

7 Ways To Effectively Roll-out PM Gatishakti In A State



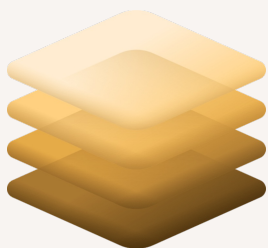
Vision and objective of PM GatiShakti

During Prime Minister Narendra Modi's address to the nation at the 77th Independence Day celebrations at the Red Fort, he stated that India aims to become a developed country by 2047 with an aspirational goal of a **\$5 trillion economy by 2025**. **PM GatiShakti National Master Plan** aims to accelerate India's path to becoming a developed nation by focusing on reforming infrastructure fit for a developed economy through data driven decision making, improving coordination and reducing delays.

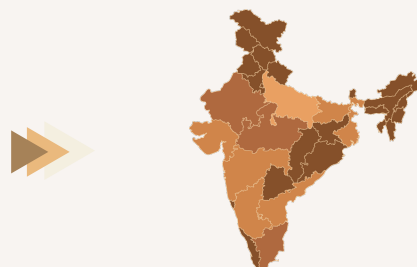
Status of PM GatiShakti National Master Plan: Then vs. Now

Launched in 2021, PM GatiShakti NMP started with 9 Infrastructure Ministries and as of 2024, the portal has been extended to **16 Social Ministries**, **15 Economic Ministries**, and **5 other Ministries**. Currently, the National Master Plan Platform has **1614+ data layers** from **36 States/UTs** and **44 Central Ministries Portal**. The National Master Plan now includes integrated development to include the development of physical and social infrastructure using the Area Development Approach along with planning and analysis of economic corridors.

PM GatiShakti National Master Plan Started with



1614+
Data Layers



36
State UTs

44
Central Ministries Portal



Impact and measurable gains of the National Master Plan portal

As per the impact assessment of PM GatiShakti NMP by Asian Development Bank (ADB), planning through the portal has resulted in time and cost savings, improved quality of projects, efficient diagnosis of critical infrastructural gaps, and faster land identification and acquisition process thus supporting holistic infrastructure development.

PM GatiShakti NMP plans to transform infrastructure planning by replacing subjective decision-making with objective data-based decision-making. As per Department for Promotion of Industry and Internal Trade (DPIIT), pre-alignment preparation at the Ministry of Road Transport & Highways, which **previously took up to 6 months, now takes just about 15 days using the PM GatiShakti NMP portal.** Similarly, at the Ministry of Railways, the construction of **new rail lines increased from 4 km per day to 12 km per day in 2023**, while the number of **Final Location Surveys (FLS) surged from 57 in FY '21 to 449 in FY '22**, all facilitated by planning through PM GatiShakti portal. The Ministry of Petroleum & Natural Gas also saw significant improvements, generating 46 Electronic Detailed Report Surveys (e-DRS) in 24 hours, compared to the earlier 6-9 months. Furthermore, the alignment of five pipelines for the North-East Gas Grid (NEGG) through PM GatiShakti reduced the distance by 42 km, resulting in cost savings of INR 169 crores (USD 20 million).



