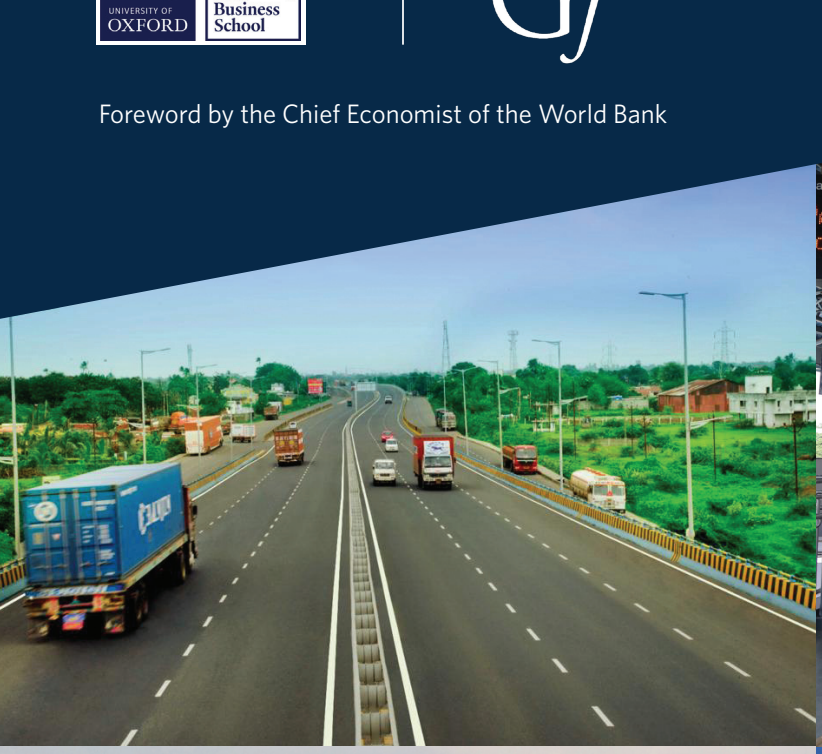
CASE STUDY

From Gridlock to Growth

How Leadership Enables India's PRAGATI Ecosystem to Power Progress

Foreword by the Chief Economist of the World Bank



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Front cover (clockwise from left): Surat-Dahisar section of National Highway 8; Namma Metro project, Bengaluru; Bogibeel Rail and Road Bridge, Assam; and Navi Mumbai Airport, Maharashtra

Foreword

By Dr. Indermit Gill

As we stand at a pivotal juncture in global economic history, nations around the world are navigating the complex terrain of development with the aim of transcending the so-called "Middle-Income Trap." This phenomenon, where countries that experience rapid growth eventually stall and struggle to move into the ranks of high-income economies, has become a critical challenge, as noted in the *World Development Report 2024, The Middle-Income Trap*. The path forward requires robust economic strategies and innovative governance and infrastructure frameworks that can sustain growth and foster inclusive development.

India's PRAGATI platform offers a compelling case study in how digital governance can drive such progress. Launched in 2015 under the leadership of Prime Minister Narendra Modi, PRAGATI—an acronym for Pro-Active Governance and Timely Implementation—has transformed the way India manages its large-scale infrastructure projects and social sector programs. This platform symbolizes India's commitment to overcoming bureaucratic inertia and fostering a Team India mindset and culture of accountability and efficiency.

PRAGATI's success lies in its ability to bring together diverse stakeholders from central and state governments onto a single platform. This collaborative approach has been instrumental in addressing some of the most complex challenges in infrastructure development, from land acquisition to inter-ministerial coordination. By leveraging real-time data, drone feeds, and video conferencing, PRAGATI has not only accelerated project timelines but also ensured that the benefits of development reach even the most remote corners of the country. The economic impact of PRAGATI is evident. According to studies by the Reserve Bank of India and the National Institute of Public Finance and Policy, for every rupee spent on infrastructure, India sees a gain of 2.5 to 3.5 rupees in GDP. This multiplier effect underscores the critical role that well-executed infrastructure projects play in driving economic growth. Moreover, the focus on timely implementation has brought economic benefits, contributing to India's resilience during global economic uncertainties.

PRAGATI's ripple effects have spread beyond economic growth. They have helped foster social progress and environmental sustainability. By fast-tracking projects that provide essential services like roads, railways, water, and electricity, PRAGATI has improved the quality of life for millions of Indians. The platform has also incorporated sustainability into its core operations, facilitating faster environmental clearances and promoting the use of green technologies. This holistic approach ensures that India's development is both inclusive and sustainable.

The lessons from PRAGATI are particularly relevant as nations worldwide grapple with the Middle-Income Trap. The platform demonstrates that governance innovation, coupled with strategic investments in infrastructure, can create the conditions necessary for sustained economic growth and social progress. By embracing digital tools and fostering collaboration across all levels of government, India has charted a path that other emerging economies can emulate.

As we look to the future, the PRAGATI model offers valuable insights for global leaders seeking to navigate the complexities of development in the 21st century. By building on this foundation, we can collectively work towards a more prosperous, equitable, and sustainable world.

Dr. Indermit Gill is the Chief Economist of the World Bank Group and Senior Vice President for Development Economics.

Table of Contents

INTRODUCTION

Soaring across the Chenab River in the Union Territory of Jammu and Kashmir, a steel and concrete arch juts out from harsh, mountainous terrain. The world's highest rail bridge, the Chenab Bridge is a feat of engineering. It forms part of the Udhampur-Srinagar-Baramulla Rail Link that now connects Kashmir with the rest of India by train, providing a vital social, political and economic link.

This ambitious infrastructure project is among many dotting India's landscape. Over the past decade, the country has built an unprecedented 50,000 kilometers of National Highways and doubled its number of airports.[1]

Led by Prime Minister Narendra Modi, this infrastructure revolution is a critical component of the "Viksit Bharat 2047" initiative (or Developed India 2047), an ambitious roadmap to make India a 'developed nation' by its 100th year of independence. This initiative encompasses a broad spectrum of national development goals, including infrastructure development, economic growth, social progress, technological advancement, and sustainable development. Specific targets include achieving a $30 trillion economy by 2047, ensuring 100% literacy and healthcare coverage and positioning India as a global hub for research and innovation.

Progress is already in motion. JP Morgan predicts that India is on track to become the world's third-largest economy by 2027, with its GDP doubling to $7 trillion by 2030.[2] The construction of new roads, bridges, ports, airports, and other vital infrastructure is paying economic dividends, allowing people and goods to travel across the country more easily and offering citizens greater access to educational and employment opportunities. Studies by the Reserve Bank of India and the National Institute of Public Finance and Policy estimate that for every rupee spent on infrastructure, the country sees a 2.5- to 3.5-rupee gain in GDP.[3]

In a May 2024 article, *The Economist* highlighted the impacts of these recent efforts. "If there is one thing about which both supporters and critics of Narendra Modi can agree, it is that his biggest achievement has been to overhaul India's infrastructure," the article noted.[4]

Studies by the Reserve Bank of India and the National Institute of Public Finance and Policy estimate that for every rupee spent on infrastructure, the country sees a 2.5- to 3.5-rupee gain in GDP.

But as nations compete to build and reimagine infrastructure as the backbone of sustainable, inclusive, and resilient economies, these efforts are laden with challenges. For many governments, the difficulty lies in navigating the challenge of limited public resources. How does one take on a series of large infrastructure projects simultaneously without overwhelming national debt? The traditional labyrinths of land acquisition, permissions, and often Byzantine procedures further exacerbate this challenge, causing delays and cost overruns in many promising projects.

[1]*Economic Times*, "Almost 50,000 km of National Highways added in 9 years," April 23, 2023. *Economic Times*, "Civil aviation sector on upswing, 75 airports built in 10 years, says Jyotiraditya Scindia," January 12, 2024.
[2].https://www.cnbctv18.com/market/jpmorgan-forecasts-structural-shifts-in-indian-economy-remains-bullish-on-china-18071051.htm
[3]https://www.investindia.gov.in/team-india-blogs/infrastructure-development-india
[4]Sheva, Nhava, "India has quietly transformed its ports," *The Economist*, May 9, 2024.

Moreover, the management of major infrastructure and social development initiatives isn't merely about mortar, bricks, asphalt, and water pipes. It is also about people — their habits, behaviors, and lifestyles. The bureaucracies overseeing and approving the building of new roads, bridges, and rail lines are made up of often-dedicated ministers and civil servants who have gotten used to ingrained ways of operating and communicating. Changing the way government works will mean changing the way they work – sweeping behavioral revolutions that don't happen on their own.

India's massive scale in a country of 1.4 billion people and its federal structure present another layer of complexity. The division of authority between central and state governments and the split between different political affiliations often represent a web of competing interests and alliances, especially when infrastructure projects span across multiple states. In addition, India's federal government contains more than 80 ministries and departments, with an equally large number of similar departments in each of the 36 states and union territories.

A Digital Solution

To overcome some of these difficulties, India has turned to digital technologies. Melding the old with the new, it has applied innovation to often aging government frameworks for infrastructure. Much like fitting a modern jet engine onto a classic aircraft, the endeavor is as much about compatibility as it is about innovation.

The PRAGATI platform, in conjunction with other platforms such as PM Gati Shakti, Parivesh, and Project Monitoring Group (PMG), is a key ingredient in this effort. This digital platform was launched in 2015 as a personal initiative of Prime Minister Modi. An acronym for Pro-Active Governance and Timely Implementation, pragati means "progress" in many Indian languages. The platform was inspired by a related system that Mr. Modi created in 2001 (called the State-Wide Attention on Grievances by Application of Technology, or SWAGAT) while serving as chief minister in the western state of Gujarat.[5]

At its most basic level, PRAGATI is a digital dashboard for the real-time monitoring and fast-tracking of large infrastructure and social development projects. It uses three core technologies – data management, project site drone feeds, and video conferencing – to promote oversight, coordination, and problem solving. This detailed and consistent oversight, often directly from the Prime Minister's Office (PMO), helps loosen bottlenecks and speed the completion of projects. The platform also provides a forum for bringing people together, both for the resolution of disputes and for collaboration. Together with other key digital platforms, PRAGATI provides a comprehensive approach to managing and streamlining large infrastructure projects across India.

A Cooperative Approach

What makes India's infrastructure revolution particularly remarkable is the way it has overcome traditional political divisions. In India's federal system, states are often governed by different political parties with competing priorities and approaches. Historically, these differences have sometimes impeded major development initiatives. Yet PRAGATI has emerged as a powerful demonstration of cooperative federalism in action – showing how central and state governments can work together effectively when focused on shared development goals.

[5]See additional details about SWAGAT on page 13.

This cooperative approach represents a significant evolution in center-state relations. Through PRAGATI, projects receive equal attention and support whether they are in states governed by the ruling party or opposition parties. The platform has created institutional mechanisms that promote collaboration over confrontation, while respecting state autonomy. This apolitical approach to infrastructure development has been crucial in building trust and demonstrating that India's federal structure can be leveraged as a strength rather than seen as an obstacle.

Overview of the Case Study

This case study explores the key elements that have made PRAGATI an important part of India's infrastructure transformation. The report consists of seven chapters:

1. *PRAGATI for Infrastructure.* This chapter introduces the platform's role in India's infrastructure revolution and its relationship to the nation's development goals.
2. *Leadership from the Top*. PRAGATI is what it is today because of decisive and active leadership, particularly from Mr. Modi. Such high-level involvement, with a regular monthly cadence, has set the tone, triggered solutions, and inspired a collective sense of teamwork.
3. *Problem Monitoring and Resolution*. By providing a platform for real-time problem-solving, PRAGATI ensures that projects aren't hamstrung by protracted legal battles and inter-ministerial disputes. Sometimes, the scrutiny from PRAGATI is so effective that disputes and issues are resolved in advance of the Prime Minister's actual review meeting.
4. *A Digital Governance Ecosystem*. PRAGATI is part of an evolving ecosystem for digital governance of infrastructure and social development projects. Its digital tools complement those of PM Gati Shakti, a portal for centralized project planning; PARIVESH, which brings transparency, fairness, and automation to the process of environmental clearances; and a detailed tracking system for all of India's large infrastructure projects.
5. *PRAGATI for the Social Sector*. PRAGATI's focus on key nationwide social sector schemes has helped advance India's goals of providing basic services to all Indians, fostering inclusivity for remote areas to improve their quality of life, and making the government more responsive to its citizens.
6. *Collaboration Across States*. With infrastructure and social development projects often bringing multiple states and central ministries to the table, PRAGATI plays the role of a uniter, facilitating collaboration across silos. A forum for a national vision and purpose, PRAGATI has also helped energize and revitalize India's once opaque and slow-moving bureaucracy.
7. *Digital Governance Lessons for Global Leaders*. India's experience accelerating large infrastructure projects may offer lessons for global leaders who also seek to make infrastructure a game changer for economic development.

Finally, an appendix examines PRAGATI in action by taking a deep dive into eight of the 340 total PRAGATI infrastructure projects across the country. This includes four rail projects:

- The **Bogibeel Rail and Road Bridge** over the Brahmaputra River in Assam.
- The **Jammu- Udhampur- Srinagar -Baramulla Rail Link** in Jammu and Kashmir.
- The **Bengaluru Metro Rail** Project in Karnataka.
- The **Haridaspur-Paradeep Rail Connection** to Paradip port in Odisha.

