Administrative Command & Control System

Gujarat CM Dashboard

Enabling government machinery for strengthening good governance

I am happy to see the wide interest evoked nationally by this system of ours, a product which has evolved due to the hard work and diligent efforts put in by the team in CMO ably supported by NIC with its technical capabilities. Such a tool goes a long way in efficient, transparent and responsive administrative interventions in improving the lives of our citizens.

Shri Vijay Rupani
Hon'ble Chief Minister, Gujarat

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Indicators	Government Projects	Government Authorities Mapped	Web Services / APIs	eGov Applications Integrated

The system first of its kind was an innovation in terms of accessing data from all e-Governance applications of the State of Gujarat and providing the same for monitoring against defined KPIs. In the reverse, CMO could drill down to the granular level on the fly for red-flagged items and intervene through voice call to administrative machinery down to the village level.

The application facilitates all of the above thus creating a complex network of aggregation, visualization, and enforcement.

It performs collections of 3000+ indicators of 20 government sectors from various e-Governance applications on a daily basis, and integrates all the key stakeholders on single platform i.e. all Secretaries, HODs, Collectors, DDOs & SPs. Hon'ble CM regularly reviews the performance of Departments and Districts

CM Dashboard, an initiative of Government of Gujarat is a visual insight of more than 3000 indicators of 20 sectors of all the state government departments which need to achieve one or more objectives; consolidated and arranged under a single umbrella so that the information can be monitored effectively by Hon'ble Chief Minister at a glance

> We are proud that the Dashboard with its vast monitoring coverage has proved to be an efficient tool in improving the systems of the State. I see a large potential for replication of the System in different administrative domains of Governance in the country by adopting the methodology of the system at the conceptual level.

Anil Mukim, IAS

Chief Secretary
Government of Gujarat

through the system established at the Command and Control Unit. The project consists of several modules such as Executive Dashboard, Sectoral Dashboard, District Dashboard, Corporation Dashboard, GIS Dashboard, Department Star Rating, PRAGATI-G (Project Monitoring), Aspiration District, CCU Dashboard, Jan-Samvad Feedback Mechanism).

The Dashboard monitors departments and services and identifies areas for improvement, thereby promoting transparency and accountability within the Government. Also, the implementation of the system assists in enforcing digital applications in functional areas yet to be computerized.

The Hon'ble Chief Minister takes a review of the activities and guide directly to the concerned authority for taking appropriate steps. Each indicator is analyzed graphically by time series analysis (Daily, Monthly Quarterly and Yearly) and location (Region, District, Block, Schemes, Heads, etc.) wise. The main feature of CM Dashboard is real-time performance measurement with dynamic benchmarking and target setting, Performance Index up to Zone, District and Taluka level, Grading system, Toppers, and Laggers Club etc. This makes the Government more productive by achieving good, efficient and transparent governance.

Objectives

- To provide data aggregation, visualization and enforcement
- To integrate all the key stake holders on Single platform
- To identify demographic issues and areas requiring improvement
- To promote transparency
- To enforce accountability within the Government
- To ensure digital systems in functional areas yet to be computerized
- To enhance the productivity of Government officials
- To centralize monitoring and help in policy level decisions
- To provide effective service delivery and measurable parameters

- To sensitize concerned authorities by measurement of performance and ranking

Features

- Different types of dashboards for visualization
- PRAGATI-G module for monitoring of physical, financial and timely progress of various projects and its follow-up
- Real time performance measurement with dynamic benchmarking, target setting
- Performance upto each hierarchical level such as Zone, District and Taluka, KPI Gradation, follow-up and measurement of performance by scoring and ranking of concerned authorities on daily basis, Toppers and Laggers Club etc.
- Mobile application to monitor performance of the concerned authorities
- Feedback mechanism (Jan-Samvad) has been incorporated in the system which collects all the feedback data of respective sectors.
- SMS facility has been incorporated in such a way that the system generates SMS to Nodal Officers, when the timely data is not received, follow-up reminder, ranking, etc.
- Admin module to manage entry of indicators, sector, sub-sector, department, user access rights, system generate reports, etc.
- Data Synchronization module to capture data automatically and manually by web service API from various MIS and online system
- Data Verification module to verify data of sector and sub-sector by concerning nodal officers on monthly basis.
- Upload Excel facility to upload data from excel sheet for certain indicators where MIS system is not available