Pre-alignment Preparation

Before - 6 Months



Now - 15 Days



Rail lines Construction

Before - 4 Km/Day



Now - 12 Km/Day

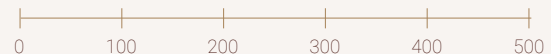


Final Location Surveys

FY 21 - 21 Surveys



FY 22 - 449 Surveys

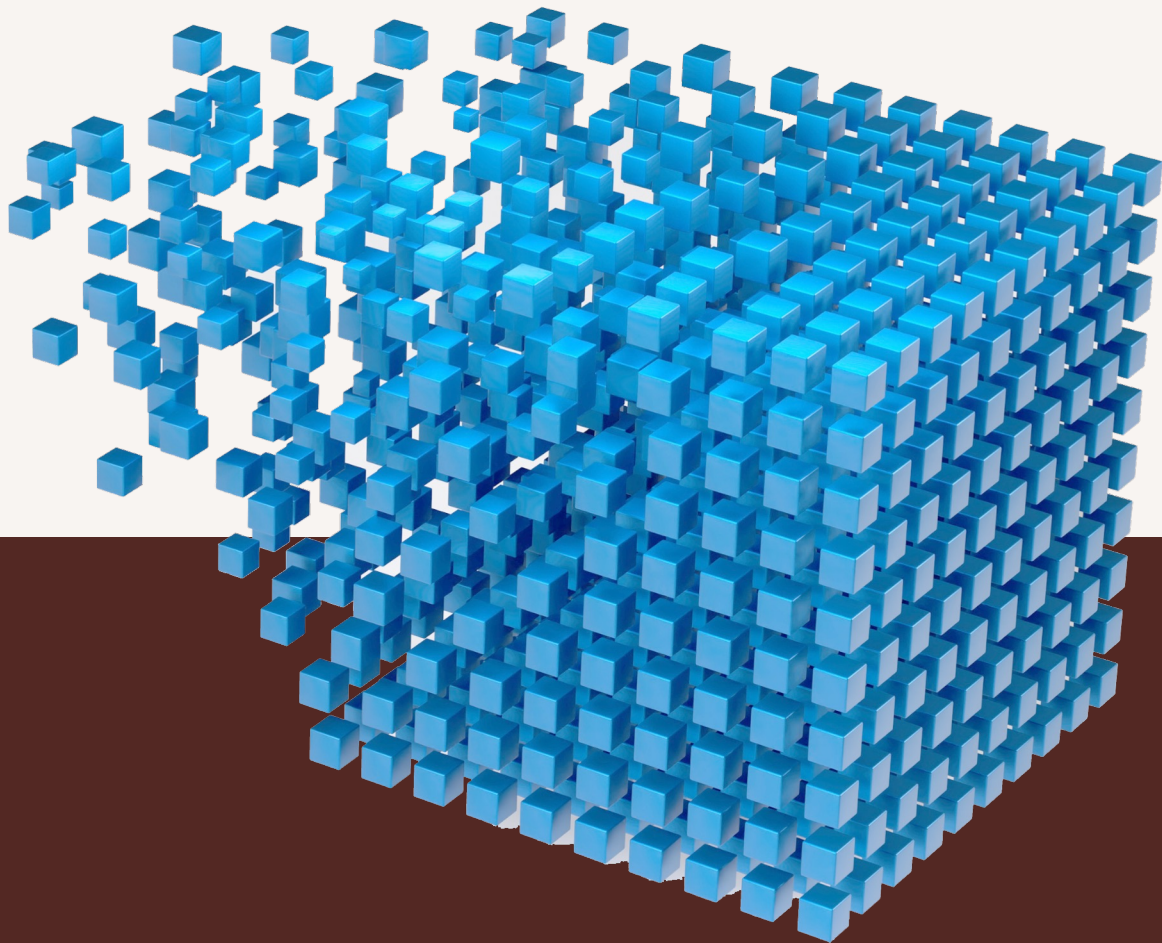




Guidelines for states on effective implementation of PM GatiShakti

PM GatiShakti's initiative has pushed for GIS mapping of existing and planned infrastructures across Ministries and State/UT on the PM GatiShakti National Master Plan (NMP) and State Master Plan (SMP) portal. The data being generated is enabling the efficient monitoring and dissemination of the data across departments and stakeholders in an effective manner further benefiting the planning process of infrastructure development. Apart from assisting in the planning and execution of infrastructure projects through various tools embedded on the portal, the PM GatiShakti portal also offers Management Information System (MIS) dashboards for respective departments enabling effective information dissemination and project monitoring to all its stakeholders.

At the heart of the PM GatiShakti platform lies the accurate GIS mapping of economic and social infrastructures implemented by various Ministries and States/UTs for effective planning and implementation of projects using the advanced planning tools embedded within the portal. While most States have successfully mapped the 30 mandatory data layers, it is pertinent for States/UTs to identify as many additional data layers pertaining to economic and social infrastructure that is important from the perspective of planning and monitoring of infrastructure projects. Emphasis should also be put on the accuracy of the GIS coordinates and the type of GIS mapping technology being employed.





1

Present GIS data as polygon and line features

A key factor is enhancing the quality of data uploaded with correct GIS representation. For instance, when a government building is mapped as a point coordinate, it is not an actual representation of the area being covered. Therefore, it should instead be represented as a polygon to capture the entire area surrounding the building, which is integral to the asset. Failing to do so may obstruct the planning of other nearby infrastructure projects. Therefore, GIS mapping should be in point for landmarks, lines for roads, river canals, etc., and polygons for government buildings, waterbodies, hospitals, schools etc. What has been observed on the ground is that for a more efficient planning process, the focus should be on mapping line and polygon data for as many applicable data layers as possible. The data source for the layer should be a Shapefile, GeoJSON file, or API integration through existing government portals such as UDISE Plus, Poshan Tracker, MGNREGA-Bhuvan, SBM etc. In case the Departments do not have geo-referenced data for their infrastructure assets, BISAG-N the technological partner will assist in the development of a mobile application for collecting on-ground data on the provision of the application framework by the States/UTs.

