



# PNGRB's Digital Initiatives



ENHANCING EFFICIENCY, TRANSPARENCY &  
COMPLIANCE WITH TECHNOLOGY

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# Overview



PNGRB's Data-driven Regulatory Approach



IT Modernisation at PNGRB



National Hydrocarbon Infrastructure Monitoring System (NHIMS)

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## PNGRB's Data-driven Regulatory Approach



Collection &  
Maintenance of  
Industry Data



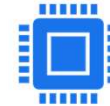
Monitoring the  
performance of  
authorised  
entities



Transparent tariff  
determination  
depends on  
accurate data  
submissions



Public Access &  
Transparency by  
publishing  
relevant data on  
its website



Safety & Incident  
Monitoring



Consumer  
Protection:  
ensuring fair  
pricing, gathering  
consumer  
feedback

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## IT Modernisation at PNGRB



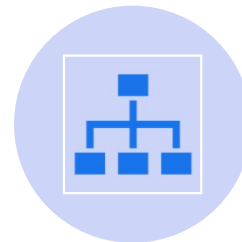
**eOffice Cloud Migration:**  
Enhancing workflow,  
transparency, and resilience.



**Enhanced Cybersecurity and IT Infrastructure:** Establishing a secure network and datacentre for better data management.



**New Email Platform & Collaboration Tools:** Improving communication, security, and teamwork




**SAP Implementation:**  
Streamlines accounting and financial processes.

# Glimpses of New Datacentre




# Digitalisation of Regulatory Processes

- Pipeline & CGD Network Monitoring:
  - Online Reporting Portal for Pipelines Network – Streamlining pipeline data submission and reporting.
  - Monthly/Quarterly Progress Reports
- Incident Analysis & Safety Compliance:
  - Incident Analysis and Reporting System – Reporting and analysing safety incidents.
- Regulatory Review & Feedback:
  - Regulatory Amendment Review System – To review and provide feedback on proposed amendments to T4S, IMS, ERDMP, and TPCA regulations.



पेट्रोलियम एवं प्राकृतिक गैस विनियामक बोर्ड  
Petroleum and Natural Gas Regulatory Board



### Select the Application to Login



**TPIA Empanelment and PNGRB TPCA Regulations**

TPIA (Third-Party Inspection Agency) empanelment and audit involve certifying independent agencies to assess organizations for regulatory compliance, quality, and safety standards. Empaneled by authorities like the PNGRB, these agencies conduct audits to verify adherence to industry norms, identify non-compliance, and recommend improvements, ensuring transparency and regulatory alignment.



**Pipeline Monitoring, Capacity and Incident Analysis**

Capacity and Incident Reporting Analysis with Monitoring provides real-time oversight of pipeline performance, tracking flow rates and detecting incidents like leaks or malfunctions. This approach enables quick responses, supports preventive measures, and optimizes resource management, enhancing safety, compliance, and efficiency across the pipeline network for sustainable operations.

