement for Employees / stake holders integarted
- 20. Dynamic real-time display of information online for public viewing / decision making.
- 21. Stake Holder / Investor relationship monitoring capability (SHIRMS)
- 22. Multi Lingual Support enabled
- 23. All State Municipalities and their respective departments can be integrated into GPMS-FMS
- 24. System capable of creating central repository for the State CMA.
- 25. System flexible enough to handle any type of crowd sourcing / domain experts activity.

The projects data can also be uploaded into the system through excel sheets in specified format as well into GPMS, it undergoes a manual/automatic check for completeness and correctness. The CMA or related Municipality office interacts with the project staff to ensure that the uploaded data is complete in all respects. The project staff may upload additional data, scanned documents, bills etc. to ensure that all the information mandated by the CMA is uploaded into the system.

Once the project data reaches a stage where requisite information is received the system goes for further processing. The data undergoes a rigorous stage of analysis,

- 1. Cross-correlation of financial transactions with bank transactions
- 2. Analysis to see whether the project complies with all the CMA mandates
- 3. Evidence collection & correlation from external agencies involved in the project

### The below flow chart illustrates the workflow,



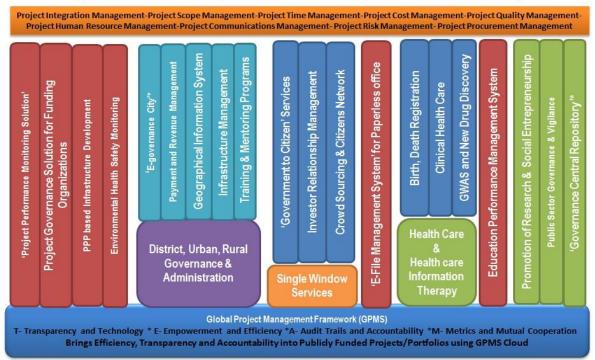
All the information about the project is kept inside the system in a closed loop to ensure security & completeness.

The CMA staff and the related municipality engineers or stake holders may employ multiple communication channels such as E-Mail, Online help, SMS, Mobile task system, etc., to ensure that all the project data is properly populated into the system.

The intelligence report created after the above steps highlights the violations of CMA or municipality guidelines, anomalies found in the tendering & work execution processes, issues with financial transactions, etc.

### The benefits of GPMS-FMS is to collect and disseminate data in a way that,

# Integrated GPMS e-Governance Cloud Computing Solutions that gets correlated constantly to provide reliable information for actionable intelligence



National Data Sharing and Accessibility Policy-2012 (NDSAP-2012)

Department of Science & Technology Ministry of science & Technology Government of India enabled in GPMS....The National Data Sharing and Accessibility Policy will apply to all data and information created, generated, collected and archived using public funds provided by Government of India directly or through authorized agencies by various Ministries / Departments/Organizations / Agencies and Autonomous bodies.

- 1. Collection of data from municipality engineers, stakeholder organizations, employees and citizens in a systematic way
- 2. Automatic Exceptional reporting makes it easy for the decision makers to pinpoint the missing information related to the project or issues
- 3. Comprehensive cross indexing of information, so that all relevant information for a particular data item can be accessed online and immediately
- 4. Complete information is available for any issue under analysis
- 5. All the glaring issues such as mismatches between two data items that are expected to be the same (or different), are flagged off appropriately
- 6. Every piece of data has an owner, with name & phone number, so that the data can be verified again if necessary

# **Some of the Integrated GPMS Unique features:**

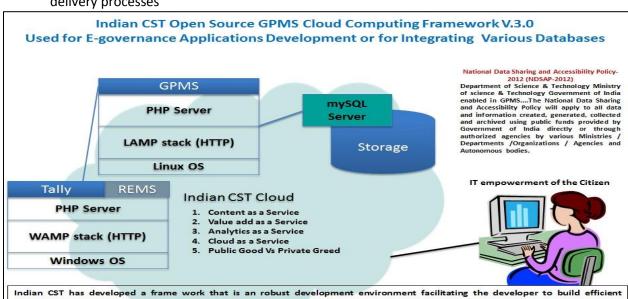


For more details visit: <a href="www.indiancst.in">www.indiancst.in</a>, <a href="www.etamine.in">www.etamine.in</a></a>
Empowering 800 Million Indians-Using Technology to Bring Efficiency, Transparency and Accountability

