IQGEO

Case study

One of the largest gas and electric utilities in North America, with 7 million electric customers and 1 million gas customers

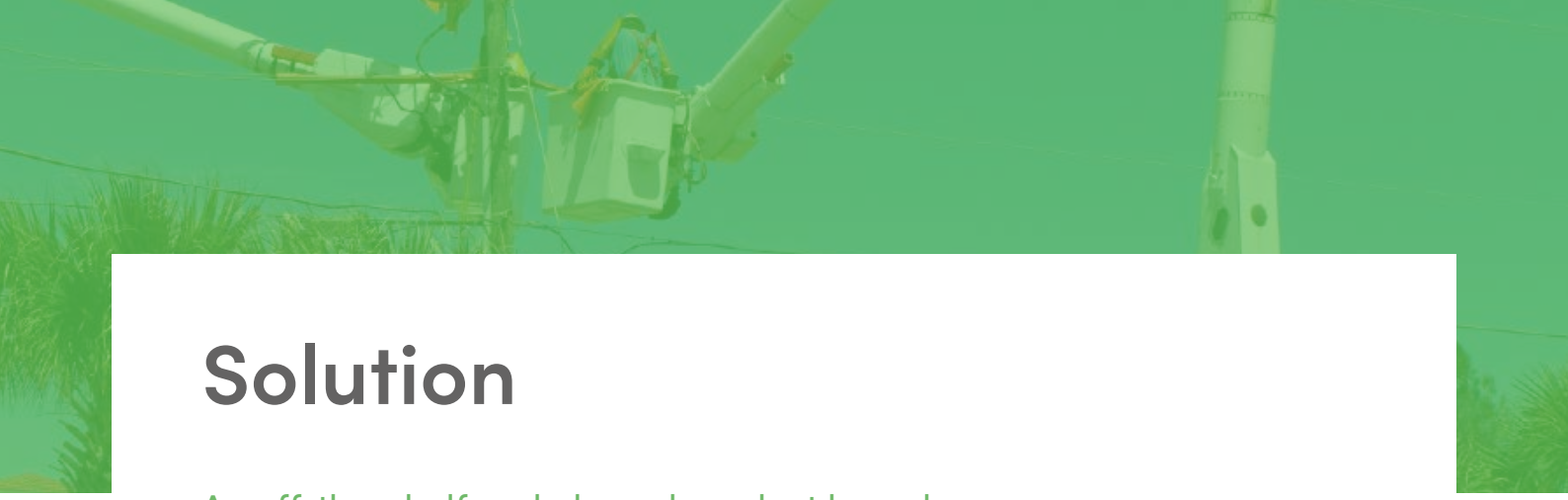
Operating in across both urban and rural areas, this network operator has a service territory of more than 100,000 square miles.

Challenge

Repeated acquisitions and mergers with other utility businesses meant that the IT team was dealing with multiple GIS, outage management, customer information and other systems. Its challenge was to make spatial and associated data from different, often incompatible systems, accessible to all users and not just its GIS professionals.

As a first step in the search for a new system, the team collected requirements from hundreds of users across the organization. Some of the key requirements were:

- Support multiple business units - Electric and gas transmission and distribution
- Integrate different GIS data sources leveraging their symbology and data models
- Provide an easy-to-use GIS viewing and analytics for the entire enterprise
- Minimize training overhead for field and office staff
- Deploy a solution that meets current requirements and can be easily extended



Solution

An off-the-shelf, web-based product based on open source components, the IQGeo Platform provided a single, unified view of information from several different GIS and corporate back office systems.

IQGeo helped the business to improve planning decisions by giving users insight into intelligent data from across business jurisdictions and source systems such as Esri ArcGIS, GE Smallworld, Intergraph Technology and Google Maps.

Key features include:

- Seamlessly switch between online and offline, supporting limited connectivity for field teams
- Support mobile and office devices including laptops, tablets and phones (iOS, Android, Windows)
- Automatically adapt UI for each device to correctly display map layers, forms, etc.
- Enable synced and direct access to databases
- Provide two ways of accessing data; periodically import or sync data into the system's spatial database (using PostGIS), or directly access the data via web services
- Support different business processes for collecting and organizing data
- Provide a simple Google Maps interface that supports enterprise wide access to IQGeo without GIS expertise

Results

Before and during deployment, the customer put on roadshows, made web demos available online, utilized computer-based-training, and provided job-aid documents to make people aware of the new IQGeo Platform.

The system was rapidly adopted. Within five months of the initial IQGeo deployment there were more than 5,000 users. This has since grown to 15,000 named users with more than 8,000 using it 24/7 /365 to access GIS and associated data from several systems. An additional 2,000 personnel login to help with storm preparation and recovery during severe weather scenarios. IQGeo users are deployed on a range of workstation and mobile devices in both online and offiine environments.

The most significant benefit was improved integration of the new merged business units. All GIS asset data is exposed through a single tool to designers and asset engineers. There were also unanticipated benefits, such as a direct impact on tax calculation, shortening the cycle for internal auditors to complete tax assessments. Employees typically view upwards of 8 million map data queries per day. As the system use has expanded, more benefits have been realized. Workorders from EAM are integrated with the IQGeo Platform so crews can locate orders, see and edit the network model and attributes, as well as perform upstream and downstream traces. Gas field crews also manage and track Leak Surveys using the IQGeo Platform.

The IQGeo software is widely used during storms and other natural disasters, enabling crews from different areas to use a familiar interface to analyze unfamiliar data. It provides driving directions for field crews and allows storm managers to overlay outages, assets, flood plains, wind, rain, traffic and other maps for situational assessment. The IQGeo software allows managers to share staging sites during storms and proved extremely useful in locating “unmatched outages” (outages called in by first responders with just an address). Teams across the organization now depend on IQGeo to provide a trusted view of their distributed assets and situational awareness, reducing operational costs and risks while improving productivity.