Two road projects:
- The **Dahisar-Surat section of National Highway 8** in Maharashtra and Gujarat.
- The **Varanasi-Aurangabad section of National Highway 2** that links UP to Bihar.

And finally: the **North Karanpura Thermal Power Plant** in Jharkhand and the **Navi Mumbai Airport** in Maharashtra.

These eight projects capture the breadth and depth of PRAGATI's impact across India's vast landscape. The projects cover a broad geographical spectrum, from Jammu and Kashmir in the north to Karnataka in the south, encompassing a wide range of social, cultural, and environmental settings. This diversity highlights PRAGATI's efficacy in addressing the challenges and needs of different regions. Moreover, the selection reflects a variety of infrastructure types, including railroads, bridges, highways, airports, and power projects. Since each type of project has its own set of complexities and logistical hurdles, this broad selection demonstrates PRAGATI's impact across different infrastructure domains. Most of these projects were anywhere from 3 to 20 years overdue when they were reviewed in PRAGATI. For some, a majority of the physical work had been completed and the project needed help getting over the finish line. Others had seen no construction at all. The number of issues addressed in each PRAGATI project totaled up to 25.

Methodology

The research team for this case study employed an inductive approach. This involved deriving general principles from specific observations and examinations of eight infrastructure projects. Through this lens, the research team gathered data and insights, piecing together the attributes and outcomes of these projects to identify broader patterns and trends. The purpose of using an inductive approach is to "condense extensive and varied raw text data into a brief summary format."[6]

By focusing on the details and outcomes of each project, the inductive approach enabled the researchers to move from the particular to the general, forming a comprehensive picture of PRAGATI's impact across diverse contexts. This method is particularly effective in understanding complex phenomena like the PRAGATI ecosystem and its impact on the execution of infrastructure projects. It also ensured that the conclusions about PRAGATI's influence on India's infrastructure development were based on empirical evidence and reality.

In the study, the research team employed semi-structured interviews to gather insights from various stakeholders such as government officials, project managers, private sector executives, and field workers. Semi-structured interviews are a qualitative research method that combines pre-determined questions with the opportunity for interviewers to explore topics in more depth based on the responses given. This approach allowed the researchers to address the complexities of each project while maintaining a uniform structure for analyzing them. Engaging a wide range of participants helped the team incorporate multiple perspectives.

The use of both inductive analysis and semi-structured interviews enabled the research team to uncover the underlying mechanisms through which PRAGATI influenced project outcomes. The research highlighted the successes and challenges of Pragati in specific settings, while also identifying several broad factors that contributed to the ecosystem's effectiveness in improving the governance and execution of large-scale infrastructure projects in India.

[6]"A General Inductive Approach for Qualitative Data Analysis," (August 2003), Thomas, David R., University of Auckland, New Zealand.

CHAPTER 1

PRAGATI for Infrastructure

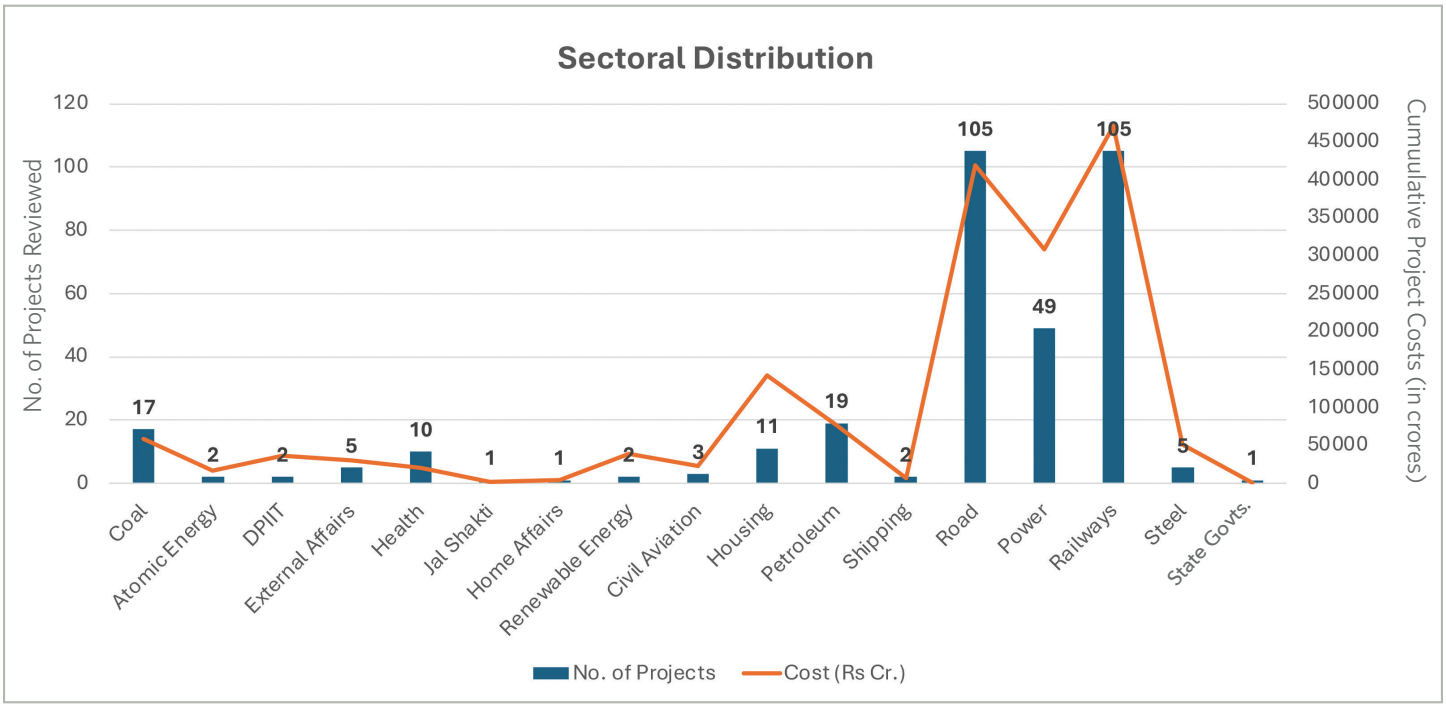
Namma Metro project (left); Bogibeel bridge project, Assam

Since its inception nine years ago, PRAGATI has had an outsized impact on India's infrastructure development. By June 2023, 340 projects worth INR 17.05 lakh crore ($205 billion) had gone through the PRAGATI review process.

Strategic Project Selection

The selection of these 340 specific projects out of the thousands of ongoing infrastructure initiatives in India is not arbitrary. These projects were chosen for their strategic importance and the complexity of challenges they face. The PRAGATI platform deliberately targets what are often referred to as the most 'wicked' and toughest projects in the country's infrastructure. These are typically large-scale initiatives that have been stalled or significantly delayed due to various issues such as inter-ministerial conflicts, center-state disagreements, land acquisition problems, or environmental clearance hurdles. Although the projects selected for PRAGATI span many different types of infrastructure, a majority encompass the three basic building blocks of economic activity – roads, railways, and power plants. [**Exhibit 1**]

Exhibit 1



Source: PRAGATI Portal

Infrastructure Investment Growth

Over the past decade, India's spending on infrastructure has soared. From a modest Rs. 196,681 crore in 2014-15, capital expenditures for infrastructure have surged to a budgeted Rs. 1,000,961 crore in 2023-24, marking a more than five-fold increase in spending. As a percentage of total Union budget allocation, these capital expenditures have doubled from approximately 12% to 22%. [**Exhibit 2**]

These dramatic increases, which coincide with the implementation and maturation of the PRAGATI platform, reflect the government's decision to prioritize capital expenditures, while giving equal emphasis to social sector spending. This prioritization illustrates a commitment to strategic, long-term economic growth and infrastructure development. It also reflects the increased capacity of state and central ministries of the Government of India

to implement infrastructure projects effectively. In total, from 2014-15 to 2023-24, the cumulative capital expenditure is projected to reach Rs. 4,389,243 crore, a substantial outlay that has the potential to reshape the nation's connectivity, productivity, and quality of life for millions of citizens.

While these substantial increases are not directly attributable to PRAGATI, an important relationship exists. By focusing on efficient project execution, accountability, and timely implementation, PRAGATI has helped build confidence in the government's ability (at both central and state levels) to utilize increased capital allocations effectively and efficiently. The government's willingness to allocate ever-larger sums to infrastructure development also speaks to the enhanced systems and processes now in place for overseeing critical projects, as well as improvements in project planning, execution, and monitoring – all areas where PRAGATI has played a key role.

Exhibit 2

Capital Expenditure Trends as a Percentage of Union Budget Allocations

(Rs. in crore)

FY	"Total Expenditure (TE)"	"Capital Expenditure (Capex)"	"Capex as % of TE"
2014-15	1663673	196681	11.8%
2015-16	1790783	253022	14.1%
2016-17	1975194	284610	14.4%
2017-18	2141973	263140	12.3%
2018-19	2315113	307714	13.3%
2019-20	2686330	335726	12.5%
2020-21	3509836	426317	12.1%
2021-22	3794171	592798	15.6%
2022-23 BE	3944909	750246	19.0%
2022-23 RE	4187232	728274	17.4%
2023-24 BE	4503097	1000961	22.2%

Footnotes:
BE: Budget Estimates
RE: Revised Estimates

Multi-Faceted Impact

PRAGATI's influence on infrastructure development manifests in four key areas:

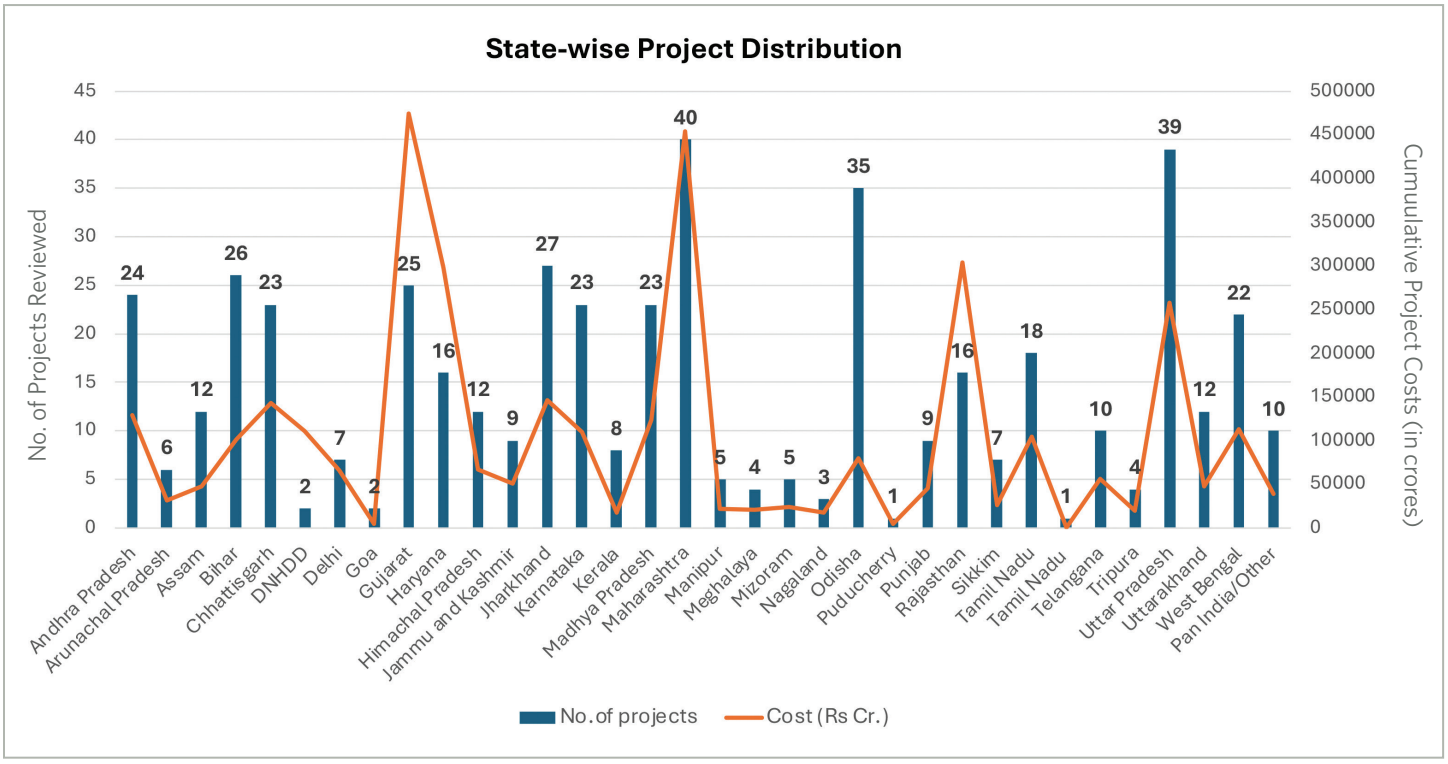
- **Economic:** Delays in the completion of new roads, rail lines, ports, and airports not only inflate direct costs due to logistical challenges and price escalations, they also forfeit potential economic returns resulting from increased passenger and commercial travel on these assets. Expedited project completions bring these financial returns online sooner.
- **Social:** As infrastructure projects come to fruition more rapidly, local populations also reap benefits sooner. New roadways, for instance, have given remote communities quicker access to essential services like schools and hospitals. Railways and bridges have spurred job creation, providing thousands with livelihood opportunities and injecting vitality into local economies. This infrastructural renaissance has enhanced the quality of life for millions, bringing them into the folds of a modern, connected India.

