

SUCCESS CASE 3.2026

ELIGE

SMART DECISION-MAKING
TOOL FOR MV GRID
MAINTENANCE

THE CHALLENGE

Enedis performs thousands of maintenance and refurbishment operations on its medium-voltage (HV/MV – HTA) network every year. For each intervention, planners must select the most appropriate execution strategy while balancing several often conflicting objectives: operational costs, quality of service for customers, mobilization of resources and environmental impact.

Traditionally, these decisions rely on technical expertise and the comparison of multiple possible scenarios. Determining the optimal option can be time-consuming because it requires consolidating data from different sources and assessing the consequences of each intervention mode on customers, network operations and carbon emissions.

As network operations become increasingly complex and as expectations regarding service continuity and environmental performance grow, Enedis needed a tool capable of supporting planners with objective and data-driven decision-making.

THE SOLUTION

To support maintenance planning on the MV network, Enedis developed **ELIGE**, a digital decision-support tool designed to identify the most efficient intervention scenario. ELIGE centralises the data required for maintenance preparation and evaluates different operational options directly from a dynamic network diagram created by the planner.

ELIGE compares the three main intervention approaches available to field operations:

- **Power Outage:** interruption of electricity supply during works; a cost-effective solution but with an impact on customers.
- **Generator Supply:** deployment of mobile generators to maintain electricity supply; improves customer continuity but increases operational costs and carbon emissions.
- **Live-Line Works (TST HTA):** maintenance performed while the network remains energised; eliminates customer interruptions and associated emissions but requires specialised expertise and resources.

For each scenario, ELIGE evaluates key performance indicators and calculates the best compromise between economic, operational and environmental considerations.

MAIN ACHIEVEMENTS

ELIGE enables Enedis to make maintenance planning more efficient and more consistent across the organisation. By providing a comprehensive comparison of intervention scenarios, the tool allows planners to base their decisions on objective data rather than historical practices.

The key benefits include:

- Faster preparation of maintenance projects through centralised information and automated scenario assessment.
- Improved decision-making based on quantified indicators.
- Better control of project costs.
- Improved quality of service through consideration of customer interruption indicators.
- Integration of environmental performance through systematic carbon footprint assessment.
- Enhanced coordination with operational tools supporting field interventions.

KEY SUCCESS FACTORS

The success of ELIGE relies on its ability to consolidate multiple decision criteria into a single decision-support environment. Rather than focusing solely on operational costs, the tool provides a balanced assessment of three essential dimensions:

- **Economic Performance (€):** project budget optimisation.
- **Quality of Service (NITI & Criterion B):** evaluation of interruption duration and customer impact.
- **Environmental Performance (CO₂):** measurement of the carbon footprint associated with each maintenance scenario.

Another critical success factor is ELIGE's integration into planners' operational workflows through the use of dynamic network diagrams and centralised data management, enabling rapid and informed decision-making.

WAY FORWARD

ELIGE represents a major step toward data-driven maintenance planning for distribution networks. Future developments will continue to enhance the quality and completeness of the data used by the tool and further strengthen decision-support capabilities.

The connection between ELIGE and **PRODIGE** already enables optimisation of generator logistics and associated costs when generator-based scenarios are selected. This integration illustrates how complementary digital tools can support more efficient, sustainable and customer-focused network operations.