RELIANCE Infrastructure

esri India
THE SCIENCE OF WHERE

Reliance Infrastructure relies on Esri's ArcGIS to manage outages and assets and deliver a value add to consumers

Client:
Reliance Infrastructure Ltd. (RInfra)

Website:
relianceada.com/ada/rinfra

Industry:
Infrastructure and Utility

Location:
Mumbai

Organization Profile

Reliance Infrastructure (RInfra) is part of the Reliance Group, one of the leading business houses in India. Incorporated in 1929, RInfra ranks among the country's largest and fastest growing companies in the infrastructure sector.

Solution

ArcGIS Server

Highlights

Esri India helped RInfra by:

- Managing outages efficiently
- Enabling it to cut costs owing to improved efficiencies
- Improving decision making
- Enhancing communication

Project Summary

RInfra is a leading utility company with presence across the entire value chain of the power business i.e., generation, transmission, distribution and trading. It distributes more than 25 billion units of electricity to over 6.4 million consumers in India's two premier cities, Mumbai and Delhi. Owing to its large scale of business and base of users, RInfra was facing problems in efficiently managing its geographically dispersed assets, reaching locations on time, responding quickly to user complaints, etc. ESRI India helped RInfra to implement the ArcGIS solution that enabled it to manage its assets and outages and undertake work order management.

Challenges

RInfra was facing several challenges related to the following:

- Managing assets spread geographically and presenting them easily for decision making
- Reaching asset locations for timely isolation of the problem and restoration of the services
- Preventing work-hour loss due to work duplication and subsequent data entry
- Planning engineer spends and curtailing the enormous effort in tracking jobs
- Minimizing errors in site data capture to provide accurate and reliable data
- Making available network data on demand for analysis and value engineering

One of the biggest benefits that has accrued from our upgrading to ArcGIS Server is the manner in which we are handling outages. We have been able to greatly scale the customer experience by getting to the root cause of outages quickly and fixing them in a shorter time. The Outage Management System now deployed has helped us reduce outages, while delivering higher satisfaction to our clients.

Anand Kumar S.V.
Assistant Vice President-IT, Reliance Energy Ltd.

RInfra needed a GIS implementation that not only helped overcome these issues, but was also cost justifiable. It needed tools to compete efficiently in the market and access spatial data that would help it achieve payback across the enterprise. The company was keen to deploy an enterprise GIS with a tiered, open architecture, breadth of applications, and best-of-breed integration strategy.

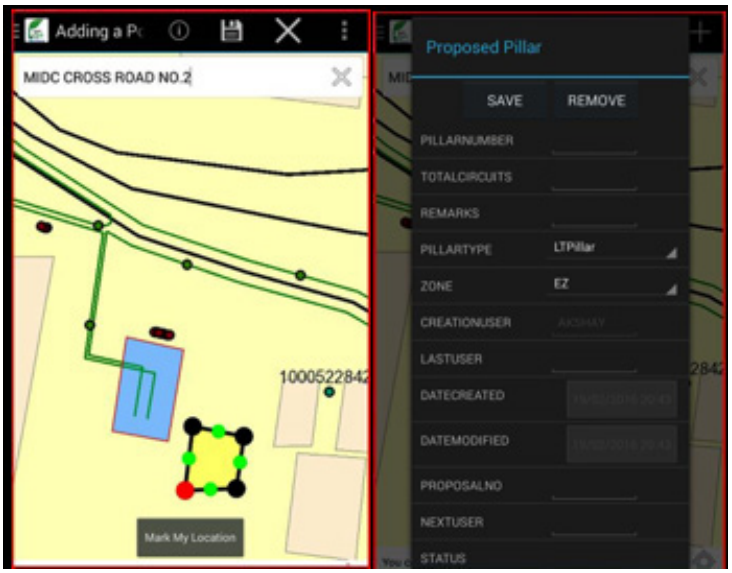
Solution

Esri India proposed an enterprise GIS solution based on RInfra's requirements in the following areas:

Asset Management. Esri's ArcGIS served as a complete GIS utility for modelling, editing, maintaining, and managing facility asset data in the enterprise system.

Work Order Management. The solution provided an integrated environment for preparing construction work sketches, undertake workflow management, structural and network analysis and create automated layouts, and job cost estimates.

Outage Management. A GIS-hosted Outage Management System (OMS) was implemented by RInfra's Mumbai Distribution Business, replacing its legacy call-based Complaint management system (CMS). The new system was developed with interfaces to various other IT systems in use such as the Interactive Voice Response System (IVR), Customer Information/ Billing System, GIS, ERP, and SCADA. It also enabled utility personnel to gain a spatial view of the location of the trouble call, making it possible to analyze outages, immediately dispatch crews and minimize the average complaint management time.



Benefits

Geospatial technology and the ArcGIS platform have helped RInfra to:

- Develop a single window concept for viewing assets spread across geographic extents
- Use COTS functionalities available through a product like Electrical Network Tracing, to derive consumers connected to the DT/Feeder and vice versa
- Upgrade ArcIMS to ArcGIS Server in order to enhance the capabilities of the GIS Web Portal
- Deploy mobile applications to help users capture network changes on site, locate assets or consumers with the help of a GPS, view the entire electrical network on site; view site feasibility and take decisions
- Manage geographically– 'GIS as a Workspace'

However, possibly, the most crucial benefit has come from the deployment of an Outage Management System (OMS), which has led to a paradigm shift in the overall approach of managing outages. Now, the focus has shifted to the root cause of the outages (Network Device level faults: Incidents) rather than symptoms (individual customer complaints: calls).

OMS is also effectively handling the Planned Outage Process, by creating and executing the switching plans for the HT network, ensuring safety, increasing transparency, providing an integration capability, enabling network analysis and providing a GIS Web Portal built on Esri's ArcGIS Server.