- **Environmental:** Although rapid infrastructure development is a key element in modernization, unbridled growth isn't. Today's strong, resilient economies are also those that prioritize sustainability. PRAGATI has advanced India's commitment to sustainability by enabling faster environment-related clearances and shorter construction timelines, which help reduce a project's carbon footprint. PRAGATI has provided a forum for the consideration of how waterways, natural habitats, and specific communities will be positively impacted by a project. Moreover, digital communication tools, such as videoconferencing, reduce the need for carbon-intensive travel.
- **Positive Governance:** PRAGATI has not only revolutionized the execution of infrastructure projects but has also emerged as a catalyst for broader changes and innovations. It has helped infuse the spirit of efficiency and transparency throughout other areas of government, contributed to India's modernization, and inspired a variety of initiatives that aim to distribute economic growth more widely throughout the country.

Geographic Distribution and Project Types

PRAGATI's project distribution at the state level reflects India's vast geographic landscape and regional diversity. Of the total 340 projects under PRAGATI's purview, 255 projects with a combined value of ₹11.11 lakh crore ($134 billion) have been clearly allocated to specific states. This distribution allows for a detailed analysis of infrastructure development at the state level, providing valuable insights into regional progress and priorities. [**Exhibit 3**]

Exhibit 3



Source: PRAGATI Portal

The remaining 85 projects, valued at approximately ₹5.94 lakh crore ($72 billion), represent initiatives that span more than one state. These multi-state projects present unique challenges in terms of coordination and cost allocation. Due to their cross-border nature and the complexity of apportioning costs across state lines, a precise state-wise distribution for these projects is not currently available.

This subset of multi-state projects underscores PRAGATI's role in fostering inter-state cooperation and addressing infrastructure needs that transcend administrative boundaries. These initiatives often represent critical connective infrastructure – such as highways, railways, or power transmission lines – that are essential for national integration and balanced economic growth across regions.

The inclusion of both state-specific and multi-state projects in PRAGATI's portfolio reveals the platform's comprehensive approach to infrastructure development. It reflects a strategy that balances localized state-level needs with broader, nation-wide infrastructure imperatives, ensuring that India's development is inclusive and interconnected.

CHAPTER 2

Leadership from the Top

Prime Minister Narendra Modi chairing a PRAGATI meeting on February 22, 2023

For people living in the remote region of Dhemaji, the promise of a road and rail bridge spanning the mighty Brahmaputra River sounded life changing. Nestled in the northeastern state of Assam and abutting the country's border, the Dhemaji region suffered from a lack of modern amenities. To get to medical facilities, universities, airports, and jobs in the much larger city of Dibrugarh, residents journeyed across the river by boat. In an area with frequent storms and heavy rainfall, these boats were hardly reliable. When they weren't canceled, these rides were often treacherous.

When construction crews broke ground on the bridge's foundation in 2002, hopes were high. But a decade later, work was nowhere near completed. By 2012, only a portion of the bridge's concrete pilings had been installed.[7] Problems procuring land and managing the torrential rainfall had plagued the project from the start. As the years wore on, employee attrition in a sparsely populated region caused project stagnation, which resulted in escalating costs.

Enter PRAGATI in 2015. With so many years of delay, the Bogibeel Bridge was an ideal candidate for inclusion in the new governance platform. When it entered the system, the project appeared on digital dashboards for a variety of officials, including Assam's Chief Minister, India's Minister of Railways, and the Prime Minister. Realizing the economic and social benefits the bridge would provide, Mr. Modi took an active role in following the bridge's construction in real time. The Prime Minister held meetings with various stakeholders and asked questions. Officials began visiting the project site more often. Eventually, construction accelerated. By 2018, less than three years after coming under review in PRAGATI, the Bogibeel Bridge was officially completed.

This hands-on involvement by India's top leader is a key feature of the PRAGATI platform – and an essential component of its success. Around the world, it's not uncommon for government leaders to throw their weight behind important initiatives. It's far rarer, however, for these leaders to sustain their support for years or regularly roll up their sleeves to help drive execution.

PRAGATI's Origin and Evolution

Mr. Modi's interest in digital governance tools didn't begin with PRAGATI. In 2001, a massive earthquake struck the western Indian state of Gujarat, devastating much of the region's infrastructure. Mr. Modi, who was Gujarat's chief minister at that time, realized the value of an online system that could help speed the rebuilding and repairing of infrastructure and boost trust in government responsiveness. Created alongside senior civil servants, SWAGAT was a first-of-its-kind, tech-based platform for addressing grievances.

Using SWAGAT, which means 'welcome' in many Indian languages, citizens could file complaints, view the proceedings and decisions about their applications online, and use video conferencing to interact with civil servants. One of the key features of this multi-modal system was a process for filtering petitions, which ensured that only substantial or important issues made their way to the chief minister's desk. SWAGAT also melded the traditional with the technological by holding monthly public hearings attended by Mr. Modi. At these forums, citizens could bring their concerns directly to their leaders. SWAGAT garnered national accolades for the government's ability to enhance transparency and accountability in public service.

[7] *The Times of India*, "Bogibeel Bridge project marks 10 years with slow work progress," April 21, 2012.

When Mr. Modi was elected India's Prime Minister in 2014, he sought to bring the regional success of SWAGAT to the national stage. In creating PRAGATI, the emphasis pivoted to the bigger, more complex mission of large-project management. But this initiative wasn't just about digital transformation; it was about how governance was perceived and executed. Much like SWAGAT enhanced state government responsiveness to a natural disaster, PRAGATI dovetailed with India's broader ambitions to harness technology for effective governance, encapsulated by its "Minimum Government, Maximum Governance" mantra.

High-Level Action

The Bogibeel Bridge is just one example of how large infrastructure projects benefit from top-level leadership. Since PRAGATI's inception, India's Prime Minister has taken a leading role reviewing each of the 340 infrastructure projects that have moved through the platform. This scrutiny lends weight and urgency to infrastructure initiatives, helping rally resources, expedite decision-making, galvanize teams, and motivate workers on the ground. As a result, many large and important projects that have languished for a host of big and small reasons have jolted back to life.

This hands-on involvement from the Prime Minister takes several forms:

- *Setting deadlines:* Across the globe, large infrastructure projects are notorious for setting, and then consistently missing, deadlines. Some of this is understandable. Road, rail, bridge, power generation, and other infrastructure projects are often complex undertakings with many variables spanning multiple geographies. But without a serious attempt at enforceable deadlines, project timelines can languish beyond what is reasonable. On numerous PRAGATI projects, Mr. Modi has given clear instructions about specific deadlines. For the development of the Pakri-Barwadih Coal Mine in Jharkhand, for example, one of the problems delaying progress was the compensation that would be provided to local people disrupted by the mine. After being approved in 2006, the project had seen little progress when Mr. Modi turned his attention to it in 2016. In a PRAGATI review meeting, he instructed the state government to resolve the issue, as well as maintain law and order at the site, within two months. This wasn't the project's only bottleneck but it set progress into motion and the mine was completed in 2019.
- *Streamlining processes:* In some instances, projects are hampered by specific bottlenecks that occur within government ministries. In these scenarios, Mr. Modi has taken the lead to identify the nature of the problem and urge solutions to fix it. The Ministry of Railways, for example, suffered from months-long delays in giving approvals for individual general 'arrangement' drawings, which are needed before construction crews can break ground on new sections of railway. The slow process delayed projects and created coordination problems with other ministries. In a 2017 PRAGATI meeting, Mr. Modi stressed the need for an integrated and accelerated approach to these approvals, instead of the 'status quo' approach of officials used to working in isolated silos. He asked the Ministry of Railways to streamline the approval process and work on a technology-based solution. This guidance from the Prime Minister led to the creation of an electronic drawing approval system. This platform, launched in 2020 along with standardized drawings, has digitized the drawing submission, viewing, and approval process, dramatically reducing approval timelines.
- *Facilitating collaboration:* Since many of India's large infrastructure projects span multiple states or require the involvement of multiple central ministries, collaboration is an essential component of successful project

completion. For construction of the Ennore-Thiruvallur-Bengaluru-Puducherry-Nagapattinam-Madurai-Tuticorin Gas Pipeline, for instance, 400 villages in three states were affected by right-of-way issues. Although the central government was responsible for building the pipeline, these right-of way-issues had to be resolved by the state governments. Having worked as a chief minister for more than 12 years, Mr. Modi had a clear understanding of how such issues often play out on the ground. In a PRAGATI meeting in 2018, he asked the government of each state – Tamil Nadu, Karnataka, and Andhra Pradesh – to empower an implementing agency to forge agreements with land owners. This decision led to a single government body taking ownership of resolving the disputes. In January 2024, the pipeline was completed.

Anatomy of a PRAGATI Meeting

The success of many PRAGATI projects can be traced directly to a small video-conferencing room at the Prime Minister's South Block office in New Delhi. There, often on the last Wednesday of every month, Mr. Modi convenes with his senior aides and at least one additional secretary who oversees PRAGATI. Joining via video conference are the Cabinet Secretary, all chief secretaries of states, and secretaries of the central ministries. These gatherings, which typically last 90 minutes, are well planned and often consist of three parts:

1. *An evaluation of public grievances pertaining to a specific central ministry.* The *Centralized Public Grievance Redress And Monitoring System (CPGRAMS)* allows citizens to file complaints regarding the delivery of government services. Many PRAGATI meetings start with a broad review of the grievances a particular central ministry is receiving and an evaluation of its approach to resolving these complaints. This system helps ensure that government ministries are responsive to citizens they are designed to serve.

2. *A discussion of particular large-scale infrastructure projects.* Roughly one month in advance of the meeting, attendees are given a long list of projects currently active in PRAGATI, with status updates received 10 days before the meeting. A day prior, attendees receive a final whittled-down list of the most pressing projects that will be discussed. During the meetings, an array of visual aids, including data, maps, and drone footage, provide a current snapshot of the projects under discussion. This helps to create a clear picture of the realities on the ground and facilitates informed discussions. Mr. Modi then dives into a detailed discussion with the relevant officials about the bottlenecks and grievances that are hampering progress and about potential strategies to overcome them. He may probe into the reasons for any delays and question the central ministries about their roles in implementing the projects. These discussions often foster a spirit of camaraderie and shared purpose, but the Prime Minister's intent is clear: to encourage officials to assume greater accountability and ownership of the projects.

3. *A review of a social sector program or current national priority, usually focused on social development.* Several ambitious nationwide initiatives aim to bring India's marginalized rural and urban communities into the economic mainstream. PRAGATI meetings often conclude with the Prime Minister's Office evaluating the status of national social sector programs such as the **Saubhagya scheme**, which is pursuing universal electrification throughout India, the **Jal Jeevan Mission**, which aims to provide tap water connections to every rural home, and the **Pradhan Mantri Gram Sadak Yojana**, which is dedicated to providing all-weather roads to and between rural areas. Other priorities reviewed include flood management efforts undertaken by state governments.

A Follow-Up Process

Ultimately, the goal of each PRAGATI meeting is leave no stone unturned in identifying and resolving bottlenecks, and to emerge with a clear and actionable path forward for each of them. This often entails assigning specific tasks to various officials and setting deadlines for their completion. Mr. Modi usually ends the meeting by reminding everyone of their shared commitment to serving the people of India and he urges them to approach their tasks with purpose and determination.

Following a PRAGATI meeting, the secretary of coordination in the Cabinet Secretariat plays a critical role in ensuring that decisions are acted upon and momentum is maintained. To achieve this, the secretary holds weekly follow-up meetings with officials from the relevant ministries and other government departments. These meetings are crucial for reviewing progress, addressing any challenges, and ensuring that the implementation of the decisions is on track. This approach helps foster a culture of accountability and also ensures that the initiatives discussed during the PRAGATI meeting are executed efficiently.

In addition to the secretary of coordination's review, a ministerial-level monitoring group is headed by a cabinet minister, who coordinates with a minister of state in the Prime Minister's Office. This monitoring group regularly reviews the progress of projects that may be lagging behind.

CHAPTER 3

Problem Monitoring and Resolution

A stretch of the Varanasi-Aurangabad highway-widening project

In large-scale infrastructure projects, problems both big and small are inevitable. Land acquisition efforts can easily run aground due to delays in agreement between project stakeholders, including farmers and local communities. Jurisdiction disputes can arise when a project spans multiple states or involves multiple ministries. Environment-related clearances can be unnecessarily delayed, and unforeseen weather or labor problems can stymie progress. These issues can cause years-long delays and massive cost overruns.