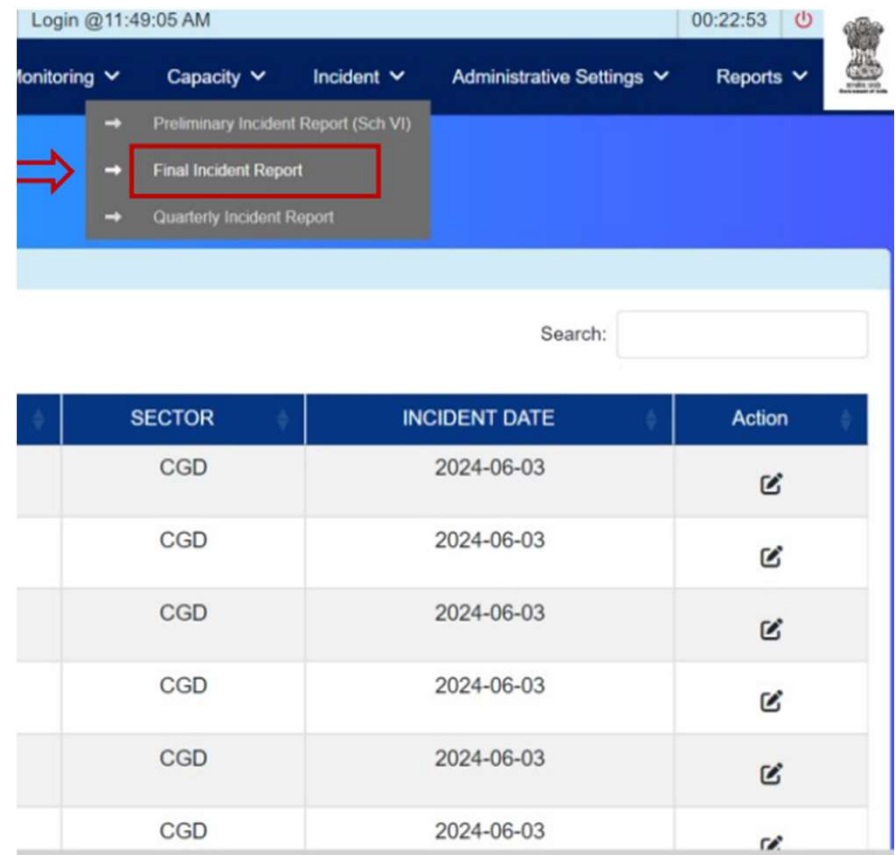


**e-Court / e-filing of Board Cases**







An e-Court/e-filing of Board Cases application facilitates the digital submission, management, and tracking of legal cases. It allows users to file documents, access case status, and communicate with relevant authorities securely and efficiently. This system streamlines the legal process, reducing paperwork and ensuring timely updates and compliance.

# Digitalisation of Regulatory Processes

- Regulatory Compliance Tracking:
  - T4S Regulations Compliance – Compliance with PNGRB's Technical Standards and Specifications (CGD, NGPL, PPPL, LNG, LPG, Retail Outlets).
  - IMS Regulations Compliance – Online reporting for PNGRB's Integrity Management System (IMS) regulations across CGD, NGPL, and PPPL networks.
  - Capacity Determination Compliance – Compliance with PNGRB's capacity determination regulations for CGD, NGPL, and PPPL.
  - TPCA Regulations Compliance – Web application to ensure adherence to PNGRB's Third-Party Capacity Access (TPCA) regulations.



The screenshot shows the PNGRB web application interface. At the top, there is a navigation bar with the following items: Monitoring, Capacity, Incident, Administrative Settings, and Reports. The 'Incident' menu is expanded, showing three options: Preliminary Incident Report (Sch VI), Final Incident Report (highlighted with a red box and a red arrow), and Quarterly Incident Report. Below the navigation bar, there is a search bar and a table of incidents.

SECTOR	INCIDENT DATE	Action
CGD	2024-06-03	
CGD	2024-06-03	
CGD	2024-06-03	
CGD	2024-06-03	
CGD	2024-06-03	
CGD	2024-06-03	

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# National Hydrocarbon Infrastructure Monitoring System (NHIMS)