# Expertise available related to the project available at Indian CST Providing Technology, Project Coordination, Project Management and Monitoring relevant to the project Providing GPMS secured cloud setup, customization and maintenance Providing survey forms, with clear demarcation of field questions and questions to be filled up in the field Providing completed surveys to be uploaded into GPMS Suggesting mobile devices, Tablet PC and GPRS- enabled sim cards for each mobile and end-to-end solution for the survey system Providing Data Center Infrastructure and Bandwidth as required for the project Overall administration of the project online Setting up, customizing and operating GPMS-REMS for the project Report generation for automatic statistical analysis Setting up & operating online help desk to provide field support Data backup and recovery will be updated as mentioned by Client Providing various Databases Integration into GPMS platform Providing customized mobile survey software Providing Backend software for mobile data processing, field database update Providing Mobile system tech online support Providing Data backup & recovery for mobile data and other data collected online

# Citizen's GPMS on Mobile Phone Project Monitoring Task Management Progress / Status Report Documents Upload Survey Forms Contacts Emails Help Desk / Complaints SMS

- 1. **Indian CST GPMS-FMS Platform integrates** various Tools & Techniques for Data Collection, Analysis with Correlations for Decision Making.
- 2. **GPMS facilities Municipalities or enterprises** whose requirements are not covered by standard software / platforms for real time monitoring.
- 3. Integrated GPMS-FMS has the capability to integrate any legacy databases or propriety databases and provide specific or customized MIS reports as there is a critical need for developing a centralized database on various issues related to urban areas such as demographic profile, establishment and functioning of the urban local bodies, service levels and availability of infrastructure, revenue mobilisation, etc.
- 4. Integrated GPMS-FMS Cloud computing platform can be easily customized and used for Registration and Issue of Births/ Deaths Certificate, Payment of Property Tax, Utility Bills and Management of Utilities that come under the ULBs, Property Tax, Water Supply and Other Utilities, Grievances and Suggestions, Building Approvals, Procurement and Monitoring of Projects, E-procurement, Project/ward works, Health Programs, Licenses Solid, Waste Management, Accounting System, Personnel Information System
- 5. **Integrated GPMS has the inbuilt capability to create forums** where different stakeholders can articulate their demands for better service delivery and governance levels.
- Integrated GPMS-FMS enables modern and transparent budgeting, accounting, financial
  management systems, designed and can be adopted for all urban services and governance
  functions
- 7. **Integrated GPMS-FMS enables City-wide framework** for establishing planning and governance that can become operational
- 8. **Integrated GPMS-FMS enables all urban residents** to obtain access to a basic level of urban services
- 9. **Integrated GPMS-FMS enables local services and governance** conducted in a manner that is transparent and accountable to citizens
- 10. Integrated GPMS-FMS e-Governance cloud computing solution or applications can be introduced in core functions of ULBs/para-statals resulting in reduced cost and time of service delivery processes



Indian CSI has developed a trame work that is an robust development environment facilitating the developer to build efficient applications by providing numerous built—in functions to perform various operations like data insertion, deletion, updating /modification etc. The framework is based on MVC architecture, and the main objective of MVC architecture based framework is to separate the Business logic and Application Data from Presentation Data to the User. The Indian CST frame work has enhancements in terms of Performance, Scalability incorporating latest Jquery components. The cloud computing applications can be developed using the Framework is platform independent; is can be easily deployed on LINUX or Windows Operating Systems.