Given the immense complexity of nationally important infrastructure projects, PRAGATI works in conjunction with at least three other government-run digital platforms. Two of them – **PARIVESH**, launched in 2018, and **PM Gati Shakti**, created in 2021 – were inspired, in part, by the success of PRAGATI. PARIVESH (Proactive and Responsive Facilitation by Interactive and Virtuous Environmental Single-window Hub) was created to streamline the process for obtaining environmental, forest, wildlife, and coastal regulation zone clearances in a fair and transparent manner. PM Gati Shakti is an ambitious national "master plan" for integrated infrastructure development that aims to consolidate the planning of large multimodal projects and boost Indian economic growth. A third platform digitally links the project-tracking portals of individual infrastructure ministries, allowing for seamless tracking of all of India's large infrastructure projects. A key piece of this connected platform is the **Project Monitoring Group (PMG)**, which has a mandate of tracking infrastructure projects with investments of INR 500 crore or more.

Together, these four platforms form an ecosystem for advancing the ease, speed, and efficiency of infrastructure development. They also provide a mechanism for raising and resolving issues between the centre and states, and can be used to identify projects for national review through PRAGATI. Although these platforms often function synergistically to address challenges, PRAGATI is the Indian government's primary problem solver for infrastructure.

The PRAGATI Pressure

As highlighted in the previous chapter, the Prime Minister's direct involvement serves as a powerful catalyst for getting PRAGATI projects moving. Mr. Modi's questions, deadlines, and directives are all effective mechanisms for resolving problems or bottlenecks. But PRAGATI also helps resolve issues in several other, less direct ways.

A sense of urgency: Because stakeholders don't know when their project will find a place in the Prime Minister's monthly review meetings, the looming suspense is often enough to break logjams, with officials motivated to proactively address lingering requests or disputes before they escalate. For example, in the five months between getting slated for a PRAGATI meeting and the meeting actually happening, the government's **National Broadband Mission**, an effort to facilitate universal access to internet services across India, received half of its needed right-of-way permissions. These clearances, which allowed crews to lay fiber in the ground, were given by a wide variety of authorities, such as municipal corporations, village panchayats, and state government departments.

> Although three other government-run digital platforms often function synergistically to address challenges, PRAGATI is the Indian government's primary problem solver for infrastructure.

Similarly, in just four months, the **Universal Service Obligation**, an ambitious program within the Department of Telecommunications to provide 4G mobile coverage to every village in India, land was made available for an additional 6,700 towers – a 45% increase over the number of pre-PRAGATI towers.

New enthusiasm for cooperation: Although the Prime Minister's directives that different government entities work together are powerful problem-solving mechanisms, often the very fact of diverse stakeholders coming together on the PRAGATI platform and during live meetings is enough to inspire cooperation.

Consider, for example, the construction of the **Dahisar-Surat segment of National Highway 8** (now NH 48). Covering 239 kilometers from Surat in Gujarat to Dahisar in Maharashtra, the project's goal was an expansion of the existing four-lane highway to six lanes, accompanied by the strategic addition of service roads catering to previously underserved communities. Initiated in February 2008, the plan called for completion by August 2011. Yet by 2014, the project was stalled, with eight kilometers still not completed.

One problem was a 1.5 km stretch of road on the outskirts of Mumbai, which would cut straight through a portion of the Sanjay Gandhi National Park. The National Wildlife Board, which runs the park, had rejected a proposal by the Minister of Maharashtra to use and clear the land.

On the PMG portal, stakeholders had tracked the progress of this dispute. Often this platform is enough to facilitate resolutions. But on the Dahisar-Surat highway, it wasn't until 2017, when the project was put up for review in PRAGATI, that changes started to happen. New discussions began on the wildlife dispute, which was essentially a state-central disagreement. The National Wildlife Board, which had previously rejected the idea of an incursion into the national park, agreed to let the state's wildlife board, chaired by the Chief Minister of Maharashtra, make the decision. This state board issued the approval, while agreeing to erect sound barriers and other boundaries on either side of the highway to protect leopards and other wildlife in the park.

A sense of legitimacy: Inclusion in PRAGATI can provide stakeholders with a new level of authority that empowers them to resolve troubles. In the stalled construction of the **Haridaspur-Paradeep Rail Link**, for instance, the Ministry of Shipping was able to solve a lingering issue after the project was slated for PRAGATI review. A special purpose vehicle (SPV) had been established to finance the rail link, but some of these investors had either been absent or contentious, and promised funding did not materialize. With the growth of the port city of Paradeep hinging on this railway line, PRAGATI gave the Ministry of Shipping the authority and resources to act. By acquiring equity in the SPV, it diluted the problematic investors and neutralized the problem.

Avoidance of scrutiny: In other instances, projects don't even need to be directly reviewed in PRAGATI for the platform to have an impact. Sometimes avoiding this review or preventing an appearance on the platform entirely is enough motivation for chief secretaries and project leaders to resolve problems quickly and keep projects moving forward.

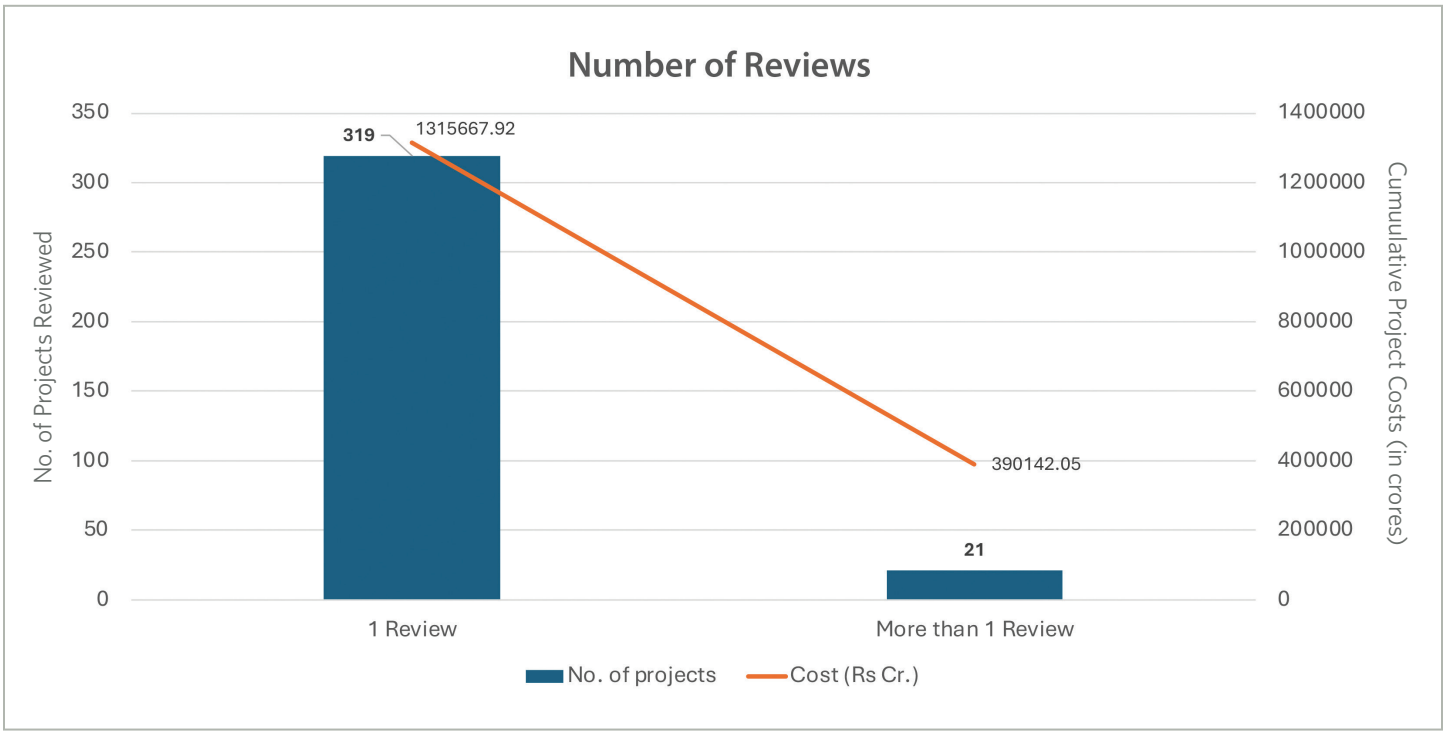
Multiple Reviews

PRAGATI's commitment to resolving complex issues is evidenced by the fact that more than a few projects have been reviewed multiple times. [**Exhibit 4**] The eight portions of the **Aizawal-Tuipang Road** project in Mizoram, for example, have been reviewed three times – in 2017, 2019, and 2021. This persistent attention has yielded significant results. As of August 2024, each of these portions have achieved physical progress of 80% or above.

Projects that have undergone more than one PRAGATI review represent a diverse cross-section of India's infrastructure development efforts. These initiatives span multiple ministries, including Civil Aviation, Health, Jal Shakti, Housing and Urban Affairs, Petroleum, Road Transport, Power, and Railways.

To illustrate the impact of these multiple reviews, we conducted an in-depth analysis of three projects: the Navi Mumbai International Airport, the North Karanpura Thermal Power Project, and the Jammu-Udhampur-Srinagar-Baramulla Rail Link Project (*see project details in appendix*).

Exhibit 4



CHAPTER 4

A Digital Governance Ecosystem

Eye from the sky – a drone view of toll booths on the Varanasi-Aurangabad highway

Over the last decade, the Indian government has leveraged digital technology to enhance basic aspects of its citizens' daily life, most notably the easy availability of instant payments through the Unified Payments Interface and quick access to tax filings and other documents with a 12-digit Aadhaar identity number.

As the nation drives forward with its ambitious infrastructure plans, similarly impactful digital technologies have hummed in the background to make the construction of roads, railways, shipping ports, airports, and bridges more efficient.

While PRAGATI's effectiveness in resolving issues and accelerating project implementation is clear, it's important to understand its place within India's broader infrastructure development ecosystem. As noted earlier, PRAGATI combines with three other governance platforms to form a powerful ecosystem. This chapter explores some of the digital features that enable each platform to help modernize infrastructure development.

PRAGATI: Video Conferencing, Drone Feeds, Data Management Software

In the previous chapters, we've seen how rigorous real-time oversight during PMO review meetings facilitates problem-solving. This wouldn't be possible without video conferencing. During video calls, state officials, chief ministers, project leaders, and other stakeholders see not just members of the PMO but also key documents about the project. Even more powerful are live feeds from drone images and GPS tracking devices that provide tangible data on a project's implementation. These on-the-ground updates also provide the PMO with direct knowledge about projects, reducing the need for reliance on potentially biased reports.

During construction of the Dahisar-Surat section of National Highway 8 (now NH 48) in Maharashtra and Gujarat, for example, installation of GPS tracking devices on construction vehicles and machinery facilitated real-time monitoring of their location and usage. This helped in optimizing the usage of resources and in identifying potential delays or inefficiencies in the construction process.

PRAGATI's third technology asset – databases and software that centralize data – aggregates all necessary project details into a single platform. Instead of having to hunt for data or wait for emails to be returned, project leaders and government officials have schedules, budgets, contracts, etc. at their fingertips. This consolidation has not only dramatically simplified information access, but enables greater collaboration, information-sharing, and decision-making among stakeholders.

PM Gati Shakti: A Centralized Portal and Geo-Spatial Technology

Infrastructure projects often span multiple jurisdictions. A highway project, for example, may involve the Ministry of Road Transport and Highways, the Ministry of Environment, Forest and Climate Change, and the state government. Historically, these stakeholders have, at times, worked in isolation, leading to misaligned goals, contradictory policies, and redundancy. After a road was constructed, for instance, other agencies might dig it up to lay underground cables or gas pipelines, causing additional inconvenience to motorists and wasteful expenditures of government resources.

By bringing together 16 central ministries on a centralized platform, PM Gati Shakti eliminated this siloed approach to infrastructure planning. On the portal, which was launched in 2021 by the Department Promotion of Industry and Internal Trade, each department now has visibility into other ministry's projects, allowing them to design initiatives with a common vision. This is particularly useful in the power transmission sector, where infrastructure projects require intricate planning to optimize routes, reduce land usage conflicts, and ensure efficient energy transmission. PM Gati Shakti can facilitate better route planning to ensure that power transmission lines take the most efficient path. This streamlining, coupled with faster permits, is helping to catalyze India's energy ambitions.

> During construction of the Dahisar-Surat section of National Highway 8 (now NH 48) in Maharashtra and Gujarat, for example, installation of GPS tracking devices on construction vehicles and machinery facilitated real-time monitoring of their location and usage.

PM Gati Shakti can also promote enhanced coordination between these central government ministries and India's many state governments. Speaking at the 41st PRAGATI meeting in 2023, Prime Minister Narendra Modi urged all state governments to use the PM Gati Shakti portal for planning infrastructure projects.[8]

PM Gati Shakti provides a sophisticated suite of tools and data sets to assist in this planning. Its geo-spatial technology leverages imagery from the Indian Space Research Organization (e.g., satellite imagery and geographic information systems) to create a comprehensive database of multi-layered maps of the entire country. Many of these 1,600 layers – including land use, soil type, water resources, forest cover, population density, road and rail networks, and airports – are able to talk to one another. When officials or planners plan to introduce a new road, railway line or industrial park, they can ascertain the availability of power from nearby stations, the sufficiency of water from adjacent canal or water supply networks, and even details about the type of land, such as government-owned, wasteland, or cultivated land.