Functionalities

Visualization

- Executive Dashboard: performance of recent and important activities across the state
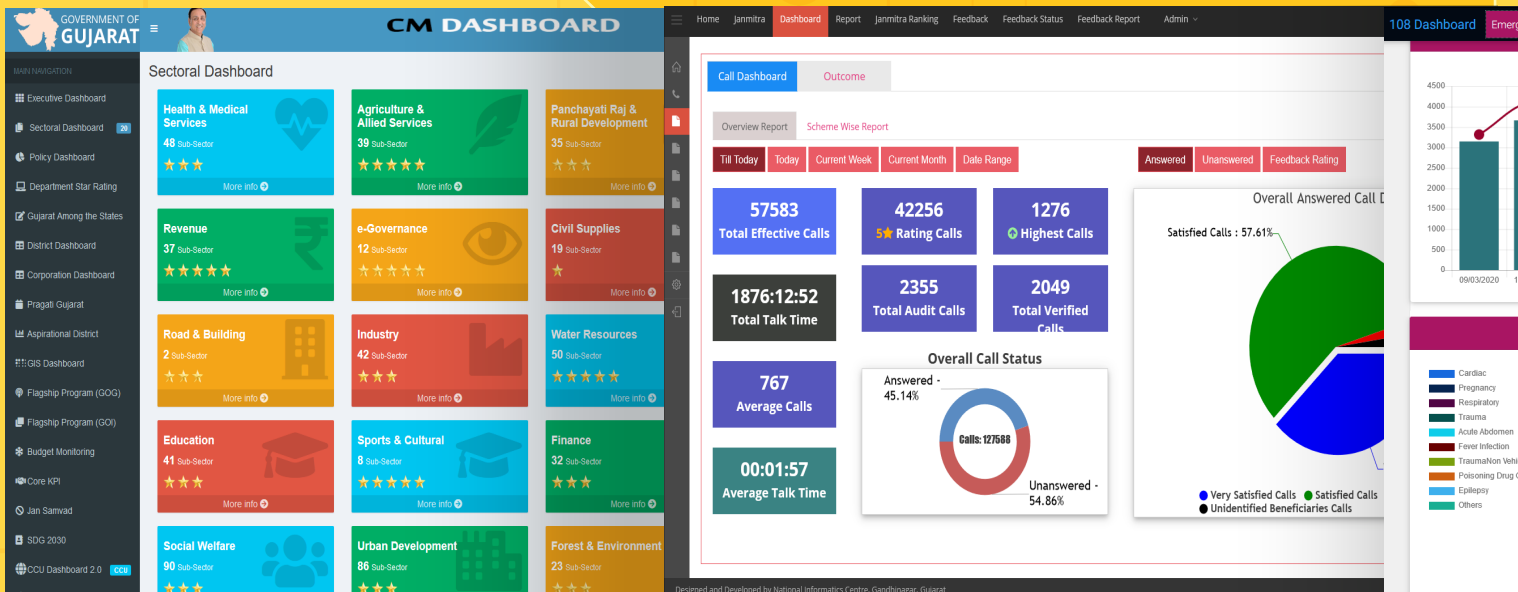
- Sectoral Dashboard: statistical data of sectors and sub-sectors
- Department Star Rating: star rating of data quality based on Verification, Depth, Fetching Accuracy, Sharing Mode and Update Frequency
- Gujarat among the States: current position (rank) of Gujarat among other states in scheme implementation
- District Dashboard: data in district wise grouping
- Corporation Dashboard: data in zone and corporation wise grouping
- Aspirational District: ranking of districts in different aspects
- GIS Dashboard: data in geo spatial mapping with respective indicators
- Flagship Program (GOG): statistical data of Gujarat Government's important schemes
- Flagship Program (GOI): statistical data of Government of India's important schemes
- Budget Monitoring: year wise budget related data

CCU DASHBOARD 2.0 (Real Time Performance Measurement System)

Command and Control Unit visualizes the performance of officers with respective to their KPIs. It also incorporates the Performance Index, Ranking Index, KPI Performance and Call analytics.