GPMS-FMS for Citizen Complaint Monitoring / Management System for any State Government or municipality departments interface to Project / Citizen participation into the project that enables evidence capture and transmission from site that also empowers citizens to keep an eye on the project progress taking place in their neighbourhood or geographical locations enabled to capture Geo-stamped information on the specific project and pass them onto a central server in the cloud and then central processing then takes over after acknowledging and giving a complaint ID to the sender for tracking progress achieved in processing the information and the citizen can keep track of the complaints online, complainant, company, correlating, countries, communication with task management monitoring system for getting inputs for Matrix management system, document management system, for data validation, for annotation, for indexing and for moving this data information on real-time into the GPMS cloud with secured access from anywhere. This enables for organization for communicating directly with the employees for capturing specific project related Information for capturing and maintaining on a state municipality centralized repository of all stake holders records information database as its increases quality and effectiveness of communications facilitates anytime, anywhere connections for recording complaints, problem, questions or other queries for connecting inside the company, organizations, departments, or connecting with outside partners from multi-functional help desks.

Information Management with Complaint Management System is the process of managing all aspects of interaction with whistle blowers, complainant reporting of corruption by citizens, officials that CMA has with, by extending Global Project Management System to Elected Representatives, Project directors of DUDC, Commissioners, Chief Officers, Superintending Engineers, Executive Engineers, AEEs, Health Officers, Environmental Engineers, AEs, JEs, Senior Health Inspectors, Revenue Officers and Community officers, Revenue Inspectors, Accountants, Assistants, Junior Health Inspectors, Bill Collectors, Community Organisers, Water Operators and Pourakarmikas or for everyone in their respective organizations and partner ecosystems, will enable them for direct stakeholder's interactions, to monitor projects in their zones, locations or wards or and analyse complaints as it will be easy for the stakeholder to complain and stake holders should be made aware of the processes and this system available to them.

### To fulfil these goals, organizations need to follow these steps:

- 1. Capture and integrate both the internal and external data into a comprehensive view that encompasses the whole organization.
- 2. "Mine" the integrated data for information.
- 3. Organize and present the information with knowledge for decision-making.

### Case Study

### Global Project Monitoring System (GPMS), Indian CST, India

**Background**: Indian CST has developed a distinctive online Project Management platform called GPMS (<a href="www.indiancst.in">www.indiancst.in</a>) in 2009 for programme and project monitoring. Majority of the users are from public sector.

### **Features at a Glance**

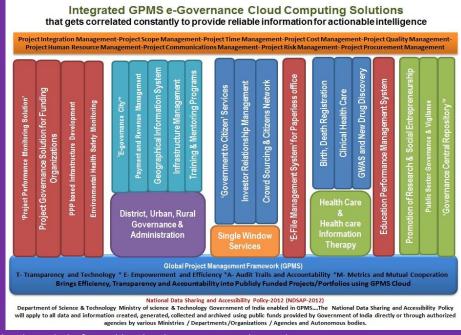
- ✓ Remote monitoring process for ongoing projects at multiple locations
- ✓ In-built escalation mechanism where superiors can quickly identify non-conformances and initiate interventions leading to prevention of delays and cost over runs.
- ✓ Allows graphical information exchange including videos and photographs
- ✓ Conversion of unstructured data to structured data, while maintaining their integrity
- Real time communication and information sharing
- ✓ Accessibility from anytime, anywhere, any device

### **System Outcome:**

- ✓ Improve monitoring and performance management of projects
- Acts as a useful decision support system based on information from the field
- ✓ Improve transparency and accountability of projects undertaken

# **Strategic Development Decisions:**

 ✓ Global Project Management
 Solution is offered as a management tool that will



introduce high end technological platforms like cloud computing and crowd sourcing.

### Impact:

- ✓ Used across a range of stakeholders including Ministries, Departments and District Municipalities
- ✓ Transparency and accountability through field data capture
- ✓ Improve the efficacy of the delivery of projects and eliminate corruption

The core strength of the GPMS is the online availability of real-time data that gets correlated constantly to provide reliable information and actionable intelligence. The GPMS-enabled remote monitoring process for ongoing projects at multiple locations leaves little scope for inefficiency or mishandling of projects and the funds associated with them, irrespective of the position in the government administrative hierarchy.