These digital tools help not only with scoping a project's most efficient route or footprint, they also facilitate greater sustainability. Projects where PM Gati Shakti has had a crucial impact include the proposed **Pune-Bengaluru Expressway**, a 700 km corridor, where route changes resulted in the removal of 19% fewer forested areas. In addition, use of the PM Gati Shakti portal enabled a 43 km reduction in the final length of the five pipelines under the **National East Gas Grid**. If these modified routes are executed, the expected cost savings will be Rs. 169 crores ($20 million).

Much like PRAGATI, the inspiration for PM Gati Shakti's mapping tools came from Mr. Modi's time as Gujarat's chief minister. Following an earthquake in 2001, Mr. Modi utilized satellite technology to help map the state's water crisis and generate information to build an extensive network of canals, dams, and irrigation channels.

[8]Use PM GatiShakti portal for planning of infrastructure projects, PM Modi advises central ministries and states," *The Economic Times*, February 24, 2023.

Further illustrating the ways in which India's digital platforms operate synergistically, PRAGATI's focus on land acquisition issues was instrumental in facilitating Gati Shakti's use of geo-spatial technology. With roads, railways, and airports all needing extensive amounts of terrain, one of the biggest bottlenecks PRAGATI projects have faced is land acquisition. In India, this problem is made worse by the antiquated, paper-based system many states have used for land records. By repeatedly shining a light on this problem, PRAGATI has helped elevate the need for states to have digital, geographic information system-based (GIS) records that connect data to maps. Following the launch of PM Gati-Shakti in 2021, many states uploaded their land records and cadastral maps onto a single platform, not only making land acquisition easier, but facilitating greater visibility about possible obstructions in the design process.

Although PRAGATI is the primary platform for resolving issues and breaking bottlenecks, Gati Shakti works to prevent problems from arising in the first place. Being able to do sophisticated and highly accurate mapping, planning, and modeling using tools on Gati Shakti, for instance, lets officials and project planners reduce their land acquisition risk, one of the most common challenges in infrastructure development. For instance, by quickly accessing land-use and ownership data or gauging the proximity of a new road or railway line to existing facilities, planners can model ideal scenarios and anticipate potential obstacles.

PARIVESH: Web-Based Automation

Large-scale infrastructure projects are inevitably disruptive. They require large tracts of land, necessitate the clearance of forests or other ecosystems, and may disrupt waterways and wildlife. Obtaining the requisite government clearances to ensure that the planning and implementation of these projects is as responsible and sustainable as possible has always been a bottleneck.

A web-based platform, PARIVESH has automated the entire process of submitting environmental applications to central, state and district-level authorities. Gone are the days of submitting hard copy toposheets and forest land diversion proposals. Now fully digitizable, they can be transmitted through the use of intricate online maps. PARIVESH has also provided a new level of transparency and fairness. Stakeholders can easily track the status of their proposals at each stage of the workflow and receive alerts about impending approvals. Moreover, PARIVESH serves as a knowledge resource, allowing any interested party, armed with just a few basic project details, to research the clearances needed for a potential venture. This 'Know Your Approval' feature has helped bolster public trust.

For forest clearances, approvals that once spanned nearly 300 days have been whittled down to 20-29 for central administration.

Similarly, PARIVESH has dramatically reduced the time it takes to obtain environmental clearances, which are crucial for maintaining the momentum of infrastructure projects. Instead of an average of 600 days, some approvals are now received in 70-75 days. For forest clearances, approvals that once spanned nearly 300 days have been whittled down to 20-29 for central administration clearance.[9]

[9]Interview with environmental ministry officials of the Government of India.

PARIVESH has also helped reduce corruption by making it harder for officials to demand bribes from project developers. Project developers can obtain environment-related clearances online through PARIVESH, without having to interact with government officials.

PARIVESH's efficiency is supported by a feature that screens for repetitive queries and by a decision support system that preemptively runs a sensitivity analysis on all projects. This allows potential issues to be identified and then addressed early in the process. In addition, the introduction of standardized terms of reference for infrastructure projects has enabled environmental impact assessment reports to be generated more quickly. Future versions of PARIVESH are expected to feature an expanded suite of modules, ranging from integrated fee payment mechanisms to a consent management system.

Project Monitoring Group (PMG) Portal: A Single Source of Truth

Initially established under the Cabinet Secretariat, the PMG portal was merged in 2019 with Invest India, which sits within the Department of Promotion of Industry and Internal Trade. On this portal, which has a mandate of tracking infrastructure projects with investments of INR 500 crore or more, stakeholders can view the progress of projects, check status updates, and download customized reports. They can also monitor and track the resolution of issues across stages. According to the Ministry of Commerce and Industry, PMG has helped resolve nearly 5,600 issues in 843 projects worth more than 26.4 lakh crore ($330 billion).[10]

In recent years, as the volume of data on infrastructure projects has grown and various ministries, departments, and agencies have developed their own portals for monitoring projects, the government has initiated efforts to consolidate digital data and streamline platforms. In 2022, the Cabinet Secretary, in collaboration with the Prime Minister's Office, recommended connecting multiple infrastructure-related platforms to the PMG portal, making it the single source of truth for infrastructure project progress and providing government officials a unified point for data entry.

This detailed tracking system now includes the monitoring platforms of individual ministries, including Railways, Coal, Petroleum & Natural Gas, Ports, Shipping & Waterways, and Water Resources, as well as the **India Investment Grid (IIG)** portal. Launched in 2018, IIG is the official platform for showcasing opportunities to the global investor community and includes the related **National Infrastructure Pipeline**, which monitors Indian government capital expenditures for infrastructure projects that are in excess of Rs. 100 Crores. The seamless connection of all these platforms with PMG has created a centralized database for all infrastructure projects, including standardized definitions, project IDs, and reporting requirements. These efforts have eliminated data discrepancies, enabled a more seamless flow of information, and removed the burden of officials having to input the same data on multiple platforms. Moving forward, PMG plans to incorporate AI-based predictive monitoring capabilities to ensure even greater accuracy and more robust monitoring.

[10]https://pmg.dpiit.gov.in

CHAPTER 5

PRAGATI for the Social Sector

Jal Jeevan Mission beneficiary in Chhattisgarh (From the archives of the Department of Drinking Water and Sanitation)

While PRAGATI has been instrumental in accelerating infrastructure projects across India, its impact extends beyond roads, railways, and bridges. The platform has played a crucial role in monitoring and expediting social sector programs that directly impact the lives of millions of Indians. They are aimed at improving quality of life and ease of living. These inclusive programs highlight the government's efforts to create a network of essential services that not only improve living standards and enhance connectivity throughout the country, but also provide the necessary support for broader infrastructure projects. By bringing these programs under the Prime Minister's purview, PRAGATI has not only accelerated their implementation but also enhanced their effectiveness.

Advances in Government Responsiveness

From its inception, many PRAGATI meetings have dedicated the first portion of their agenda to reviewing the effectiveness of CPGRAMS (Centralized Public Grievance Redress and Monitoring System). This online platform, which is run by the Department of Administrative Reforms and Public Grievances, allows citizens to file complaints regarding the delivery of government services, providing a vital link between the people and their government. PRAGATI has significantly enhanced CPGRAMS' effectiveness by making it a regular focus of high-level reviews, leading to quicker grievance resolution and a strong accountability mechanism. Ministries and departments are now more responsive to citizen grievances, knowing that their performance will be reviewed at the highest level and subjected to a data-driven analysis. Across all government departments and ministries, the average time for the resolution of a grievance has decreased from 32 days in 2014 to approximately 20 days in 2023.

In most PRAGATI meetings, the Prime Minister's Office zeroes in on a particular ministry's record in receiving and resolving grievances. This high-level scrutiny has not only improved overall responsiveness, it has led to systemic improvements in specific government services. For example, after repeated grievances about delays in passport issuance were highlighted in PRAGATI meetings, the Ministry of External Affairs implemented reforms that reduced the average time for passport issuance from 16 days to 7 days.

In addition, high-level attention from the PMO has led to various enhancements of the CPGRAMS. For instance, the Department of Administrative Reforms and Public Grievances has created a mobile app that makes the system more accessible. On the app, citizens can now track the status of their grievance in real-time with a unique registration ID.

The synergy between CPGRAMS and PRAGATI has significantly improved the government's responsiveness to the needs of its citizens, creating a feedback loop where public input directly informs high-level decision-making. This has been especially important in the social sector, where these direct lines of communication have been crucial in identifying gaps in the implementation of nationwide social schemes.

Ease of Living

As noted earlier, the third and final portion of PRAGATI meetings has been devoted to a review of national social programs. PRAGATI's consistent focus on

These inclusive programs highlight the government's efforts to create a network of essential services that not only improve living standards and enhance connectivity throughout the country, but also provide the necessary support for broader infrastructure projects.

these schemes underscores the government's belief that resilient and sustainable economic growth must occur alongside a commitment to social development in order to improve quality of life and ease of living for its people.

PRAGATI has helped advance the goals of key nationwide social sector schemes through a combination of accelerated implementation, inter-departmental coordination, and data-driven monitoring. Since many social programs require collaboration between multiple ministries and state governments, PRAGATI's ability to bring stakeholders onto a single platform for real-time problem-solving and decision-making has been an essential factor. It has also facilitated the practice of adaptive policy-making, allowing implementing agencies to quickly identify challenges, then make timely policy adjustments or improvements in program design.

The key social sector schemes that have been regularly reviewed in PRAGATI meetings include:

- More running water with the **Jal Jeevan Mission**: This ambitious program aims to provide tap water connections to every rural household in India by 2024. PRAGATI reviews have helped accelerate the progress of the Jal Jeevan Mission by facilitating better coordination between the central Ministry of Jal Shakti and state-level implementing agencies. For instance, a review in 202113 led to a 20% increase in the rate of new tap connections in water-scarce regions over a six-month period. PRAGATI has also helped showcase and spread best practices and innovative approaches from different states, accelerating overall progress. The result has been a dramatic increase in the total number of rural households with tap water connections. In 2019, just 17% of all Indian households had running water; as of February 2024, 74% do.[11]

- Improved sanitation through the **Swachh Bharat Mission**: This effort to change open defecation behavior across India came up for review in PRAGATI meetings. Because the issue of sanitation is implemented by states and also cuts across many different departments and ministries, PRAGATI's oversight has been beneficial in addressing implementation challenges and bottlenecks. Launched in 2014 by the Department of Drinking Water and Sanitation, the Swachh Bharat Mission set the goal of changing the open defecation behavior of more than 550 million people across the country to usage of toilets. In just five years, over 100 million individual household toilets were installed across India. In addition, a number of different central departments provided access to sanitation in their respective sectors, such as along highways, and at petrol pumps, railways, schools, and hospitals. The timely realization of this milestone has had numerous benefits for public health, including a significant reduction in groundwater contamination, fewer childhood illness and deaths, and a safer environment for women.

- Universal electrification with the **Saubhagya Scheme**: Launched in 2017, the Saubhagya scheme is dedicated to making sure every Indian household has electricity. The program provides free electricity connections to disadvantaged and rural households.[12]

[11]https://jaljeevanmission.gov.in
[12]*The Economic Times*, "Access to electricity among poorest households rises to 86%," January 16, 2023.

The PRAGATI Ripple Effect

In recent years, PRAGATI's influence has extended beyond traditional infrastructure projects to include development initiatives in strategically important areas. A prime example is the **Vibrant Villages Programme (VVP)**, which was launched as a centrally sponsored scheme for the comprehensive development of border villages in February 2023. This initiative seeks to reframe 46 areas that abut India's northern border (19 districts across five states and union territories), transforming them from "Last Villages of India" to "First Villages." Monitored through PRAGATI-like mechanisms, the VVP illustrates the ways in which PRAGATI's influence has had a ripple effect throughout India's government. The program focuses on empowering women and youth, improving connectivity through all-weather roads, ensuring clean drinking water and 24x7 power (emphasizing solar and wind energy), enhancing mobile and internet connectivity, and establishing tourist centers and health facilities. For the period 2022-2026, the central government has allocated a total of Rs. 4,800 crore to the VVP to ensure that remote border regions benefit from India's infrastructure revolution.

In other instances, PRAGATI review meetings have helped pave the way for wide adoption of specific technologies such as building information modelling (BIM). This process, which creates digital representations of the physical and functional characteristics of buildings, has been used in the Ministry of Housing and Urban Affairs' (MoHUA) **Light House Projects**. These model housing projects in six cities – Indore, Chennai, Agartalla, Lucknow, Rajkot, and Ranchi – identify and use new and innovative housing construction technologies to build homes efficiently, cost-effectively, and sustainably. The Light House Project in Chennai, for instance, constructed more than 1,100 homes and flats in a record 12 months.

Similarly, drone technology was adopted for the **Svamitva** initiative in order to provide rural property owners – particularly women – with clear and accurate land ownership records. Launched in April 2020, this program has positively impacted rural communities, especially women, by enabling property owners to formally document their land holdings, facilitating access to credit and other financial services. By issuing legal land ownership cards, Svamitva has helped reduce land disputes, bringing greater security and empowerment to rural residents.