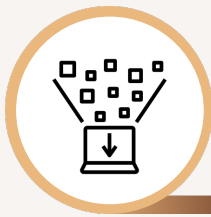


2

Assign Detailed Attributes to each layer

Another essential factor from a planning perspective is the accuracy and comprehensiveness of the attributes assigned to each layer. Attributes are the list of features associated with each data layer. This level of precision ensures optimal alignment of new infrastructure projects, minimizing distances, saving time, reducing costs, and cutting carbon emissions, all while reducing the impact on natural resources.





3

Standardize data collection

This is another crucial component of effective infrastructure planning and decision-making. To ensure uniformity, it is essential to integrate data from all available portals into a standardized framework. This approach will streamline the decision-making process by providing a cohesive view of critical information across platforms. A key aspect of this integration is the identification and standardization of key attributes that are essential for infrastructure planning. By defining these attributes clearly, decision-makers can make more informed and accurate judgments.

The use of standardized symbology, colour coding, and asset categorization further enhances this process. These visual tools not only simplify data interpretation but also expedite decision-making by allowing stakeholders to quickly identify and prioritize assets or issues. For example, colour coding can be used to highlight different infrastructure conditions or levels of urgency, enabling faster response times and more strategic planning. Data standardization can be done by preparing Standard Operating Procedures (SOPs) for each layer.



4

Implement a robust data validation process

To maintain the highest levels of data accuracy, it is important to implement a robust data validation process. This can be achieved through a Maker-Checker-Approver mechanism, where data is first entered by one party (Maker), reviewed and verified by another (Checker), and finally approved by a third party (Approver). This layered approach to validation minimizes errors and ensures that the data used in decision-making is both accurate and reliable.



5

Ensure accuracy of land records

To ensure that the pre-planning alignment process done through the PM GatiShakti portal aligns with physical surveys, the accuracy of digitized land revenue records must also be prioritized. While most states have digitized legacy survey maps, Ladakh stands out as one of the few conducting on-ground survey using the latest technology to create new digitized land records. Uploading accurate land records will not only expedite land identification and acquisition processes, a common bottleneck in infrastructure planning but also help in more accurate identification and planning of projects.

Ultimately, by adopting these practices—data integration, visual standardization, and rigorous validation—organizations can significantly improve the quality and speed of their infrastructure planning and decision-making processes.



6

Adopt institutional framework

In addition to this, the states must adopt the institutional framework for planning new infrastructure projects. The institutional framework is constituted of a three-tier structure which includes the Empowered Group of Secretaries (EGoS) (Tier I), Network Planning Group (NPG) (Tier II), and Technical Support Unit (TSU) (Tier III).

For effective implementation of the portal, each State/UT should hold regular NPG and EGoS meetings to discuss planned projects and approve the same on a common platform. The States/UTs should set a budget ceiling for approval of all infrastructure projects being implemented under various State and Centre Schemes at both the Network Planning Group (NPG) and Empowered Group of Secretaries (EGoS) levels. The States also streamline the process for obtaining No Objection Certificates (NOCs) and permissions from various government departments. This will help in reducing processing times of the project planning process, ensuring faster and more efficient decision-making.



7

Conduct capacity-building training

Another important factor for the adoption of the portal is to conduct regular capacity-building training and handholding workshops for the State institutions along with the technological partner BISAG-N. The existing government framework is such that officials are frequently transferred from their position and thus these trainings and workshops must be mandated by each Department on a regular basis. Stemming from the same issue of non-permanence of a government official at a particular position is to prepare SOPs, training manuals and videos for ease of data collection mechanism and operability of the portal.

For any State/UT to make the most of their respective State Master Portal, the various Departments to invest time and research in creating customized tools and dashboards as per their needs and effective use of the portal for planning, reviewing, and monitoring projects under implementation.





Conclusion

States lagging in portal adoption should be encouraged through policy mandates, compliance with Quality Improvement Plan (QIP) for data management, enforcement of Standard Operating Procedures (SOPs), continuous training and handholding workshops for government officials. The SOPs should contain the upload mechanism and frequency of upload which might differ for each data layer. Another key aspect of portal adoption by various State/UT Departments is the appointment of Nodal Officers from each Department/Division who will be responsible for coordinating with the State/UT Nodal Department for effective implementation of the PM GatiShakti portal.

While PM GatiShakti has the potential to be a transformative development initiative, its success depends on flawless execution and the effectiveness of state-level implementation. Implementation of any program is often the limiting factor for the success of any government-led country-wide project. The key to achieving significant progress lies in building a more efficient State, enhancing effectiveness, and utilizing data-driven decision-making to determine what strategies succeed and which ones fall short. The government will need to encourage a culture of collaboration across ministries, streamline bureaucratic processes, and ensure active participation from the private sector to make the PM GatiShakti portal to be effective and result oriented.



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