# Global Project Management/Monitoring Solution / System Functionalities

SI.	Problems as	Requirements	Functionalities	Solution	Deliverables
no	summarized				
	Revenue Section	Assessments of Property and Vacant Land are happening separately, which can be combined.      There is no integration between various modules and functions within the modules.      Payment processes for each of the services is different and often faulty.      Single point for information      Centralized Control for data dissemination      Easy search for data      Seamless display, query	A Cloud Computing Integrated project monitoring system with financial management with remote eye monitoring, communications management and monitoring, public grievances monitoring with a dynamic single point dashboard representation for analyses with GIS location on map with Integrated dashboard with Role based user with Metadata management with Query System Unified Communication Integration.	Integrated Cloud Computing Global Project Monitoring System with Financial Management Solution (GPMS-FMS) For Determining geographic distribution and for correlation of payments, receipts, works, bank reconciliation online, Property Tax Assessment, Public Grievances System, Solid Waste Management, Project Management System with Integrated MIS customized dynamic reports enabled online with Source Code handed over to GOI department or State Government department  Ability to integrate heterogeneous App Silos	The Integrated GPMS platform enabled with remote monitoring process integrated with task management for ongoing projects at multiple locations based on flow of realtime data, quality geo-stamped information and analytics leaves little scope for inefficiency or mishandling project. And this ensures that no one in the government administrative hierarchy-including the heads of field organizations and their bosses in the administrative Ministries/Departments-can escape from their individual responsibility and accountability in cases of underperformance and / or misuse of funds in project/program implementation. The data collection will be focused on for gathering information at source as it is the necessity to integrate all information and for benefit of the departments, organizations, citizen's services etc.
	Accounts Section	Payments are delayed to Vendors and other personnel.  Long time in budget preparation  Single point for information  Centralized Control for data dissemination  Easy search for data  Seamless display, query	Integrated dashboard  Role based user  Metadata management  Query System  Payment Gateway	Requirement Elicitation based decision support system for approving project and budget sanctions.  Bidirectional payment integration with Project based milestones through Payment Gateway	GPMS incorporates World's best practices on how to get things done are used to process the information, as it gets validated, collated, validation of bills and photos – Proposed "Crowd Sourcing" Process analyzed and transformed to actionable intelligence. Instant availability to replicate success from others, ability to correlate information, lower cost of technology infrastructure & foundation technology, capacity aggregation, integration of disparate technology & resources

Engineering Section	Manual process     Delay in Service Delivery	Integrated dashboard for ( Site monitoring )	GPMS E-File management , Digitization, content	The core strength of the GPMS-FMS-REMS is the online availability of real-time data & quality information in intelligent and customised
	<ul> <li>Inability to track application</li> </ul>	Cataloging of project request	sharing, DMS.  Pre and post	formats, leading to less error- prone and speedier decision making initiatives being
	Multiple visits by citizens for availing the services leading to additional workload	Assessment and approval mechanism system.	implementation Audit ( Surveys , checklist, etc )  Cataloging and requirement fact book generation	prompted at every level with an in built escalating mechanism. The GPMS also ensures that the superiors/supervisory officers can quickly identify the non-
	for both citizens and employees	Role based user  Metadata	Project prioritization	conformances and initiate interventions leading to appropriate preventive and
	Single point for information	management	decision support system  Seamless portfolio	corrective actions in time with all stakeholders being suitably kept informed.
	Centralized Control for data dissemination	Query System  Content	hierarchy Parent – Child Link	Collection, Collation, Analysis and Actionable intelligence for
	Easy search for data	Management, DMS, Knowledge	Evaluation Based Metrics System	action and feedback for loop Convergence of ideas into GPMS, Cloud computing, crowd sourcing, financial accountability, actionable
	• Seamless display, query	Management, E-Filing & Sharing	Online centralized Help Desk	intelligence, data will be converted into information for action, when compliant is
		Evolution of Forms and Functions	Security and User Management	converted into actionable intelligence became knowledge.
		Templates Forms and constructs for tactical needs	Dynamic and Adaptive survey capability with GPS data capturing	
Town Planning Section	Multiple visits by citizens for availing the services leading	Integrated dashboard	Cloud computing based GPMS-FMS	GIS module in GPMS where project data can be analysed & viewed in a geographical context. The geo-stamped
	to additional workload for both citizens and	Role based user  Metadata	Access anywhere and any time	data coming from the mobile task system, GPMS citizen complaints from GPS-enabled
	employees	management	Ability to Integrate with GIS database	mobiles, geo-stamped data from citizens and stakeholders etc. are mapped into a GIS
	<ul><li>Manual process</li><li>Delay in Service</li></ul>	Query System  Scheduling, Tracking	Help Desk with CRM facility for end user	software such as Google Earth to view & analysis it geographically.
	Delivery	and escalation	Dynamic and Adaptive survey capability with	
	Inability to track application	Milestone based bidirectional communication system among all stake holders	GPS data capturing	
		Online and Offline Survey forms with		

