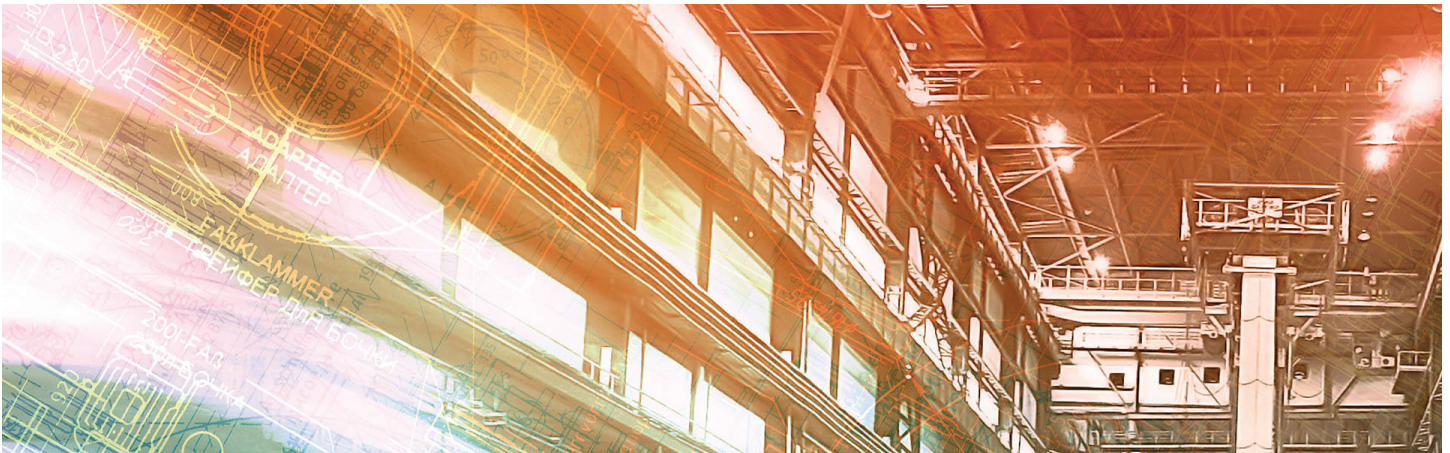


CASE STUDY

# Major Manufacturer Reaping Multiple Benefits From Data Conversion to Enterprise GIS

One of the largest manufacturing companies in North America has gained greatly improved safety, efficiency and quality for facility operations, thanks to a major migration of vital operations data into an Enterprise GIS system hosted in the cloud.



## Challenge

One of the largest manufacturing companies in North America was facing a significant challenge. Its vast portfolio of facilities, often located on sites totaling hundreds of acres, was aging rapidly at a time when many new demands were emerging for its sophisticated products. Though these facilities remain highly efficient, maintaining them while effectively planning for future use was becoming more complex.

The organization continually looks for ways to improve the management of its facilities as it continues to build some of the nation's most critical infrastructure efficiently and safely.

## Project Stats

**Client**  
Confidential

**Location**  
Confidential

**56**

MILES OF  
FEEDER LINES

**11**

SUBSTATIONS

**604**

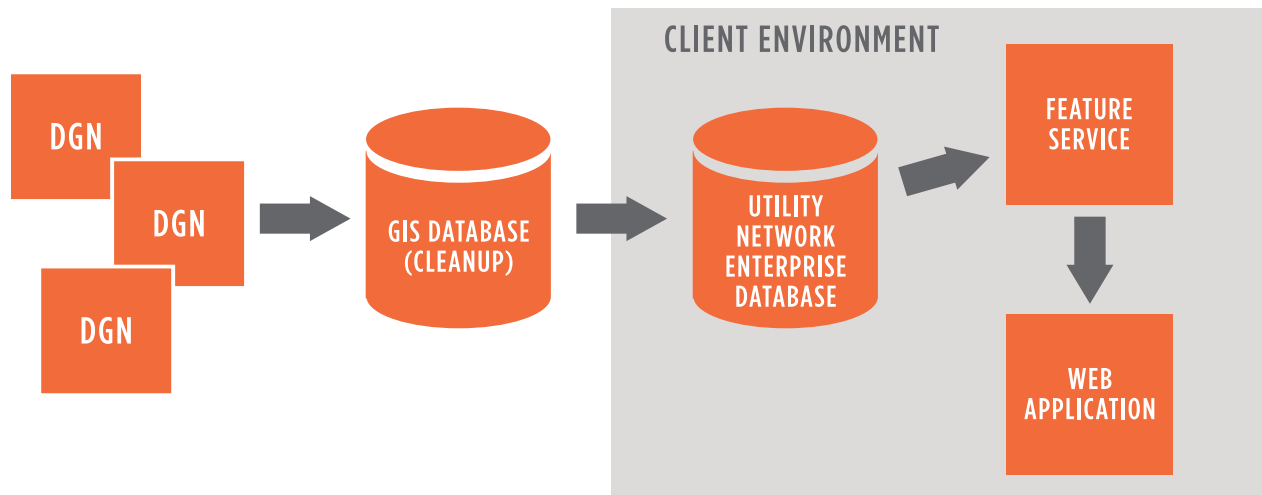
DEVICES

**160**

MANHOLES

**41**

JUNCTION BOXES



**Figure 1:** The conversion process for transferring disparate CAD data files to more accessible GIS formats including moving it into a Utility Network Enterprise Database.

The manufacturer engaged 1898 & Co. to help it meet the challenge of consolidating data for utilities, space utilization and architectural drawings and transferring it into easy-to-use web and mobile applications.

### Solution

Over a nearly two-year project duration, vital operations data for the organization’s three largest sites was migrated into an Enterprise GIS system hosted in the cloud. Transferring this critical data to an advanced geospatial format unlocks many new capabilities while greatly improving efficiency, safety and quality for facilities operations.

The company had been actively building capabilities in ArcGIS to support its strategic vision of process optimization and sustainability for operations within its facilities engineering division. One key goal was to help maintenance staff quickly access the information needed to maintain the facilities and perform planning activities. Applications we helped with include:

- Electrical outage management.
- COVID-19 space planning.
- Water main break response.
- Safe and efficient site navigation.
- Roof inspections using unmanned aerial vehicles (UAVs).

### Electrical System Impact

Maintaining reliable electrical service is critical for the client, which is one of the world’s leading manufacturers of high-value products.

The information about the electrical system at one of the company’s largest campuses included many disconnected,

non-georeferenced CAD files, making it difficult to plan and manage electrical system improvements.

The CAD files were consolidated into a single view, providing access to the entire 5-kV network within an intuitive web application. This application allowed facility managers to isolate a given electrical feeder or building to determine outage impacts, search and locate assets, view linked asset photos and drawings, and perform upstream and downstream tracing of the electrical network to identify outage impacts.

### Results

The enterprise GIS system has created a variety of benefits, including better space planning and space utilization, improved safety for operations personnel and visitors, enhanced asset management, and a more comprehensive campuswide view of utility assets, enabling more effective planning and management of utility outages.

The safety, efficiency and cost savings benefits of this data conversion and GIS system implementation are continuing to accrue for this major manufacturer.

### About 1898 & Co.



1898 & Co. is a business, technology and cybersecurity consulting firm serving the industries that keep our world in motion. As part of Burns & McDonnell, our consultants

leverage global experience in critical infrastructure assets to innovate practical solutions grounded in your operational realities. For more information, visit [1898andCo.com](http://1898andCo.com).