FOR PETROLEUM, PP, NATURAL GAS, AND  
CGD PLANNING & MONITORING

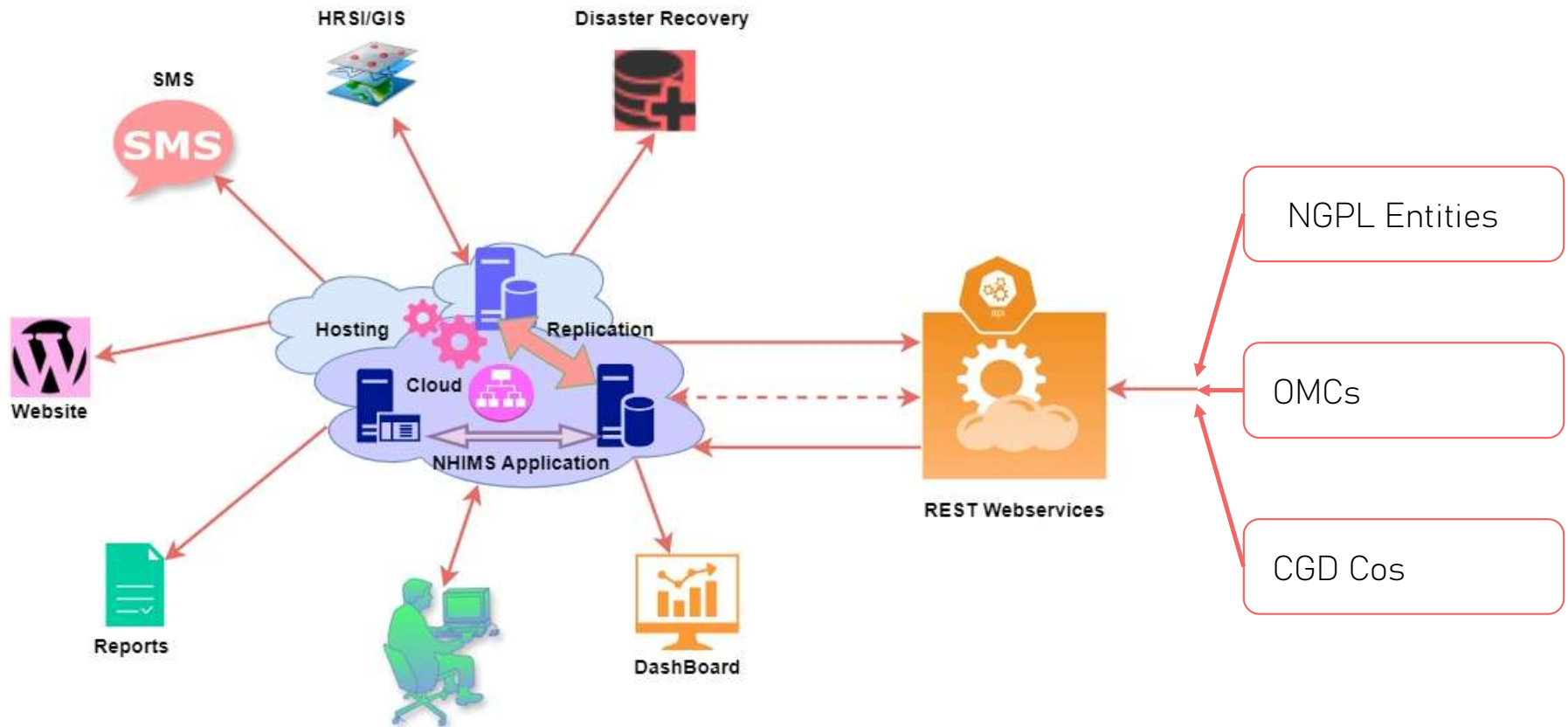


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## NHIMS: Genesis and Objectives

- To maintain a data bank of information on activities relating to petroleum, petroleum products, and natural gas.
- Infrastructure Mapping: Covers Petroleum & Natural Gas Pipelines, Refineries, LNG Terminals, Storage Facilities, Delivery Points, RO/CNG Stations, etc.
- Based on Secure Framework with API integration with the stakeholders.
- Advanced Analytics & Visualization:
  - Bulletin Board & Dashboard for monitoring.
  - Reports, Queries, and Charts for decision-making.
  - GIS functionalities & Data Analytics for enhanced planning and risk assessment.

