Dynamic, interactive, real-time visualization for proactive reliability analysis and informed decision making.

Increase your ability to monitor and visualize electric assets and their performance to support reliability and maintenance using a spatially enabled operational dashboard and the utility systems you already have in place.

Feeder Sentinel™ is the leveraged software component for building out your Reliability Analysis solution using the data and systems your utility relies on.

Built on the Esri Enterprise, Feeder Sentinel is an Esri Web AppBuilder application for condition-based maintenance, predicted maintenance and reliability analysis. Feeder Sentinel provides the views your asset managers and reliability engineers want and need. It is unique in its ability to interactively display historic operational and non-operational data, current real-time data and forecasted engineering and reliability data.

The solution provides considerable cost savings by leveraging Esri and OSIsoft PI condition data to enable the utility to design capital improvements based on feeder performance, feeder condition, asset condition and feeder loads overlaid with the company's preventative maintenance program status and weather events.

Relying on your data to drive the application, it can work with many of your operational systems.

Key Features & Benefits

- Provides visualization of utility historic, current and forecasted operational performance for maximum effectiveness

- Interfaces with AMI data for analysis of poor power quality events, outage durations, outage frequencies, customer outage durations

- Interfaces with OMS for outage events, outage frequencies, outage event durations, customers outage counts and outage root causes

- Interfaces with ADMS for advanced application results

- Provides ability to compare actual behavior to forecasted feeder behavior for the utility

- Assists in capital improvement project design and planning

- Enables analytical historic event playback, rewind, fast forward and pause

- Built on top of ArcGIS Enterprise Platform so it can scale with the utility's investments in digital devices and digital management systems. Same architecture that handles 1 billion daily requests on John Hopkin's COVID-19 website. Latest version brings AI & Machine Learning analytical engines

Primary Capabilities

"More than a KPI dashboard, Feeder Sentinel is a valuable tool for today's reliability engineers."

Capabilities	Feeder Sentinel™ Dashboard
Dynamic auto updating of map and widgets to display historic, real-time, and forecasted	✓
data and provide a complete, consistent view of the feeder's behavior	✓
Quickly Configurable dashboard views for reliability engineers	✓
Quickly Configurable dashboard views for asset managers	✓
Interactive User capabilities for all dashboard information panes	✓
Graphic display of load range and peak load by feeder	✓
Four week running view of feeder load profile	✓
Dynamically auto updates and displays AMI power quality issues, outage durations, outage frequencies, usage	✓
Dynamically auto updates and displays feeder level impacts on outage indices: SAIFI and SAIDI	✓
Graphically displays historic feeder and device behavior and condition information	✓
Graphically displays outage cause codes, frequency, duration, location, customer count	✓
Leverages investment in OSIsoft Vision analytics, charts and graphs	✓
Displays year-to-date outage indices	✓

Potential Interfaces

Digital Utility® - Feeder Sentinel™ allows your utility to easily correlate, visualize and bring together the information from your desired systems for analytics including the following:

- Outage Management Systems
- OSIsoft PI System™
- Customer Information Systems / CRM

- Enterprise Asset Management
- Mobile Workforce Management
- Distribution Planning Systems
- Reliability Forecasting Systems
- Advanced Distribution Management Systems
- Demand Response Management Systems
- Advance Metering Infrastructure / Meter Data Management Systems
- Distribution Automation / Substation Automation
- Distributed Energy Resource Management
- SCADA Historian

Dashboard Applications and Uses

Opportunities to leverage your operational systems and data

Reliability
- The Feeder Sentinel dashboard supports these reliability centric views:
- Historic Outage Causes vs. Preventative Maintenance vs. Environmental
- Historic power quality issues at specific locations
- Historic feeder impacts on outage indices
- Predicted feeder reliability
- Predicted system reliability indices
- Forecasted system reliability performance

Asset Management
- The Feeder Sentinel dashboard supports these asset management centric views:
- Historic power quality issues at specific locations
- Historic status of Preventative Maintenance
- Historic asset condition information at both asset level and feeder level
- Predicted DER capacity along a feeder
- Historic system utilization
- Forecasted system utilization

The flexible nature of its widget-based design allows UDC to customize reliability and asset management dashboards based on our client's reliability, asset management policies, analytical and reporting requirements for monitoring feeder reliability and feeder utilization and analyzing events to gain insight, enhance performance and achieve business goals.