Challenges and Future Directions

Looking ahead, PRAGATI is expected to play an even more significant role in social sector development. Discussions are underway about expanding its scope to include a more granular monitoring of not just scheme outputs, but their broader outcomes. Potential also exists to leverage artificial intelligence and machine learning to provide more nuanced insights for decision-making.

Yet, as India continues its journey toward inclusive development, it will need to keep advancing on several key fronts. The infrastructure for rapidly rolling out social services across the country not only needs to be installed, but maintained. Local implementing agencies will require adequate resources and support to continue building the necessary skills and capabilities that allow them to maintain a high quality of services. In addition, challenges exist in collecting robust, reliable data on the ground. Accurate and timely information about both the impacts of social schemes and the ongoing needs of local communities and villages will be critical in designing new initiatives and measuring the effectiveness of existing ones.

CHAPTER 6

Collaboration Across States

Ranging from elected and appointed leaders to government administrators in permanent positions, the apparatus of India's central and state governments keeps the trains running, helps power homes, keeps track of money flows, and allows new construction to move forward, among many other things.

Yet, as might be expected in a vast and complicated system, these government processes aren't always a model of efficiency or responsiveness. Critics have called India's bureaucracy stifling, slow, rigid, corrupt, and lacking in accountability.

In India's complex federal structure, fostering cooperation between the central government and states – regardless of which political party is in power at the center or the states – is crucial for effective governance. The relationship between the central government and states has historically been marked by political tensions and competing priorities. Different political parties often control different states, and partisan differences can easily derail important initiatives. Yet PRAGATI has emerged as a powerful demonstration of cooperative federalism in action – showing how central and state governments can work together effectively regardless of political affiliations when focused on shared development goals.

When facilitating infrastructure development, this cross-jurisdictional coordination is especially critical. The development of roads, railways, airports, and power plants inevitably brings multiple central and state ministries to the table. What makes PRAGATI particularly remarkable is how it has fostered collaboration across India's diverse political landscape. Projects receive equal attention and support whether they are in states governed by the ruling party or opposition parties. This apolitical approach has been crucial in building trust and demonstrating that infrastructure development transcends partisan divisions.

Since its launch in 2015, PRAGATI has emerged as a powerful tool in promoting collaboration, embodying the concept of "Team India" – a united approach to national development that rises above political differences. PRAGATI has brought district collectors and chief secretaries together and smoothed disagreements between sometimes-competing jurisdictions (e.g., the Ministries of Railways, National Highways, and Shipping). In doing so, it has helped elevate shared goals that will bolster India's development as a nation. Prime Minister Modi's hands-on review of select projects has also injected a sense of purpose into infrastructure development, painting a collective vision for a new, modern India that all states can rally behind, regardless of their political leadership. As one state official noted, "Everyone starts looking in the same direction due to PRAGATI."

Strengthening Center-State Collaboration

PRAGATI's video conferencing feature has transformed center-state interactions, creating a neutral platform where political differences take a back seat to development goals. By bringing together the Prime Minister, central ministry secretaries, and state chief secretaries onto a single platform, PRAGATI has created a virtual roundtable for national governance that transcends partisan politics. This direct line of communication has helped break down traditional bureaucratic silos and political barriers, enabling swift resolution of inter-state and center-state issues. This has proven especially valuable in states governed by opposition parties, where traditional channels might be affected by political considerations. PRAGATI's focus on concrete project outcomes helps overcome partisan differences that might otherwise impede progress.

Speaking at an April 2023 event marking the 20th anniversary of SWAGAT, Mr. Modi emphasized how PRAGATI exemplifies cooperative federalism in action, noting that when a project is reviewed under PRAGATI "the state governments work hard to diligently eliminate any obstacles that may impede the project's progress" - regardless of political affiliations.

The platform's success in bringing together states led by different political parties illustrates the power of institutional structures that promote collaboration over confrontation. Chief Secretaries from states across the political spectrum have praised how PRAGATI has helped them work more effectively with the central government while respecting state autonomy. In Jharkhand, for instance, Sukhdev Singh, the state's former Chief Secretary, says PRAGATI's intervention was crucial in helping state officials overcome hurdles they faced with the North Karanpura Thermal Power Plant. "The platform expedited lease agreements for government land and facilitated swift resolutions with various departments," says Singh. "This project is about power generation but more fundamentally it's about illuminating the future of Jharkhand by creating jobs and ensuring a reliable electricity supply."

Similarly, Arun Mehta, former Chief Secretary of Jammu & Kashmir, credits PRAGATI with helping to secure timely and robust support from the union territory for the building of the Udhampur-Srinagar-Baramulla Rail Link. "After years of delays, PRAGATI intervention in 2015 galvanized project execution," says Mehta. "In addition to being an engineering marvel, this railway, connecting Kashmir with the rest of India, is a lifeline for our region's socio-economic development."

Vandita Sharma, former Chief Secretary of Karnataka, calls PRAGATI a "game-changer" for the state's development. "The mere prospect of a PRAGATI review instills a sense of urgency and accountability among our teams, ensuring we stay on schedule and deliver quality results for our citizens," says Sharma. "In addition, the review process at various levels, including the secretary of coordination in the Cabinet Secretary's office, has been instrumental in maintaining high standards for projects such as the Bengaluru Metro."

The platform demonstrates how India's federal structure can be leveraged as a strength rather than seen as an obstacle. By providing a neutral forum focused on development outcomes rather than political positioning, PRAGATI enables productive collaboration between central and state governments regardless of party affiliations. This success has inspired other states to develop their own versions of implementation platforms. In 2021, Uttarakhand created the Unnati digital portal, which allows senior officials to track the real-time status of pending proposals across departments. In Arunachal Pradesh, the Chief Minister now conducts monthly reviews of major state and national projects on the state's e-Pragati platform.

Cross-Department Collaboration

By bringing central ministries together, PRAGATI has also created an alignment of purpose across different areas of the central government. Instead of approvals made within the Ministry of Railways remaining invisible to the Ministry of Road Transport and Highways or to the Ministry of Rural Development, officials in these departments can see each other's decisions, track progress throughout the bureaucracy, communicate directly, and share data. This ensures that projects do not fall into a black box of delays and bureaucratic nit-picking.

At times, this has highlighted mutually beneficial resource-sharing. In 2023, when Mission Amrit Sarovar was reviewed in PRAGATI, for instance, Mr. Modi instructed that excavated soil from the creation of ponds ("amrit sarovars") across India be used for nearby road and railway projects. These infrastructure projects needed dirt fill, while local governments needed a way to dispose of soil dug up for ponds. Without PRAGATI, such a win-win scenario might never have been identified.

In recent years, the Sectoral Groups of Secretaries (SGoS) have emerged as a vital component for fostering this kind of cross-sector collaboration. These groups, typically comprising four to five secretaries from related ministries, focus on a specific national development goal, such as overhauling the bureaucracy, opening new foreign missions, developing renewable energy resources, or launching a flagship highway program. Their primary functions include developing a roadmap for the future, creating targets and actionable policy interventions, and proposing ways to improve ease of getting work done.

By working together, the SGoS strengthen the Team India mindset and cooperative federalism. For example, the joint effort between the Ministries of Agriculture, Water Resources, and Rural Development led to the development of the Pradhan Mantri Krishi Sinchayee Yojana, a comprehensive irrigation scheme that addresses water conservation issues and takes a holistic view of water resources management. Similarly, the SGoS' focus on skill development and employment – a coordination between the Ministries of Skill Development, Education, and Labour – resulted in the National Career Service Portal, which bridges the gap between job seekers, employers, and training institutions across the country.

The SGoS often present their recommendations directly to the Prime Minister, ensuring that high-level decision-making on complex policy challenges is informed by well-rounded, multi-dimensional, expert insights. For instance, the SGoS on Transport and Communications played a crucial role in shaping the PM Gati Shakti National Master Plan, demonstrating how collaborative efforts can lead to transformative national initiatives.

The Chief Secretaries' Conferences are another crucial component of the Team India approach and cooperative federalism. These high-level meetings, which have been reviewed in PRAGATI sessions, bring together chief secretaries from all states and union territories to discuss critical national priorities, regardless of their states' political alignments. Recent conferences have focused on urban development, education, and agriculture (June 2022), Viksit Bharat or Developed India (January 2023), and a continuation of Viksit Bharat discussions (December 2023/January 2024). These conferences serve as a forum for sharing best practices, aligning state policies with national objectives, and fostering a spirit of cooperative federalism. The subsequent review of these conferences in PRAGATI meetings ensures follow-through on key decisions and maintains momentum on agreed actions.

Changing the Culture of India's Bureaucracy

Historically, the Indian bureaucracy, despite its evident contributions to nation building, was caricatured by critics as faceless functionaries shielded by stacks of files and letters, a system where communications often disappeared into the abyss. Some administrators, who sometimes quibbled over whether "the second reminder" was ever received or acknowledged, took pride in postponing infrastructure projects or holding up permissions.

By bringing some of the country's biggest and most important infrastructure projects through PRAGATI, Mr. Modi sends a powerful message throughout India's bureaucracy: new rail lines, bridges, roads, and airports are India's future.

Now, thanks to PRAGATI, they are keenly aware that someone stationed above them in the bureaucracy, all the way up to the Prime Minister's Office, may be paying close attention to the project. Within the portal, decisions and communications are documented and trackable. Officials involved with a project can see, for instance, who is making what decision and when they made it.

Over time, this scrutiny has prompted a powerful cultural shift that extends beyond administrative efficiency to demonstrate a new model of cooperative federalism – one where different levels of government work together effectively despite political differences. This new model not only does away with layers of obfuscation, but introduces an element of "naming and shaming" that compels officials to be directly answerable. It's hard to overstate the impact this has on accountability and transparency. Instead of a singular focus on established rules and procedures, officials who are part of the country's bureaucracy overseeing infrastructure are encouraged to prioritize outcomes and solve problems. The power today lies with officers who find solutions.

Within the Team India mindset, each official, regardless of rank or cadre, is seen as a valuable team member, contributing to a shared vision that transcends political boundaries. Decision-making becomes a more thoughtful exercise aligned with broader objectives. By bringing some of the country's biggest and most important infrastructure projects through PRAGATI, Mr. Modi sends a powerful message throughout India's bureaucracy: new rail lines, bridges, roads, and airports are India's future, and their development cannot be held hostage to political differences.

Future Challenges and Opportunities

Although significant progress has been made, the streamlining of India's approach to infrastructure development is far from complete. PRAGATI represents a focus on governance process reforms—making sure government entities help facilitate efficiency and productive relationships with businesses rather than hamper them. But while PRAGATI's real-time, high-level monitoring adds a layer of urgency to the bureaucracy, it isn't a panacea. Underlying structural challenges, endemic to any large system, can still persist. The Modi administration has expressed a commitment to continue to address this.

As India's federal structure continues to evolve, PRAGATI offers an important model for how institutional mechanisms can promote productive center-state collaboration regardless of political dynamics. The platform's success in fostering cooperation across party lines while respecting state autonomy provides valuable lessons for other aspects of center-state relations. Potential exists to further enhance the Team India approach through PRAGATI. This could be done by incorporating more state-specific issues in PRAGATI reviews, facilitating direct state-to-state cooperation through the platform, and leveraging data analytics to identify and promote successful state-level governance models nationally. Additionally, it will be critical to ensure that state officials have the skills and resources they need to advance their infrastructure and social development goals. Ensuring equitable participation of all states, regardless of political affiliations, will also be an important focus.

Integrating Viksit Bharat 2047 and PRAGATI

As India drives toward its goal of becoming a developed nation by its 100th anniversary, PRAGATI's strengths could be leveraged to help translate this ambitious vision into measurable progress. This could be accomplished in several ways. First, PRAGATI's digital dashboard could be expanded to include key performance indicators (KPIs) related to Viksit Bharat 2047 goals. These could span economic metrics, social development indices, and sustainability markers. Secondly, PRAGATI's proven ability to facilitate collaboration across different government departments could help ensure state-central cooperation in achieving Viksit Bharat 2047 objectives. For instance, the platform could be used to monitor and encourage state-level initiatives aligned with the Viksit Bharat 2047 vision, fostering competitive federalism in pursuit of national goals. Finally, regular reviews of Viksit Bharat initiatives through PRAGATI could help identify roadblocks and challenges, allowing for timely adjustments to strategies and resource allocations. Most importantly, these reviews could leverage the Team India mindset to accelerate progress toward the achievement of India's long-term development goals.

In turn, the integration of Viksit Bharat's goals into PRAGATI would represent a potential next step in the platform's evolution, highlighting its central role in India's governance framework and enabling it to become a comprehensive tool for the national development strategy.

Over the past several decades, India has transformed from an economic laggard into the fastest-growing major economy in the world. In 2020, the World Bank Group's Ease of Doing Business study identified India as one of the world's top ten improvers for the third consecutive year. As India continues its journey toward greater inclusivity, interconnectedness, and economic strength, infrastructure and everything that it enables will continue to be crucial to unlock India's full potential. In this context, initiatives like PRAGATI will play an increasingly vital role in propelling the country towards its vision of becoming a developed nation while demonstrating the power of cooperative federalism in action.