			T	
		geo-tagged based information captured		
		imormation captured		
Public Health Section	Increased     workload	Integrated dashboard	GPMS enables end to end social services delivery and monitoring services	Determining geographic distribution of disease Analyzing spatial and
	<ul> <li>Manual process</li> <li>Delay in Service Delivery</li> <li>Single point for information</li> </ul>	Role based user  Metadata management  Query System  Complaints management system	Resource Management  Dynamic and Adaptive survey capability with GPS data capturing  Web based and Mobile based compliant registration system	temporal trends Mapping populations at risk  Stratifying risk factors  Assessing resource allocation  Planning and targeting interventions  Monitoring birth and death, diseases and interventions over time  Public health informatics
	<ul> <li>Centralized Control for data dissemination</li> <li>Easy search for data</li> <li>Seamless display, query</li> </ul>	management system		can add considerable value to the successful planning, execution and evaluation of public health programs
Establishment Section	Manual processes with respect to service delivery to employees resulting in delays     Single point for information     Centralized Control for data dissemination     Easy search for data     Seamless display, query	Integrated dashboard  Role based user  Metadata management  Query System  Content Management system / CRM for public information		Integrated GPMS-FMS Cloud computing platform can be easily customized and used for Registration and Issue of Births/ Deaths Certificate, Payment of Property Tax, Utility Bills and Management of Utilities that come under the ULBs, Property Tax, Water Supply and Other Utilities, Grievances and Suggestions, Building Approvals, Procurement and Monitoring of Projects ,E-procurement, Project/ward works, Health Programs, Licenses Solid, Waste Management, Accounting System, Personnel Information System

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Miscellaneous	Office conditions and infrastructure (lack of good Table, Chair, Seating, general office ambience, restrooms, dining place, etc.) is not very conducive to work      Training is inadequate on various topics      Lack of resources such as Computers, paper for printing, toner/cartridges, etc.	Integrated dashboard  Role based user  Metadata management  Query System  Inventory status reporting system  Online Purchase Order requisition and approval System		GPMS-Global Project Monitoring System is a new Project Monitoring Tool with Task Management System for Project Monitoring online through Mobile phone to assist task teams supervision, Online Survey System for any Project feedback for conducting Implementation Impact Analysis Studies integrated with Latitude / Longitude captured automatically, from Hand Held/Mobile Devices to Capture Data from Ground, an end-to-end solution for any Government/Private Corporation to manage their assets, project/s online, to get real time information updates from all their stake holders.\  Periodical training programs, fortnightly reviews meeting and status updates will be conducted on regular basis for all the engineers, staff and officers by fixing responsibility for initiating the majority of actions required to guide the projects and programs once they get started on how to report current progress, how to update status or will be asked to add missing data information, validate their data, on how to generate their datily / monthly / quarterly types of reports online
Commissionerate of Municipal Administration	1. Birth and Death Registration 2. Property Tax 3. Water Charges 4. Professional Tax 5. Non Tax 6. Financial Accounting System (FAS) 7. Personnel Information System & Pay Roll 8. Building Plan Approval System 9. Grievance Records 10. Solid Waste Management 11. Dangerous & Offensive Trade License	Integrated dashboard  Role based user  Metadata management  Query System  Project Close Out and Knowledge Management  Change Order Management	Integrated Cloud Computing Global Project Monitoring System with Financial Management Solution (GPMS-FMS) For Determining geographic distribution and for correlation of payments, receipts, works, with bank reconciliation online, Property Tax Assessment, Public Grievances System, Solid Waste Management, Project Management System with Integrated MIS customized dynamic reports enabled online with Source Code handed	The core strength of the GPMS is the online availability of real-time data that gets correlated constantly to provide reliable information and actionable intelligence. The GPMS-enabled remote monitoring process for ongoing projects at multiple locations leaves little scope for inefficiency or mishandling of projects and the funds associated with them, irrespective of the position in the government administrative hierarchy. Since there is an in-built escalation mechanism, superiors can quickly identify nonconformances and initiate interventions leading to appropriate preventive and corrective actions in time with