# NHIMS Functional Architecture



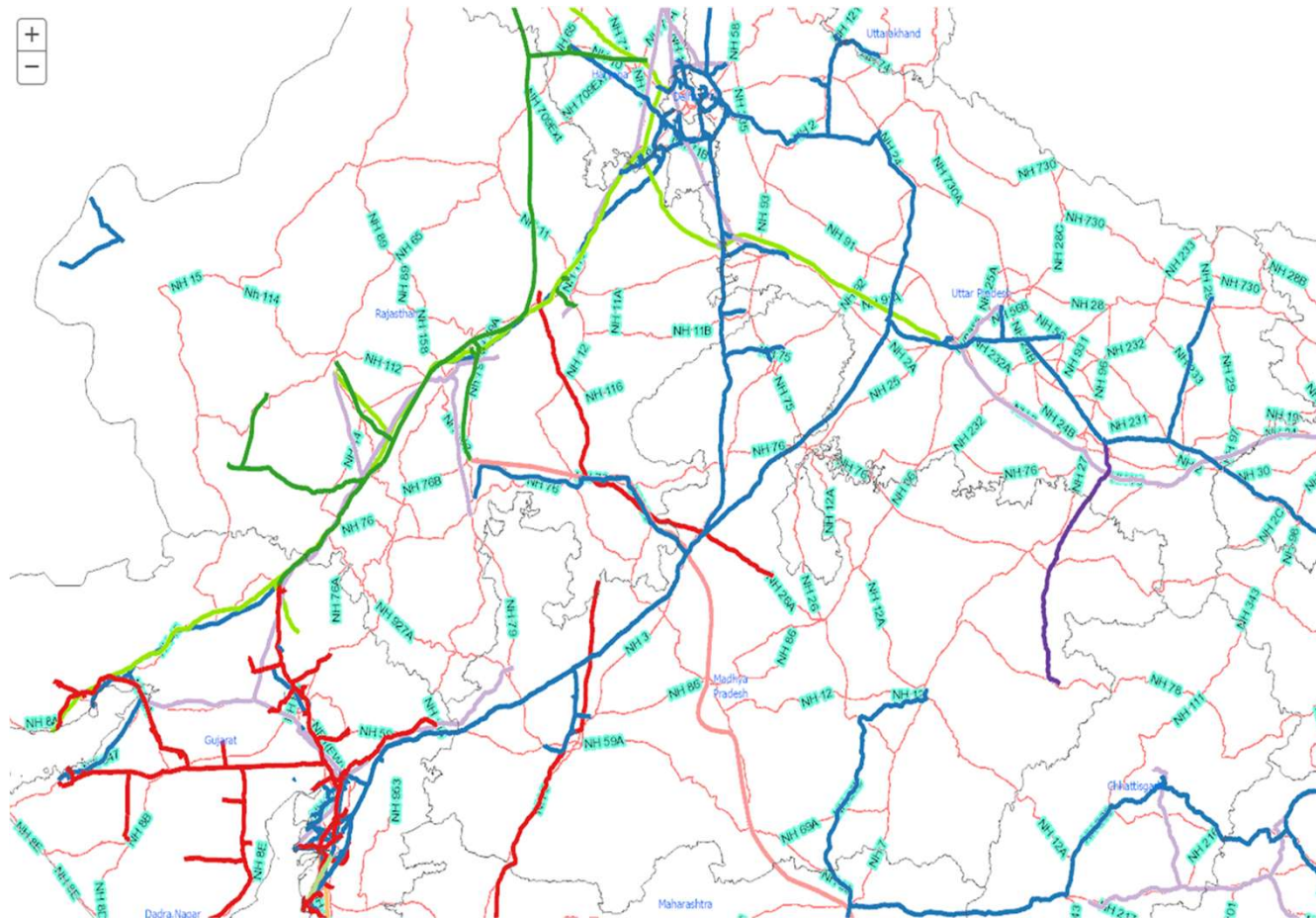
# Pipelines on GIS Map (Entity-wise On-click Info)



**TOC**

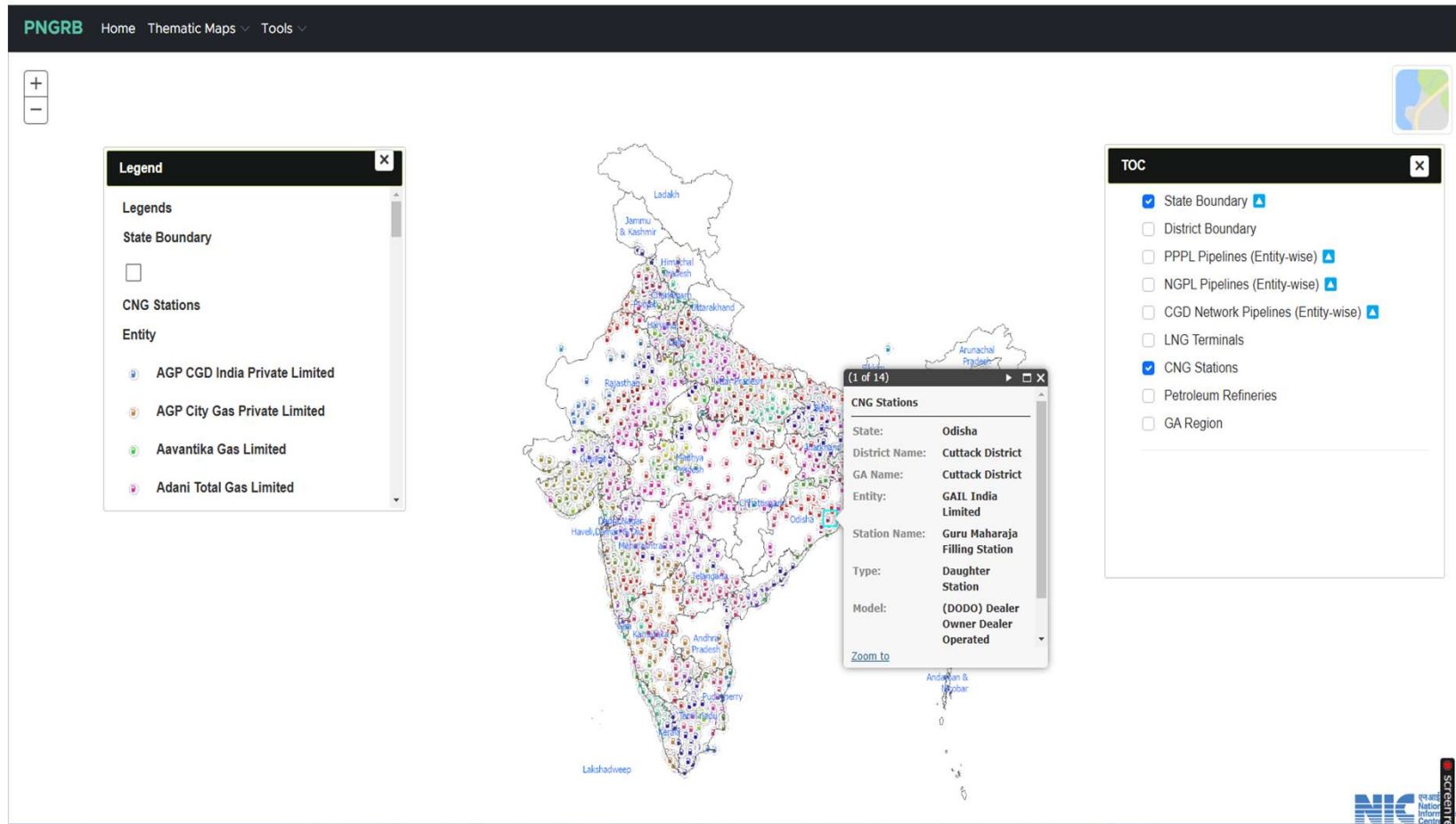
- State Boundary
- District Boundary
- PPPL Pipelines (Entity-wise)
  - BPCL
  - GAIL
  - HPCL
  - IOCL
  - PMHBL
- NGPL Pipelines (Entity-wise)
- CGD Network Pipelines (Entity-wise)
- LNG Terminals
- CNG Stations
- Petroleum Refineries