JAN SAMVAD (Real Time Citizen Feedback System)

Designed for taking questionnaire based feedback from beneficiaries of various government schemes/ projects to ensure the benefits received by beneficiary and quality of services delivered. Jan Samvad has evolved as a CM to Citizen platform.

Performance Measurement System

The stability of the Performance Measurement System depends on indicators and Key Performance indicators. Indicators for each service are different from one another. These indicators are identified by conducting meetings with the department, CMO unit, and other concerned parties. Once the indicators are decided, data is collected and aggregated based on these indicators. Checks should be made to avoid data quality degradation. Derive KPIs for the services and associate the officers with the services and its KPIs. Based on the benchmark of each KPI the ranking and performance of services, as well as officers, are evaluated.

Identification & Aggregation of Data Elements (Indicators)

A true Governance monitoring system should survey availability of digital systems across all domains. To cite a few, Systems in Revenue, Civil Supplies, Health, Law and Order, Agriculture, Urban Development, Panchayat and Rural Development. These digital systems are workflow systems which may be in G2C or G2B segments which are basically systems which result in better governance.

This involves lateral level discussions where the monitoring authorities need to sit with the respective domain officers and identify the data elements which are critical and amenable to monitoring. At the software application level these identified indicators/ data elements are sourced from the underlying digital applications of respective domain using web services on a periodic basis which can vary from daily to quarterly. Few of the underlying systems may not be truly web service amenable in which case soft formats like spread sheets will have to be absorbed in system through functions created.

At the software development level, capability has to be built-in to access heterogeneous underlying systems managed by different application service providers using different development stacks. The exercise of integration also involves clear directions from the authorities of the domain to their respective service providers to share data with the Monitoring Team. This is because it should not be missed out that the Service Providers, though managing their data sources are not the owners of data. Proper protocol for data

> "Truly impressed by the exhaustiveness of the dashboard. Feedback loop is a novel initiative and NIC is honoured to be associated with this exemplary initiative of Gujarat Government."

Dr. Neeta Verma
Director General, NIC
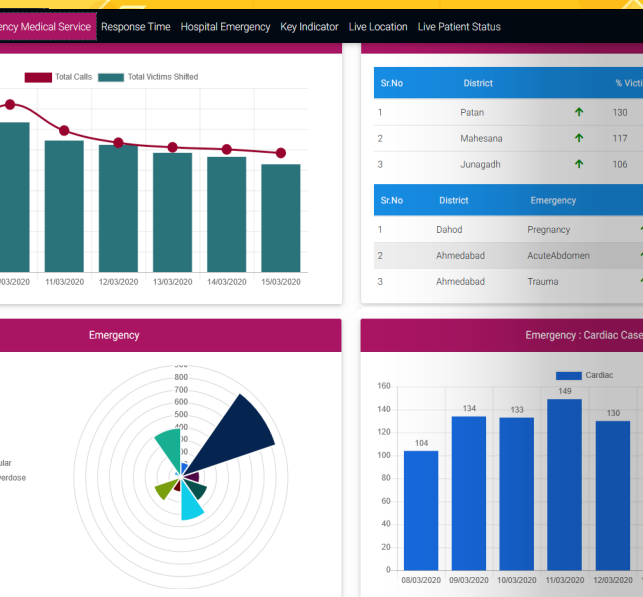
CM Dashboard Modular Flow

Shri Amit Shah, Hon'ble Union Minister of Home Affairs and Shri Vijay Rupani, Hon'ble Chief Minister, Gujarat during the launch of CM Dashboard

sharing should be in place to avoid any issues in time.

