DIGITAL SOLUTIONS

CASCADE

Risk management, decision support and predictive maintenance

SAFER, SMARTER, GREENER
Energy utilities face increasing pressure to deliver increased reliability while also reducing costs. Efficient technical asset management is the key to optimizing trade-offs and meeting these key business goals. More than that, advanced technical asset management solutions provide key decision support for enterprise risk management, capital budgeting, and operational excellence initiatives.

Cascade is the leading software solution for achieving asset performance management objectives. Cascade provides utility stakeholders with a focused solution for risk management, predictive maintenance and other asset management activities that maximize equipment lifetimes. Unparalleled functionalities provide transparency to the data, analysis and decision support.

"Implementing Cascade with our reliability centered maintenance program brought substation outages down. We previously had approximately 13 outages per year, now we have zero to one substation outage per year."

Laura Davis, Operational Support Technician, Chugach Electric Association Inc.

Risk Management
Cascade is a powerful asset health index and risk management tool. Cascade gives utilities the ability to detect, assess, and act on critical risks to the asset fleet and system operability. The integrated Criticality, Health and Risk assessment of Cascade helps utilities prioritize maintenance and understand asset risk. Standard algorithms can be tailored and steadily tuned to fit current assessment methods. For deeper analysis of the entire asset fleet, Cascade Foresight provides remaining life and risk assessment of the fleet by asset class. Cascade can be integrated with other enterprise systems so that financial, real time, and other data is included in the risk analysis.

Predictive Maintenance
Cascade and DNV GL subject matter experts help utilities evolve their maintenance practices for operational excellence and efficiency. Cascade takes the guess work out of maintenance management. It shows which assets need attention and automates analysis of condition assessments and work generation. Cascade also assists with budgeting, forecasting maintenance resource needs, and regulatory compliance through its maintenance tracking and data validation and extrapolation capabilities.

With Cascade you can:
- Manage risk relating to asset replacement and maintenance
- Optimize CAPEX/OPEX budgets
- Improve reliability and avert failures
- Maintain regulatory compliance and audit readiness
- Collect and analyze data for predictive maintenance prioritization
- Provide transparency and accessibility to asset lifecycle data
- Manage and improve asset and maintenance practices
- Drive operational excellence with integration to enterprise systems
- Share insights into your asset maintenance programs through Cascade Viewer

Cascade for asset performance management (APM)
Over 100 utilities globally depend on Cascade solutions to manage assets, adapt to changing needs of the industry and advance their APM strategies. Cascade enhances reliability, enables predictive maintenance and manages technical asset risk.
Decision Support

Making confident and timely decisions for your assets demands transparent and accessible information across the asset lifecycle. Cascade boasts robust decision support and analytics based on real on-the-ground data. Cascade's Reliability and Compliance manager gives a concise view to critical maintenance and helps ensure regulatory compliance.

The Cascade Viewer provides secure web-based access to your asset information through intuitive navigation and search capabilities. For graphical dashboards and analysis, Cascade Insight delivers business intelligence through preconfigured dashboards with ability to add utility-specific dashboards to meet changing needs.

Modules in Cascade

- **Doble Test Assistance Interface** - integrates DTA data into asset management operations to maximize asset health.
- **Powerbase** - allows automated creation and closing of maintenance orders for relay tests and lets you take advantage of Cascade’s triggering engine for relay maintenance and testing.
- **CARE** - proactive watchdog for monitoring equipment, detecting anomalies and sending critical alerts on events and performance.
- **Inspector** - substation inspection solution for tablet devices, pre-integrated with Cascade, giving faster and more accurate substation inspections and fail-safe sequences to guide users through complex procedures.
- **FieldUnit** - brings all the power of Cascade to the field, with offline access and maintenance orders for your mobile workforce and field engineers.
- **Thermography (IR)** - integrated IR imagery and analysis adds condition-based assessment to Cascade.
- **Maintenance Program Triggering Engine** - supports continuous improvement of condition-based and predictive maintenance programs.
- **Transformer Oil Analyst Interface (TOA)** - Delta-X Research TOA manages and interprets insulating oil dissolved-gas and physical test data. This module integrates TOA and Cascade to maximize transformer health and decrease the chance of costly asset failures.
- **Enterprise Integration Solutions** - an efficient and reliable way to integrate Cascade and LOAD software with your existing enterprise systems for improved field operations, work and asset management, and strategic planning.
- **Cascade Viewer** - dynamic web-based solution for immediate insight into asset and maintenance information in Cascade, clearly presented in a single view, with drill-down capability where needed.
About DNV GL

DNV GL is a global quality assurance and risk management company. Driven by our purpose of safeguarding life, property and the environment, we enable our customers to advance the safety and sustainability of their business. Operating in more than 100 countries, our professionals are dedicated to helping customers in the maritime, oil & gas, power and renewables and other industries to make the world safer, smarter and greener.

Digital Solutions

DNV GL is a world-leading provider of digital solutions for managing risk and improving safety and asset performance for ships, pipelines, processing plants, offshore structures, electric grids, smart cities and more. Our open industry platform Veracity, cyber security and software solutions support business-critical activities across many industries, including maritime, energy and healthcare.