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CHAPTER 7

Digital Governance Lessons for Global Leaders

As countries around the globe, particularly emerging economies, pursue their development goals through large infrastructure projects and social initiatives, we hope that key learnings from India's experience with the PRAGATI platform, and broader ecosystem that has grown around it, will offer useful inspiration as countries develop their own templates or playbooks.

Lesson 1: Decisive Leadership is a Catalyst for Change

One of the most significant lessons from the PRAGATI initiative is the critical role of decisive leadership. This commitment must come from the highest levels of government to effectively catalyze action throughout the entire system. A top-tier endorsement can impose a sense of urgency and ensure the mobilization of various administrative segments towards common goals. Even though it is not possible to clone or replicate a leader such as PM Modi, by adopting the actionable insights of the template that follows can enable countries to serve their own constituents and stakeholders more effectively.

Actionable Insight

Countries, particularly those in emerging markets, could benefit by setting up a system where leadership at the highest level — notably heads of state or government ministers — actively oversees large-scale projects. This oversight must involve direct engagement with project details, deadlines, and challenges. Leaders should not shy away from delving into technical aspects or demanding accountability, as their active participation can significantly accelerate project timelines and improve outcomes. As the experience with PRAGATI has shown, infrastructure projects that were stuck for decades emerged from their hibernation as a result of this process.

Lesson 2: Integrate Technology in Project Management

Governments around the world are turning to digital platforms to transform governance in matters large and small, ranging from voter registration to the renewal of licenses. Although PRAGATI's use of technology is significantly different from these instances of e-governance, it shows that digital platforms can play a crucial role in expediting the implementation of major infrastructure projects. The uses of technology can range from data analytics to the use of drones during meetings to monitor progress, and these have been indispensable in enhancing the efficiency of project execution. The ability to monitor progress digitally and address issues as they arise can reduce delays and avoid cost overruns.

Actionable Insight

Adopting a digital-first approach is key. Governments should invest in digital infrastructure that allows for the real-time tracking and management of projects. Technologies like geographic information systems, drones, and online dashboards should be part of the standard toolkit for project management. Such technologies can provide a transparent overview of progress and facilitate immediate corrective actions when necessary.

Lesson 3: Develop Effective Dispute-Resolution Mechanisms in Federal Government Systems

PRAGATI's effectiveness as a governance tool is greatly enhanced by its dispute-resolution mechanism, which addresses and resolves conflicts among various government agencies before they escalate into significant delays. While disputes are a challenge for every type of government, they are especially difficult in federal government systems, whose effectiveness hinges on close coordination and cooperation between the central and state governments. The PRAGATI ecosystem preemptively identifies areas of contention and facilitates rapid

mediation, ensuring that developmental projects and initiatives do not stall due to bureaucratic disagreements or red tape. By providing a streamlined process for resolving disputes, PRAGATI ensures that government functions remain agile and responsive, maintaining the momentum of critical projects essential for national development.

PRAGATI reviews have been instrumental in resolving inter-governmental issues, particularly those between federal and state authorities. These reviews serve as a platform for open dialogue and collaborative problem-solving, promoting mutual understanding and cooperative planning. By fostering a spirit of unity and shared responsibility, PRAGATI has helped bridge the gap between different levels of government, ensuring that policies and projects are implemented smoothly across jurisdictions. This has not only enhanced the efficiency of governance but also strengthened the overall fabric of national administration.

Actionable Insight

Governments in other developing countries can draw valuable lessons from the PRAGATI model to enhance their administrative effectiveness. Establishing a similar mechanism would involve creating a centralized platform where leaders at various levels can regularly review ongoing projects and resolve inter-agency conflicts. It is essential to leverage technology to efficiently monitor project progress and hold stakeholders accountable. This approach not only breaks down silos within the government but also enhances transparency and speeds up implementation. By adopting these practices, governments can ensure more effective delivery of public services and foster a more cohesive and cooperative governmental ecosystem, much like PRAGATI has achieved in India.

Establishing and enforcing a clear framework for dispute resolution within infrastructure projects is essential. This could take the form of dedicated mediation bodies or arbitration panels with the power to make binding decisions. Crucially, these mechanisms should be designed to operate swiftly. Early intervention in disputes and the establishment of a clear path to resolution are fundamental to maintaining project momentum. In PRAGATI's case, meetings headed by the country's apex leadership and regularly attended by administrative officers at the central and state levels for the purpose of discussing the progress of major infrastructure projects acted as the spur. Disputes were often resolved as soon as they were listed for review at PRAGATI meetings.

Lesson 4: Institutionalize Follow-up Processes Through Regular Reviews

PRAGATI's structured review meetings played an important role in reinforcing accountability. Regular, scheduled assessments of progress against predefined benchmarks helped ensure that projects stayed on course. Such reviews also allowed for early identification of potential delays and held all parties accountable for their commitments, promoting a culture of responsibility and accountability in India's vast administrative apparatus. An energized bureaucracy and the evolution of the Team India mindset were the effects of this cultural transformation.

Actionable Insight

In learning from the PRAGATI model, countries should implement regular review systems that rigorously evaluate project progress against timelines and milestones. These reviews should have real consequences for missed deadlines or subpar performance. By creating a transparent and consistent review process, stakeholders from government officials to contractors know they are answerable for their deliverables, thus fostering a results-oriented culture within infrastructure projects. As part of PRAGATI, India institutionalized the follow-up process

with two mechanisms. The review process does not end with the PRAGATI meeting. Rather, the secretary of coordination and the ministerial Monitoring Group continue with their respective follow-ups to ensure that decisions are implemented. Other countries could benefit if they, too, were to institutionalize similar follow-up processes.

Lesson 5: Create an Ecosystem of Inclusive, Collaborative Frameworks

PRAGATI's success can be partly attributed to the fact that the platform did not operate in isolation; it worked hand-in-hand with other collaborative digital initiatives including PM Gati Shakti, PARIVESH and PMG. Moreover, these digital platforms were able to drive change because they stood on the foundation of other significant regulatory changes. These changes made it possible to bring together many federal and state agencies, blending their perspectives and resources to address complex challenges. This approach demonstrated that collaboration, rather than working in silos, is necessary to overcome the multifaceted obstacles inherent in large-scale infrastructure development.

Actionable Insight

To emulate this aspect of PRAGATI, it is essential for nations to cultivate an environment where cross-collaboration is the norm. It involves establishing platforms where federal, state, and local governments can come together with private sector players to align on objectives, share resources, and consolidate efforts. Such collaborative ecosystems must acknowledge the unique contributions of each stakeholder. By doing so, the collective expertise can be harnessed to drive projects forward in a more cohesive and integrated manner.

Conclusion

Building on PRAGATI's experiences, other countries have a valuable opportunity to revolutionize their approach to infrastructure development. By instituting regular accountability reviews, creating inclusive collaborative frameworks, ensuring broad-based participation in decision-making, and harnessing technology for better coordination, these countries can set in motion a ripple effect of efficiency and success in their development agenda. This is particularly valuable for developing countries that are aiming to make infrastructure development a pillar of economic growth. The transition towards such systems may require initial investment and cultural shifts, but the long-term benefits of more reliable infrastructure and public trust are immeasurable.

APPENDIX

PRAGATI in Action: A Look at Eight Transformative Infrastructure Projects

In this appendix, we discuss the specific features of eight rail, road, power, and air projects, providing additional details about their trajectory and the role PRAGATI played in streamlining their execution.

RAIL

Bogibeel Rail and Road Bridge, Assam

Conceptualized in the Assam Accord of 1985 and then sanctioned in 1998, the Bogibeel Bridge was intended to provide both rail and road connectivity between the northern and southern banks of the Brahmaputra River. This link would serve as a catalyst for economic growth, providing the region with better access to markets, healthcare, and educational institutions. It also aimed to connect disconnected hinterlands in Assam and Arunachal Pradesh with developed centers in Guwahati and Dibrugarh.

From its inception, the Bogibeel Bridge project was marred by a slew of difficulties. First, balancing development with environmental preservation in the ecologically sensitive Brahmaputra River basin proved challenging. In addition, the river's massive width and the region's seismic vulnerability called for intricate engineering solutions. The river also changes course every few years, presenting a massive challenge. Some officials considered it "unbridgeable" for that reason.

Delayed decision-making led to escalating costs and a lack of funding for subsequent work. The land procurement process for roads and rail lines in populated regions encountered local resistance, adding to the delays. Other challenges included torrential rainfall that permitted only a few months of sustained work and high employee attrition because the region is relatively cut off from the rest of India.

Given the Bogibeel Bridge's strategic significance and immense potential to transform the regional economy, the project's stagnation and soaring costs raised alarms at the highest levels of India's central government. Originally budgeted at RS. 1,000 crore, the final price tag for the project was RS. 5,920 crore.

Following a PRAGATI review in May 2015, officials visited project sites more often, elevating the urgency of bottlenecks, streamlining efforts between state and central agencies, and expediting the project's progress. As a result, the bridge, which had been in the making for more than two decades, saw its inauguration in December 2018.

Today, the Bogibeel Bridge has achieved many of its stated aims. Local businesses in Assam and neighboring states, especially agriculture and fisheries, have benefited immensely from reduced transportation time and costs. Residents from remote areas can now access major medical facilities in Dibrugarh in a fraction of the time. Students, too, have better access to educational institutions on both sides of the river. In addition, the bridge has facilitated faster movement of defense personnel and equipment toward the frontier areas. And finally, festivals, markets, and cultural events see greater participation from both sides of the river, leading to a richer cultural amalgamation.

Jammu Udhampur Srinagar Baramulla Rail Link, J&K

Despite a year-round tourism industry, the vibrant Kashmir Valley—described by the 13th century poet Amir Khusrau as "paradise on earth"—has historically had just a single mode of transport connecting it to the Himalayan territory of Jammu and the rest of India. For years, overwhelming traffic on National Highway 44, as well as shutdowns created by erratic snowstorms, served as a constant reminder of the need for an alternative source of connectivity.

The plan to nestle a railway line within the Himalayas—traversing mountains, gorges, and ridges—marked a long, arduous, and technologically challenging journey. Approved in 1995, the Udhampur-Srinagar-Baramulla Rail Link (USBRL) required innovative tunneling in treacherous terrain. The project includes 38 tunnels, one of them nearly 13 km long. A mere 7km of track was constructed in open air. The line also passes over 931 bridges, including the Chenab Rail Bridge, the world's highest railway bridge, which sits 359 meters over the Chenab River.

The USBRL is divided into three sections:

- The 25.6 km Udhampur-Katra, which serves as a crucial conduit for pilgrims journeying to the Shri Mata Vaishno Devi Temple
- The 129 km Katra-Qazigund, which features the 1.3 km Anji Khad Bridge, India's first cable-stayed rail bridge
- The 118 km Qazigund-Baramulla track

When the project was first listed in the PRAGATI portal in 2015, a decade had passed with no construction. PRAGATI's intervention ushered in a paradigm shift at all levels of execution and administration. It prompted the publication of weekly hindrance reports, unparalleled union territory support given to project officials, and army convoys that escorted trucks of construction material. By the time the USBRL came up for its second PRAGATI review in 2020, construction of the line was three-quarters complete. The full rail line is now expected to be inaugurated in 2025.

As an all-weather means of transport for an area that is snowbound for part of the year, the USBRL is poised to open up opportunities for enhanced tourism and broader socio-economic development. The project has already shown signs of boosting the state economy. Construction work has provided livelihoods for many locals, including those whose land was acquired for the project. Other residents have been able to develop complex construction and engineering skills.

Bengaluru Metro Rail, Karnataka

Overseen by the Bengaluru Metro Rail Corporation Limited (BMRCL)—a collaborative venture between the Indian federal government and its Karnataka state counterpart— the Bengaluru Metro Rail Project (BMRP) aims to redefine urban mobility in the heart of India's Silicon Valley. Conceived in stages, the first phase became operational in 2017, with the second phase expected to be completed in 2026. A third phase could be operational by 2028 and will include two new elevated lines.

A 2015 PRAGATI review was instrumental in helping acquire the remaining tracts of land for Phase 1. With the project's rail corridors snaking through the city, the acquisition of vast swathes of land was a Herculean task. Since becoming operational in 2017, the 42 km and 40 stations of Phase 1 have served as an urban rejuvenator. The tangible benefits include a drastic cut in congestion, an uplift in air quality, and a dependable transport mode.

The metro rail project in Bengaluru, fondly called the Garden City, has also championed green initiatives. For every tree that had to be cut down, the BMRCL has planted 10 saplings. Many trees were also replanted elsewhere, with a 70% survival rate.

Although Phase 2 – 20 km between the Central Silk Board and Krishnarajapura and a 58 km link between Krishnarajapura and Kempegowda International Airport — has not been directly reviewed at PRAGATI meetings, the prospect of an eventual review by the Prime Minister's Office has accelerated progress and helped maintain quality standards. For the BMRP team, the possibility of facing the PM's questions acts as an energizer for people to give this work high priority. Even minor delays to projected opening dates elicit calls from New Delhi, pressing for explanations. This timely accountability will continue to be pivotal to getting the next Bengaluru Metro phases up and running on schedule.