Visualisation Layer

This is a software application specific activity where all types of display formats e.g graphs, time series charts are used. The activity is initiated through joint discussions between monitoring agency and NIC development team to identify the data elements, their units, frequency etc. for each visualisation instance. Ranges of data, classification of data clusters are also part of the finalisation process. Comparative charts which are year-on-year, quarter-on-quarter, month-on-month became part of this exercise.

Though the manual processes may be limited under visualisation activity, the development work will require proper use of tools in terms of through-puts and responses of the system.

Data Quality Measurement and Improvement Loop

The visualisation process will throw up aberrations in data which helps in initiating an exercise with the domain officials to cross check data content and take remedial action regarding the supplied data from their systems. The nodal, sub-nodal officers are given windows to the visualisation module to check the data and certify quality of the data.

Additionally the application system will also have validation routines against data elements i.e range checks of the values and thus flag the faulty data arising in the incoming services. These are conveyed to the nodal officers using SMS or email for immediate corrective actions.

Derivation of Key Performance Indicators (KPIs)/ Performance Monitoring

This is the key of the Monitoring System where the execution level officials under each domain specific application are mapped to set of KPIs so that these KPI benchmarks are used to evaluate performance, ranking of these officials. Examples of such officials are the Collectors, District Development officers in the State. Intensive follow ups to motivate improvement of performance of the nodal officers are executed.

The ratings for each KPI is classified as A+ for Already satisfactory, A – Satisfactory performance, B – Positive performance, C – Negative Performance. The performance matrix including Officers-Districts is kept upto date. The classification also providers for Toppers, Laggards classification. Also start rankings are provided based on different attributes.

Beneficiary Feedback System

Based on the same data collection methods used in the Performance Measurement System, the beneficiary feedbacks of the corresponding services are collected. For that call centre executives are employed to generate feedback using the questionnaires defined for the services. Analyse the data generated and identify the sentiment (positive or negative) of the feedback. Poor feedback are forwarded to the higher authority and subsequently, the action taken report, as well as a confirmation call, are recorded till beneficiary gets the benefit. From this data 'satisfaction index' and 'effective implementation rates' are derived.

Creation of Questionnaire for Feedback

The KPI performance values which are flagged for feedback by the Monitoring Cell are accordingly marked in the system and the stored questionnaire against the KPI is made visible to the Call Centre team for telephonically using with the beneficiary.

Beneficiary Details extraction

Based on the identified KPIs for feedback and the filter applied to extract a subset of the beneficiary list, the underlying application system is mined for the granular data giving the beneficiary personal information including contact details.

Call Centre Operations

The Call Centre will initiate telephonic querying of the beneficiary based on the questionnaire. The objective answers and final feedback is recorded
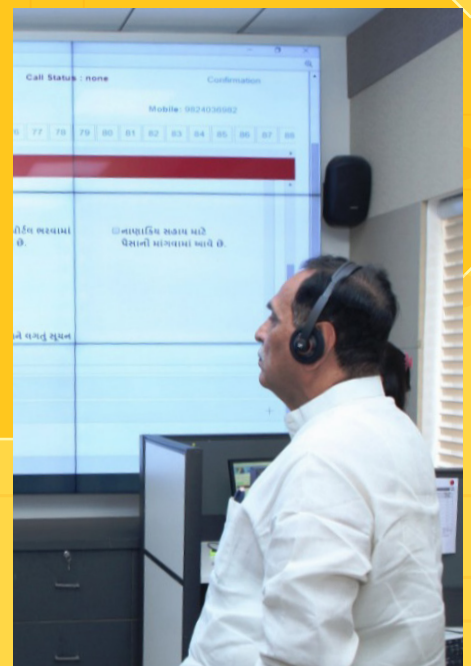
Hon'ble CM viewing the Feedback Questionnaire

into the system. Everything is done through online integration including the telephony integration through Telecom Service Provider.

Beneficiary Feedback Followup

The feedback is displayed online for the CCU team to view, analyze and flag for escalation to the concerned nodal officers for the KPI related to originating district.