	Maintenance 3. Stores & Inventory 4. Movable & 4. Immovable 6. Properties	Dispute Resolution system  Complex crosshierarchies of various departments & agencies in government  Online Citizen information sheet Birth to Death  Centralised EMR —	over to GOI department or State Government department  Project progress Compliance monitoring system	all stakeholders being suitably kept informed. Thus our innovative, high-tech and simple-to-use system enabled by GPMS, empowers teams to deliver results efficiently and within cost-time-quality parameters prescribed.  GPMS enables real time Citizen Engagement & Feedback on outcomes and consequences of actions at each stage of the service delivery chain Connecting Policy Makers, Providers, Beneficiaries and their Voice that Enables Results Agenda,
18		offline and online		
		GPS data capturing		

# **Deliverables**

Integrated GPMS for GIS-based e-Governance Real Time Monitoring System with the following GPMS –FMS features will be integrated for any organization that gives connectivity to data sources, record level synchronization, search of metadata across multiple sources to access or use and those who want to bring Transparency in their existing systems: Highly Replicable Model, Potential to replicate this model at various sectors with adjustment to language and structure, across other states municipalities in India and across other countries for Data Utilization and Evidence-Based Decision Making.

- i. **GPMS-Global Project Monitoring System** an end-to-end solution available for any Government organization or department use to manage their projects online to get real time information updates from all their stake holders
- ii. **GPMS- E-File management** System available for any Government department to move files online for giving approvals or rejecting and for any BPO's to digitize data online just by viewing the scanned documents online.
- iii. **GPMS-Investor Relationship** Management System available for any Govt. ministry or department use to manage investors who have proposed to invest in the country, state etc., this helps them monitor, track communications, projects, various stages of municipality project or schemes or programs or investments, MSME's Schemes and grants, etc. acts as single window clearance system
- iv. **GPMS- Online and offline Survey System** with Geo tagging available for any Government Project or feedback for conducting Implementation Impact Analysis Studies integrated with Latitude / Longitude captured automatically for technologies, schemes, products, programs surveys undertaken etc., from Hand Held/Mobile Devices Capture Data from Ground; Beneficiary Verification System (Dashboard) hosts all Data and Metrics in a Central Location for dynamic real-time display of information online for public viewing / decision making.

