Esri India helps Tamil Nadu Highway Department to take the high road to success

Client
Tamil Nadu Highways Department (TNHD)

Website
www.tnhighways.gov.in

Location
Dasampalayam, Mettupalayam, Tamil Nadu

Industry
Transportation

Organization Profile
TNHD serves its customers, the road users of Tamil Nadu by providing a high quality, cost-effective, environment-friendly road network that is reliable and safe. The Department is contributing to the sustainable economic development and social well-being of the state through innovation, the use of Best Practices and appropriate technologies and the responsible management of internal and external resources.

Solution
ArcGIS for Server

Highlights
Esri India helped TNHD by:

- Enabling it to retrieve and analyze the data on roads and bridges visually
- Improve planning, monitoring and maintaining of roads
- Enabling timely decision making
- Providing it with a complete picture on road management and maintenance

Project Summary

The Transportation network is the backbone of all developmental activities in the state of Tamil Nadu. With exponentially increasing motorized vehicles, there is a need for supporting road and related infrastructure and continuously monitoring and managing this vast network to make quick, reliable and rational decisions on upgrades and maintenance.

The Tamil Nadu Highways Department (TNHD) is primarily responsible for the construction and maintenance of about 60,000 kilometres of road network. It improves the roads under the control of the government and provides all weather road connectivity to rural habitations.

The Department was facing problems in dealing with an exponential increase in data related to the road system and required a GIS solution to

Challenges

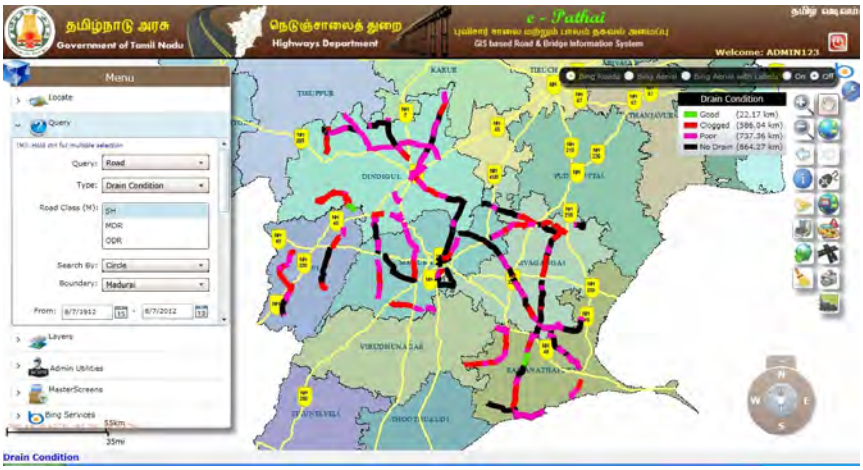
Tamil Nadu's expanding road system was generating voluminous amounts of data, which needed to be managed and utilized for decision making. The TNHD already had the Tamil Nadu Road Maintenance and Management System (TNRMMS) in place, which could generate a variety of reports, but was still inadequate for its growing needs. While the TNRMMS served as a planning tool, it lacked visualization capabilities

TNHD was also finding it difficult to allocate resources for the road sector and make best use of public funds to keep the road network at an acceptable level of serviceability.

Solution

TNHD deployed a solution centered around Esri's ArcGIS Server technology. TNHD envisioned a web-based GIS road and bridge information system (based on the client-server architecture) under the e-Pathai (Electronic Project, Administration,

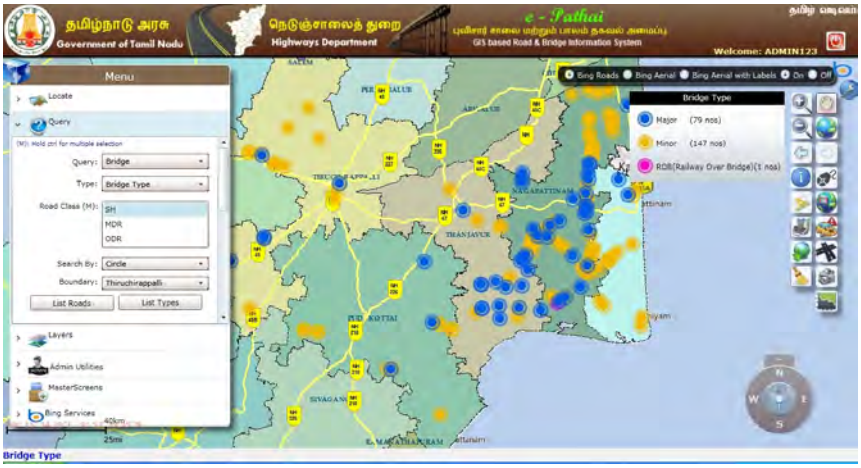
Traffic, Highway Assets and Information Management System) program by integrating the GIS solution with the TNRMMS and the Project & Finance



Management System (P&FMS).

This led to the integration of spatial and non-spatial data into the e-Pathai GIS from several sources such as the Survey of India (SOI), Open Series Maps (OSM), the Census of India and the Indian Meteorological Department. Customized query and analysis tools were also developed specifically for the TNHD.

Multi-lingual support allowing users to switch between English and the Tamil language was offered and the solution encompassed video integration with the web GIS interface.



Benefits

The Esri India GIS solution is enabling TNHD to:

- Retrieve and analyze the data on roads and bridges visually to help decision makers in planning, monitoring and maintaining of roads and related assets in a better way
- Take timely decisions at anytime, from anywhere
- Access a common picture alongside other agencies associated with road management and maintenance, thus efficiently and cost-effectively managing road maintenance
- Provide an interface to the public to access details about roads, bridges and other projects it has implemented

Customer speak

"The ArcGIS platform's extensive capability has helped us to rationalize our decision making in planning, programming, funding and allocation of resources. It has allowed us to make the best use of public funds to preserve the road networks at an acceptable level of serviceability."

*-**Er. K. Visalakshi***
Chief Officer (IT) TNHD