Action Taken Reporting (ATR)

The nodal officers to whom such feedback (which are poor or negative) is flagged are supposed to manually intervene for resolution and revert through documentary proof of resolution of the case. The online system facilitates such data collection. In addition to nodal officers, the Secretaries and HODs are also flagged in the online communication.

Confirmation process

The ATR triggers a confirmation feedback call with the beneficiary to close the feedback loop through the Call Centre.

Stakeholders

- Chief Minister Office
- All State Government Departments (Secretary, HODs, Nodal/ Sub-Nodal Officers)
- District Authorities (Collector, DDO, SPs, etc.)

Services To Stakeholders

CMO

- Monitor all the statistical data drilled down to the last level for all the services, sectors and overall
- Evaluate performance of all the officers involved in the system
- Defining target and benchmarking for performance measurement of concerned authorities
- Getting and monitoring feedbacks from beneficiary of various government schemes

All State Government Departments (Secretary, HODs, Nodal/ Sub-Nodal Officers)

- Monitor department level performance of concerned indicators
- Access and verify data that they are responsible for
- Action taken against poor feedbacks

District Authorities (Collector, DDO, SPs)

- View their performance statistics of concerned Key Performance Indicators
- View their performance compared to the same officers groups

Use Cases

KPI monitoring, follow up with officials to speed up procedures.

- **Income certificate:** The number of pending applications for Income certificate (Panchayat) through e-Gram before the implementation was several thousands. This KPI is categorized as short term which implies that it should be improved in short time limit. In this case the KPI is mapped with district level authority which is a DDO (District Development Officer) of district panchayat. According to the set benchmark and time limit by CMO, the call has been generated to convey this KPI to the DDO. It drastically decreased to hundreds after the implementation.
- **Grant utilization:** The KPI, 'Percentage of Grant utilized under Mahatma Gandhi Swachhta Mission' is mapped with DDO of the

district. It was categorized as medium term. This resulted in an increase which was almost three times of the previous value.
- **Inspection of police station:** The KPI, 'Percentage of Police stations inspected against target given by Home Department' is mapped with District Magistrate. In this case the improvement was more than its double after adding the KPI into the Performance Measurement System.
- **Land Records- Auto Mutation Pending**: The KPI number of auto mutation pending for more than 90 Days in Land Records is mapped to District Magistrate, which is an immediate term KPI that has to be taken care urgently. As the monitoring system started taking into account of the KPI, pendency of the application decreased drastically.
- **108 service:** The KPI based 108 service of medical emergency is geographically mapped for real time monitoring of ambulance calling up hospital to confirm arrival. Response time of 108 service and peak hour emergency call is being monitored as part of the KPI. Also feedback from the patient is taken into the loop.

Outcome of the citizen feedback mechanism

- **Mukhyamantri Bhagyalakshmi Bond:** From the citizen feedback of 'Mukhyamantri Bhagyalakshmi Bond', cases have been found such as the beneficiary did not receive the benefit amount as mentioned in the bond. This is a scheme of State government to provide financial benefit to the daughters of labor workers for their education or marriage. The case has been escalated to the concerned Head of Department/ Secretary, they have taken an action to deliver benefit and submit the report back to the system. CMO has made confirmation call to beneficiary and ensured the delivery of benefit.
- **Public Distribution System (PDS):** Randomly select beneficiaries and generates feedback as well as the confirmation from them. Poor feedbacks are forwarded to officials for corrective measures.

Way Forward

- Include more sectors and corresponding services to achieve 100% data coverage.
- Data analytics interface is to be developed so that AI, Machine learning models can be applied on the collected data for predictive and prescriptive analysis.

Summary

Gujarat Chief Minister Dashboard is the first of its kind system in terms of accessing data from all e-Governance applications of the State of Gujarat and providing the same for monitoring against defined KPIs. This enables the CMO to analyse the performance of departments, services and even officers which in turn helps in identifying problems of services. In all hierarchical levels such as zones, districts, talukas the flagged performance can be monitored. It additionally gives an insight into the effective implementation of schemes.

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