- v. **GPMS- Task Management System** available for any Government Project monitoring online to use through mobile devises or phones to assist their task teams by having a wide array of reliable data to focus limited supervision capacity.
- vi. **GPMS- Environment Health Safety System** available for any Government Project monitoring remote sites with Video Surveillance and for monitoring medical reimbursement schemes online of the organization or project related stake holders, employees etc.
- vii. **GPMS-Compliant Management System** available for any Government Project or Citizen charter's use for brining in the public participation in this specific project or view status of complaints online.
- viii. **GPMS- Financial Management System** available for any Government department to Track their incoming all Receipts and outgoing Payments happening in real time along with Bank reconciliation enabled online.
- ix. **GPMS-Financial Document Management System** available for any Government department to scan and upload their vendor bills online, digitize and post to Financial Management system for generating various Tax compliance reports or mismatch tax wise reports etc.
- x. **GPMS-Public page integrated with Face Book** available for any Government department to display their project status for pubic in their particular location to view, send their feedback, comments, complaints or upload the photos, videos, audio's, documents, etc.
- xi. **GPMS- Stake holder Management System** available for any Government department to validate their company vendors, beneficiaries, organizations employees, NGO's, MSME's, etc. online and update the information in real time to improve governance and accountability, public voice in governance, public pressure, and civil society engagement: Information collected from the field can be made available through public sites to improve transparency on program performance and public voice in governance. Stake Holder teams can access the dashboard through the internet and engage in continuous supervision from their offices
- xii. **GPMS-Family Tree** available for any Government department or Individual to create or validate their tree information etc.
- xiii. **GPMS- Bullion Network System** available for any Intelligence agency or Government department to use enabled to track the stake holder network information related to that particular specific project
- xiv. **GPMS-Financial Transaction Tracking System** available for tax department or Investigating agency use for collecting details or evidence required of the particular transaction related to the individuals or organizations
- xv. **GPMS-Vault System** available for any Individual person or any Government department use to validate the repository based on the various integrated GPMS databases.
- xvi. **GPMS- Beneficiary Verification System** available for any Government organization department use to improve evidence based decision making by policy-makers; governance and accountability; continuous monitoring of progress towards output / outcome indicators and collection of reliable information from the field
- xvii. **GPMS for Municipalities** available for monitoring infrastructure Projects, GIS System for Road history, Property History, Advertising Hoardings, Health Information history, complaints and grievances history, Revenue and Expenditure history, etc.
- xviii. **GPMS for Finance Management System (FMS)** available for any Government department to track their General Payments and Receipts with Bank reconciliation and monitor them online.
- xix. **GPMS for Birth and Death Monitoring System** available for any Govt. health department use to track the specific event taking place in the particular location or for monitoring online or for collecting information or reports from various Hospitals, PHC's, Nursing homes, etc.
- xx. **GPMS for Education for monitoring students** available for any school, college, university or educational institutions etc. especially for introducing the examination reforms into their institutions for managing and monitoring all their examinations related activities online,

- digitization of their student answer books, then comparing the answer book information with their results declared etc. online ( very useful for Preliminary, High school, Pre-University, UG and PG )
- xxi. **GPMS** for **Health Information Monitoring** Cloud Based solutions available as hospital Information management, monitoring system for their patient/s to view their medical records online through secured access useful for any Govt. hospitals, PHC, country or any state etc.
- xxii. **GPMS-Connect** A cloud based video conferencing and surveillance online facility enabled for tracking projects online and for monitoring safety onsite
- xxiii. **GPMS Survey System** available for Beneficiary monitoring of BPL families along with their social-demographic details for online capturing of information or verification towards delivery of the Govt. funded schemes.
- xxiv. **GPMS for MSME** A cloud based solution available to monitor MSME programs and registrations online, Indian CST consultancy for preparing Business Proposals, Offering Video conferencing facility online, MSME GPMS IRMS customer relationship management system enabled to bring in the awareness and provide affordable computing to bring in the accountability.
- xxv. **GPMS-IRMS-CRM** cloud solutions with GPMS-E-File Management system for any Govt. organization or department for monitoring and recording interactions of all their Citizens charter services, etc.
- xxvi. **GPMS-Cloud computing** available for UID, programs, Schemes, Govt Fund, CSIR-Products and technologies monitoring services online.
- xxvii. **GPMS e-Governance Facilitation Council** Subject Matter Experts available from Indian CST as project management crowd sourcing services online, team compromises of Governance Experts-Retired IAS, IPS, IRS Officials, Bureaucrats, Judicial authorities, Public Sector & like-minded Public Servants etc., Domain Experts- Doctors, Engineers (All major discipline), Auditors, Charted Accountants, Lawyers, Project Management Professionals etc., Information Technology Experts, Specialized in e-Governance, Project Management, Cloud Computing, Mobile, Security Technologies etc., Media, Public relations, Coverage, Case Study, Publications etc. offered as consultancy services under Indian CST.

### For more details or for your requirements contact:

### Raja Seevan

Founder Trustee
Indian Centre for Social Transformation
A Public Charitable Trust

Email: rajaseevan@indiancst.in

Mobile:+91 9739047849, +91 9538874982

E-mail: rajaseevan@gmail.com

For more details visit:

www.indiancst.in, www.gpmswiki.org