Haridaspur-Paradeep Rail Connection, Odisha

Situated in Eastern India, Odisha is a mining colossus, boasting a generous bounty of bauxite, coal, iron ore, and limestone. The Paradip Port is the essential gateway for the export of these and other materials.

Conceived as a connection between the port and an expansive hinterland spanning several states – from Jharkhand to West Bengal – the 82-km Haridaspur-Paradeep rail line was approved in 1997. The route was meant to ease coal and mineral transportation, as well as enhance connectivity across several Odishan districts.

For a decade, the project moved at a snail's pace due to insufficient funds. The need for additional funding led to the formation of an unusual special purpose vehicle (SPV), which solicited shipping and mining investors. But these potential backers were deterred by the novel nature of the deal and instead, a contractor ended up as both an investor and a project executor. The conflicts of this arrangement resulted in further stalling of the project.

In 2018, PRAGATI gave the Ministry of Shipping authority to acquire equity in the SPV, effectively breaking the deadlock by diluting the contentious investor's influence. PRAGATI's influence also helped the project grapple with bureaucratic delays and environmental clearances for land acquisitions and the procurement of materials like stone chips and sand. It also helped foster collaboration among departments, state bodies, and project officers. Case in point: when local disturbances impeded progress in Dumka Village, the railway department's request for support from Dumka's Superintendent of Police went unheeded. After the issue was raised in a PRAGATI meeting, 100 police officers were deployed and the necessary work was completed a week later.

The Haridaspur-Paradeep rail line was inaugurated in 2020. Since then, the project has reduced the travel time and distance between mining regions in Odisha and Paradip Port by half, helping to lower transportation costs and boost business. The big Kalinga region, for instance, has witnessed a steel industry surge. More recently, the introduction of the first passenger train service to the Kendrapada district promises to bridge the divide between the hinterlands and urban centers, knitting Odisha closer together.

ROADS

Dahisar-Surat Section, National Highway 8, Maharashtra & Gujarat

The construction of the Dahisar-Surat segment of National Highway 8 (now NH 48) is an example of how a few specific last-mile issues can hobble a project, threatening to undermine significant amounts of already-completed work. The project's goal was designed as an expansion of a 239 km four-lane highway into six lanes and the addition of service roads that would cater to previously underserved communities. Construction began in February 2009 and was slated to finish by August 2011.

By 2014, eight kilometers remained unfinished due to two points of contention. On the outskirts of Mumbai, part of the service road would cut through a wildlife park, which had declined to grant the use of its land. Secondly, some landowners had not agreed to sell their land for the service road.

When the project was reviewed in PRAGATI in February 2017, new discussions began on the wildlife park dispute. Over the next four months, an agreement was made to run the road through the park but erect sound barriers and other boundaries on either side of the highway in order to protect leopards and other wildlife in the park. In addition, compensation disputes with landowners were resolved.

Challenges like these are now being addressed upfront by the PM Gati Shakti platform, which did not exist when the Dahisar-Surat highway expansion was being conceived and planned. Had it been available, Gati Shakti would likely have anticipated the wildlife park issue, prompting project leaders to either redesign the road or preemptively forge an agreement.

The platform's unique geo-spatial features provide a comprehensive overlay of all existing infrastructure points on a map, allowing for more informed and streamlined decision-making about site selection and more efficient resource allocation for new developments.

Varanasi-Aurangabad Section, National Highway 2, UP & Bihar

Spanning 192 km, this road-widening project aims to better connect Varanasi in Uttar Pradesh to Aurangabad in Bihar. The objective is to transform a modest four-laned highway into a six-lane, access-controlled highway, helping more closely link the two cities and weave together the economic and socio-cultural fabric of the two regions. With more than 150 structures, from underpasses to flyovers, the project is complex.

This road project forms part of the Golden Quadrilateral (GQ), a sprawling highway network connecting India's four major metropolises: Delhi in the north, Kolkata in the east, Chennai in the south, and Mumbai in the west. Envisioned as the backbone of India's road infrastructure, the GQ spans approximately 5,800 kilometers, facilitating inter-city travel, fostering regional development, and bolstering economic activity. The Varanasi-Aurangabad highway represents a vital artery in this grand design, as it connects the northern and eastern parts of India.

When the Varanasi-Aurangabad stretch of National Highway 2 came under PRAGATI review in 2016, land acquisition was a major challenge, in part due to Bihar's antiquated land records. Litigation with landowners and encroachments along the highway also held back progress. After five years, only 20% of the road-widening had been completed.

The widened highway is now scheduled for completion later this year. Among the expected benefits are a smoother journey, reduced travel times, lower costs to operate the highway, and a decrease in accident rates.

Among the Varanasi-Aurangabad project's most notable features is its environmentally responsible implementation. Green initiatives range from the utilization of waste materials in road construction to engineering modifications that reduce pavement thickness. In addition, the project aims to mitigate emissions by optimizing vehicle movement.

POWER

North Karanpura Thermal Power Plant, Jharkhand

To keep up with electricity demand in the world's fastest-growing major economy, the National Thermal Power Corporation (NTPC) received approval to build a 1,980 megawatt thermal power plant in Jharkhand's Chatra district in 2014. Thermal power plants are vital to India's electricity supply, contributing roughly 70% of the nation's total power generation. They provide essential base load power, supporting industrial growth and infrastructure development.

Located in Eastern India, Jharkhand, translates roughly to 'forest land'. The project's challenges included gaining access to nearly 800 acres of this forested land, both private and government-owned. Additional clearances were also needed for routes to transport coal from the Magadh mines. Approvals moved slowly due to Jharkhand's informal land records. PRAGATI reviews in 2015 and 2021 helped expedite lease agreements for government land and secure an agreement with the Water Resources Department for withdrawal from the Garhi River.

Scheduled to be operational later this year, the plant will not only help promote India's national growth ambitions, but deliver new employment opportunities to an area with high unemployment and a consistent electricity supply to an area plagued by power outages. In doing so, the North Karanpura Thermal Power Plant is helping illuminate a path towards a brighter future for Jharkhand's residents.

AIR

Navi Mumbai Airport, Maharashtra

As economies boom, airports are more than mere transit points; they are vital cogs in a nation's growth machinery. Over the past several decades, the city of Mumbai, India's economic capital, has grown exponentially, while its airport struggled to keep up. When the city's Chhatrapati Shivaji Maharaj International Airport was first built in 1942, Mumbai's population was 1.7 million. Today, the Mumbai Metropolitan Region (MMR) is a vast sprawl of 22 million people (almost as much as that of Sri Lanka).

The Navi Mumbai International Airport (NMIA) was designed to alleviate the crippling air traffic bottlenecks resulting from this growth and to help the region fulfill its economic aspirations. Named after Dinkar Patil, a former Member of Parliament and leader of the Peasants and Workers Party of India, the airport is projected to have a capacity of 100 million passengers annually. Approved in 2007, it is being built by the City and Industrial Development Corporation of Maharashtra (a planning agency established by the Government of Maharashtra) through a public-private model.

As with any project of this magnitude, the NMIA had its share of hurdles. Land acquisition proved to be a formidable challenge. The project required the relocation of several thousand households across 10 villages, some of whom protested the loss of their land. Construction of runways would also affect a region of mangrove forests, a source of contention for environmental groups. This resistance significantly delayed the airport's development.

A PRAGATI review in 2015 helped project stakeholders find resolutions to these challenges. The Prime Minister's Office connected directly with the chief secretary of Maharashtra to help the villagers. With an empathic negotiation strategy, deadlines to vacate were extended and rates of acquisition were adjusted to be consistent with market rates, rather than the lower "circle rates" often used for such transactions. Land acquisition was successfully completed in 2019. Similarly, permission to remove certain acres of mangroves was obtained from the Maharashtra Coastal Zone Management Authority. Construction on NMIA finally began not long after a second PRAGATI review in 2021.

On course to be commissioned by an updated targeted timeline of December 2024, the airport is a symbol of what is possible when ambitious leadership and digital technology drive governance.

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GLOSSARY

General

PRAGATI – Pro-Active Governance and Timely Implementation
PMG – Project Monitoring Group
SWAGAT – State-Wide Attention on Grievances by Application of Technology
PMO – Prime Minister's Office
CPGRAMS – Centralized Public Grievance Redress and Monitoring System
IIG – India Investment Grid
VVP – Vibrant Villages Programme
BIM – building information modelling
MoHUA – Ministry of Housing and Urban Affairs
SGoS – Sectoral Groups of Secretaries
KPIs – key performance indicators
PM – prime minister
GIS – geographic information systems
J&K – Jammu and Kashmir
USBRL – Udhampur-Srinagar-Baramulla Rail Link
BMRCL – Bengaluru Metro Rail Corporation Limited
BMPR – Bengaluru Metro Rail Project
UP – Uttar Pradesh
GQ – Golden Quadrilateral
NTPC – National Thermal Power Corporation
MMR – Mumbai Metropolitan Region
NMIA – Navi Mumbai International Airport

Infrastructure Projects' Construction associated concepts

SPV – Special Purpose Vehicle
When a parent company creates a subsidiary such that the latter has its own independent legal status and financial obligations, this subsidiary is known as a Special Purpose Vehicle (SPV). Formation of an SPV helps the parent company in isolating its risk.

ADDITIONAL READING

1. PM launches PRAGATI: a multi-purpose, multi-modal platform for Pro-Active Governance And Timely Implementation | Prime Minister of India (pmindia.gov.in) – Launch of PRAGATI
2. #PRAGATI | Prime Minister of India (pmindia.gov.in) – Interactions of the Prime Minister (PM) on PRAGATI
3. Press Information Bureau (pib.gov.in) – Press Information Bureau (PIB) covering GatiShakti before the launch
4. pib.gov.in/PressReleaseIframePage.aspx?PRID=1763638 – PIB covering the launch of Gati Shakti
5. PM Gati Shakti - National Master Plan for Multi-modal Connectivity | National Portal of India- Vision and Pillars of Gati Shakti listed in the Indian Government website
6. Speeding Up with Gati Shakti | NITI Aayog – Amitabh Kant, CEO of Niti Aayog opinion / thought leadership piece on Gati Shakti and Indian infrastructure
7. https://usbrl.org/ctb.pdf Coffee Table Book Building the Great Himalayan Railway regarding USBRL published by North Railway Construction Organisation concerning USBRL
8. https://usbrl.org/Him-XII.pdf Him Prabhat publication by North Railway Construction Organisation concerning USBRl, Issue XII, Aug 2019

ABOUT THE UNIVERSITY OF OXFORD

Oxford University is one of the oldest and most prestigious institutions of higher education in the world. With a history dating back to the 12th century, it has long been a center of academic excellence and intellectual inquiry.

It comprises 43 colleges and various academic departments, offering a diverse range of undergraduate and postgraduate programs. Renowned for its rigorous academic standards, Oxford fosters an environment of intellectual curiosity and critical thinking.

The university's research output is globally influential, contributing significantly to advancements across multiple disciplines. Its alumni include numerous Nobel laureates, world leaders, and influential thinkers. Oxford also emphasises a holistic educational experience, encouraging students to engage in extracurricular activities and community events. With a commitment to diversity and inclusion, the university attracts students from more than 160 countries, creating a vibrant international community that enriches the learning experience.

Beyond its academic reputation, Oxford is also known for its rich cultural and architectural heritage. The university's stunning Gothic buildings, such as the Radcliffe Camera and the Bodleian Library, are iconic symbols of its long-standing history.

ABOUT SAID BUSINESS SCHOOL

Saïd Business School blends the best of new and old. It is a vibrant and innovative business school, yet deeply embedded in the 800 year old world-class university.

SBS creates programmes and ideas that have global impact. These include educating people for successful business careers; delivering cutting-edge education, including the highly regarded MBA, Executive MBA, a number of specialist MScs, a portfolio of custom and open programmes and accredited diplomas for executives, as well as undertaking ground-breaking research that transform individuals, organisations, business practice and society. SBS is an international and outward looking school with our programme participants coming from more than 50 countries.

The School's mission is to address critical global challenges through a values-driven approach, fostering leaders who are not only skilled in business but also committed to ethical and sustainable practices. Situated in Oxford's historic environment, Saïd Business School leverages its unique setting and academic resources to provide students with a holistic, interdisciplinary education that prepares them to navigate and lead in an increasingly complex world.

ABOUT THE GATES FOUNDATION

Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive, no matter where they happen to be born. The foundation is led by CEO Mark Suzman, under the direction of Chair Bill Gates and the board of trustees.

The Gates foundation started work in India in 2003. Today, the work in India spans healthcare for mothers and children, family planning, nutrition, selected infectious diseases, urban sanitation, agricultural development, digital public infrastructure and inclusive financial system, and economic empowerment of women and girls. The Gates Foundation partners with the national and state governments and a network of Indian partners to support local innovations and solutions that can deliver impact at scale in India and across the world. The efforts of the Gates Foundation align with the Government of India's Vision 2047 and the UN Sustainable Development Goals (SDGs), including diffusion of promising innovations and practices to advance development and growth across the Global South.