



# CASE STUDY: Integration Strategy For ADMS and the Future

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This utility client of Xtensible is a public utility in the United States with an electric customer base of about 7 million delivering:

- Generation
- Electric distribution
- Gas distribution

Partnering with Xtensible for consulting services:

- Business & Technology Consulting
- Strategy & Architecture
- System Integration

## THE NEED

The utility saw the need to go beyond a typical advanced distribution management system integration, by also focusing on related areas such as customer and meter as part of their grid modernization program.

## BUSINESS VALUE

Integrated network connectivity model design for DMS and GIS. With the goal of reuse and leverage for future data analytics and integration

## RESULTS

An integration design was completed for 12 data areas related to advanced distribution management as part of the overall grid modernization program at the utility. Use cases were identified building their repository in support of grid modernization.

## OPPORTUNITY

This utility is driven to achieve world-class performance taking the people it serves, a sustainable planet and financial success for itself and the region into account. The utility is committed to providing an electric distribution system that delivers safe, reliable, and affordable electricity to customers today and in the future. This means addressing near-term infrastructure improvements and adapting to customer expectations and evolving technologies.

The utility has been working on its foundational Grid Modernization efforts, aiming to leverage smart grid investments to significantly improve its grid management and automation capabilities for better grid resiliency and reliability.

The Grid Modernization Program includes several important efforts to enable the successful implementation of a modern Distribution Management System (DMS). These efforts include circuit survey program to improve GIS data, upgrades to communication infrastructure, installation of new distribution devices and controls, and establishment of operational data analytic capabilities using data sets from multiple sources.

## DISTRIBUTION CIM PACKAGE

Xtensible needed to understand current integration, supporting organizations and technologies to be able to extend the existing CIM based integration design. The design is to include the export of the electric distribution GIS connectivity model to support the new DMS, as an operational model. Key integration touch points were added to allow for a phased DMS implementation.

Service patterns and interface schemas were developed, with extensions to the IEC CIM 61968 and 91970 standards where applicable. Design processes and modifications to methodology and toolset were documented, which included a Distribution CIM Package.

A roadmap for the future integration of the grid modernization projects was create to ensure the interdependencies were identified and a preliminary budget establish. Future use cases were documented, using UML, with the primary use case being GIS/DMS integration scenarios.

# DATA AREAS

Xtensible took on the task to establish the integration design for 12 associated data areas with multiple end points:

1. Premise data
2. Customer data
3. Power on/off Disconnect/Reconnect
4. Outage data
5. Ping
6. Event Device data
7. Customer call / outage data
8. Model data
9. Device sensor data
10. Weather forecast
11. Meter info / reads
12. Mobile Jobs / Crew info

# RESULTS

A strategic roadmap and plan for the implementation of multiple use cases and integration requirements. Established an IEC CIM based Network Connectivity Data Model to support the integration between GIS and the new ADMS and future use cases.

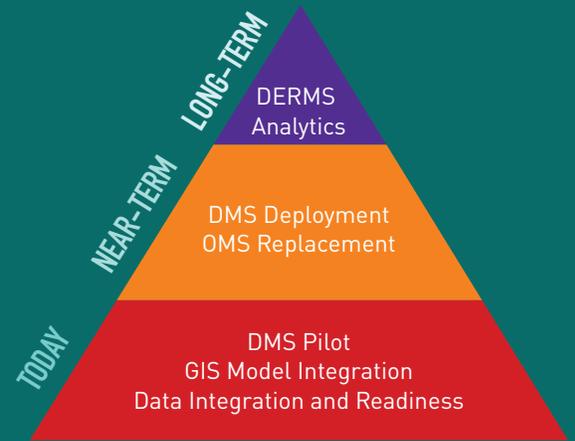
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*We worked with the utility to document use cases for this integration project, including processes, integration requirements, and data requirements. This is the foundation for business use cases in support of the overall grid modernization program and beyond.*

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*- Michael Covarrubias, VP of Strategy and Solutions Xtensible*

# WHAT IS HAPPENING NEXT?

The utility continues to evaluate the future of the grid and looks to further identify technological gaps between the current state of the grid and what is needed for the future in its modernization efforts. Safety, reliability is on the forefront from an investment perspective. A focus on providing customers greater control over their supply and consumption is also key.

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# INTELLIGENT GRID DEVICES CONTRIBUTE TO GRID EFFICIENCY



## BUSINESS UNITS INVOLVEMENT

- Information Technology
- Grid Modernization
- Grid Operations
- GEO-Spatial
- Enterprise Analytics



## TECHNOLOGIES

- MD3i
- OSII Spectra (AMS)
- ESRI (GIS)
- FME
- Tibco
- SAP AM, PI, PO