# Multiple Layers of Info

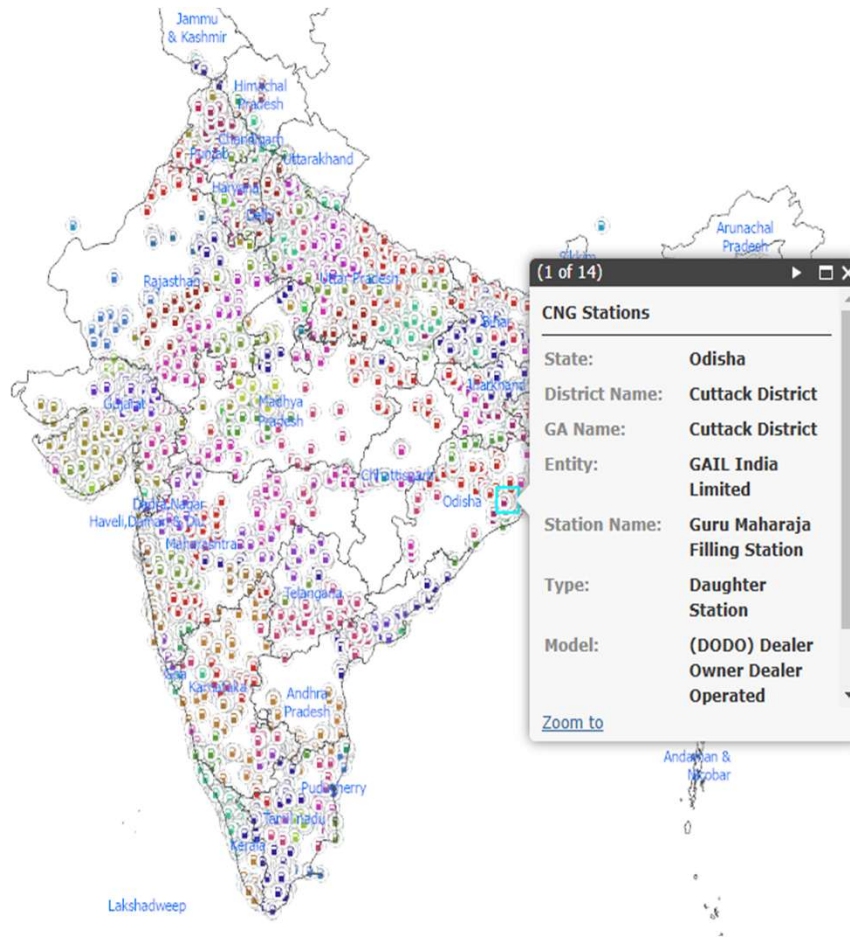


- Administrative Boundaries (e.g., State, District)
- Geo Area Boundaries
- Urban Centres
- National/State Highways
- Rail Network
- Bridges
- Water Bodies

