



DIGITAL SOLUTIONS - CASCADE

ALECTRA REACHES NEXT LEVEL WITH CASCADE

Customer story - Alectra Utilities

Alectra Utilities was looking for a system that would take them to the next level to drive their condition-based maintenance program.

When Alectra was created by a merger of municipal utilities in Southern Ontario, the company had to establish new maintenance procedures. It involved establishing a methodology concerning how to maintain and track assets while transitioning from a paper-based to a digital environment.

“One of the main drivers for us to implement Cascade was that our company is very technology-based and innovative,” says former manager of station sustainment at Alectra Utilities, Vince Polsoni. “We were looking for a system that would take us to the next level, to move from time-based maintenance to a condition-based maintenance model,” he says.

Alectra is the second largest municipally-owned utility in North America and the largest in Canada, serving approximately one million customers in the municipalities in the Golden Horseshoe region of central and southern Ontario. Alectra uses Cascade to manage substation assets, including protection and control assets, communication assets and smart switches.

A new groundwork

The first step taken was to set up a new foundation or groundwork on how to maintain the assets, adopting the reliability-centered maintenance methodology. “We trained our users and we started to analyse our key assets,” says Polsoni. “With the output of that process we established the need for condition-based maintenance.”

With Cascade, Alectra can maintain more assets with less resources - maintaining the equipment the right way at the right time. And when Cascade was adopted throughout the company, the possibilities of the system were rapidly taken onboard.

“When our management staff first saw how Cascade was utilized by one of the four merged utilities - they basically were blown away. Literally, that’s the word I heard. They weren’t aware that Cascade was actually doing all the things that it can do,” says Polsoni.

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- Vince Polsoni, former Manager of Station Sustainment, Alectra Utilities

Leveraging technology

“As a result of implementing condition-based maintenance we had to leverage technology and install a number of sensors on our assets,” says Polsoni. “The model has now evolved from installing sensors, bringing the data through our SCADA system into a data historian which is being monitored and triggered based on our CARE [Cascade Algorithm Rules Engine] application and triggering automatic work orders, alerts and notifications.”

“We want to leverage technology and sensor information as much as we can. Cascade drives our condition-based maintenance methodology,” he says.

Polsoni describes many changes that have taken place since Cascade was implemented. Situational awareness is key. “All of our field staff and asset management staff have a good understanding of the condition of our assets,” he says. “We have implemented a criticality health and risk model. We use that information to prioritize our maintenance work. We collect all our equipment failure information in Cascade. We also collect every single deficiency through our patrols in Cascade. Now that information is never lost.”

“The people at DNV GL have been instrumental in the success of the Cascade implementation. They are very receptive to our needs. They respond quickly to any issues that we have that need to be resolved, and they are very much available when we need them to assist us to get through a problem that arises,” says Polsoni.

Knowledge transfer

Some common challenges in the industry relate not only to aging assets, but also an aging and retiring workforce. It’s important that knowledge is captured and transferred before the long-time experts leave the company. “There’s information in Cascade that definitely helps with the transfer of knowledge,” says Polsoni, noting maintenance procedures, trends, historical information and the building of smart algorithms for analysis are key areas where Cascade supports knowledge retention.

The company is looking to leverage the technology further, increasing the utilization of the information stored in Cascade. This relates to areas such as asset condition assessments or capital replacement strategies. “There are products out there that Cascade interfaces to very well,” noting that Alectra is constantly striving to reach to the next level.



Vince Polsoni, former Manager of Station Sustainment, Alectra Utilities

Polsoni is confident that artificial intelligence will soon be even more important to utilities. “If you have the data, you can implement artificial intelligence very, very quickly,” says Polsoni. The data is already in Cascade and the data historian. “If you’re tracking and monitoring statuses of equipment, or analogue type values of a piece of equipment, failure information. All that information, it’s ready to go if you have history. And you can start putting that to work for you. We’re there. Most of the industry is there, it’s just a matter of taking it to the next step,” he says.

ALECTRA IN BRIEF:

Alectra is the largest municipally-owned electricity utility and distributor in Canada, by number of customers served, and the second largest in North America. It is the result of a merger of four municipally-owned electric utilities in 2013. Alectra covers an area within the Greater Golden Horseshoe region of Ontario, serving one million homes and businesses in communities from Mississauga, to Hamilton to Guelph.

PROFILE

- Customer name: Alectra Utilities
- Website: www.alectrautilities.com
- Market: Electric power utility
- Employees: 1600
- Products: Cascade, CARE

BRIEF ACCOUNT

Why we chose DNV GL - Digital Solutions:

- Cascade is industry leading solution
- Team at DNV GL provides excellent support
- Cascade integrates well with other enterprise systems

This is what we gained:

- Condition-based maintenance brings us to the next level
- Criticality health and risk model gives overview of asset condition to field and asset management staff
- Greater reliability and fewer failures
- Efficient maintenance of equipment, the right way at the right time