# CNG Stations, LNG Terminals, Refineries, etc.

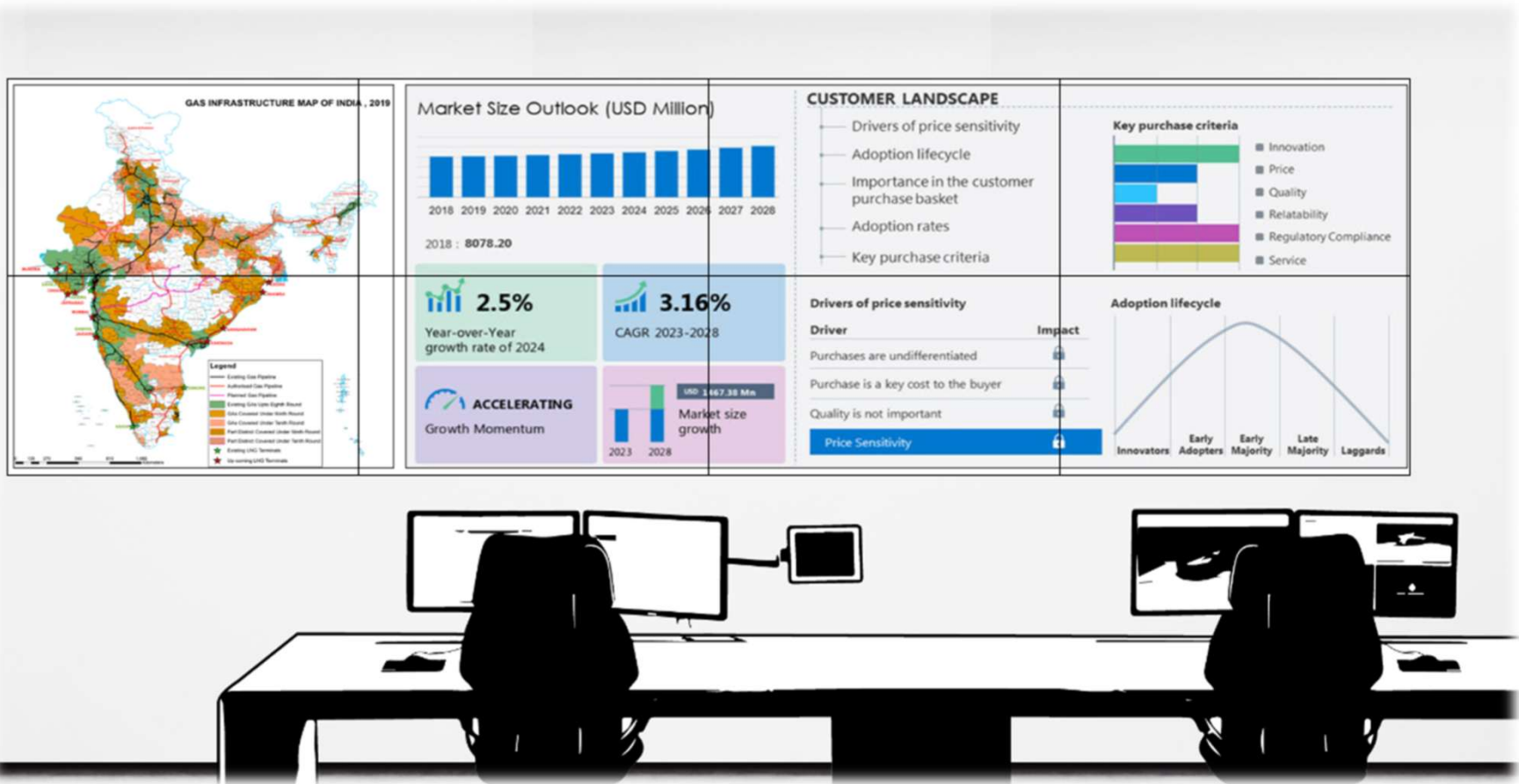


# CNG Stations, LNG Terminals, Refineries, etc.



- District Boundary
- PPPL Pipelines (Entity-wise) ▲
- NGPL Pipelines (Entity-wise) ▲
- CGD Network Pipelines (Entity-wise) ▲
- LNG Terminals
- CNG Stations
- Petroleum Refineries
- GA Region

# Centralized Monitoring Centre and Dashboards





Thank you!

