

Outage Planning Optimization

Optimize your intervention and outage planning with Advanced Analytics



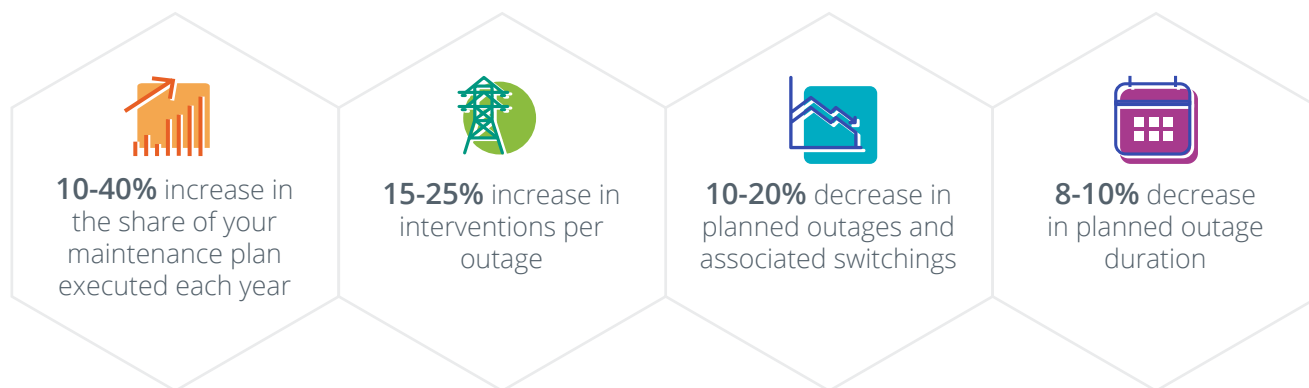
Our solution

N-SIDE developed in a partnership with Elia, the Belgian Transmission System Operator, a decision-support optimization software able to find an optimal planning for one year with up to 10.000 grid activities and linked outages for a time horizon going from year-ahead planning to week-ahead updates, allowing a more stable planning of activities when possible but also more agile when necessary.

The developed solution combines state-of-the-art optimization techniques (*Constraint Programming*) with business knowledge. It is able to consider multiple business objectives with network and resource constraints in an integrated way.

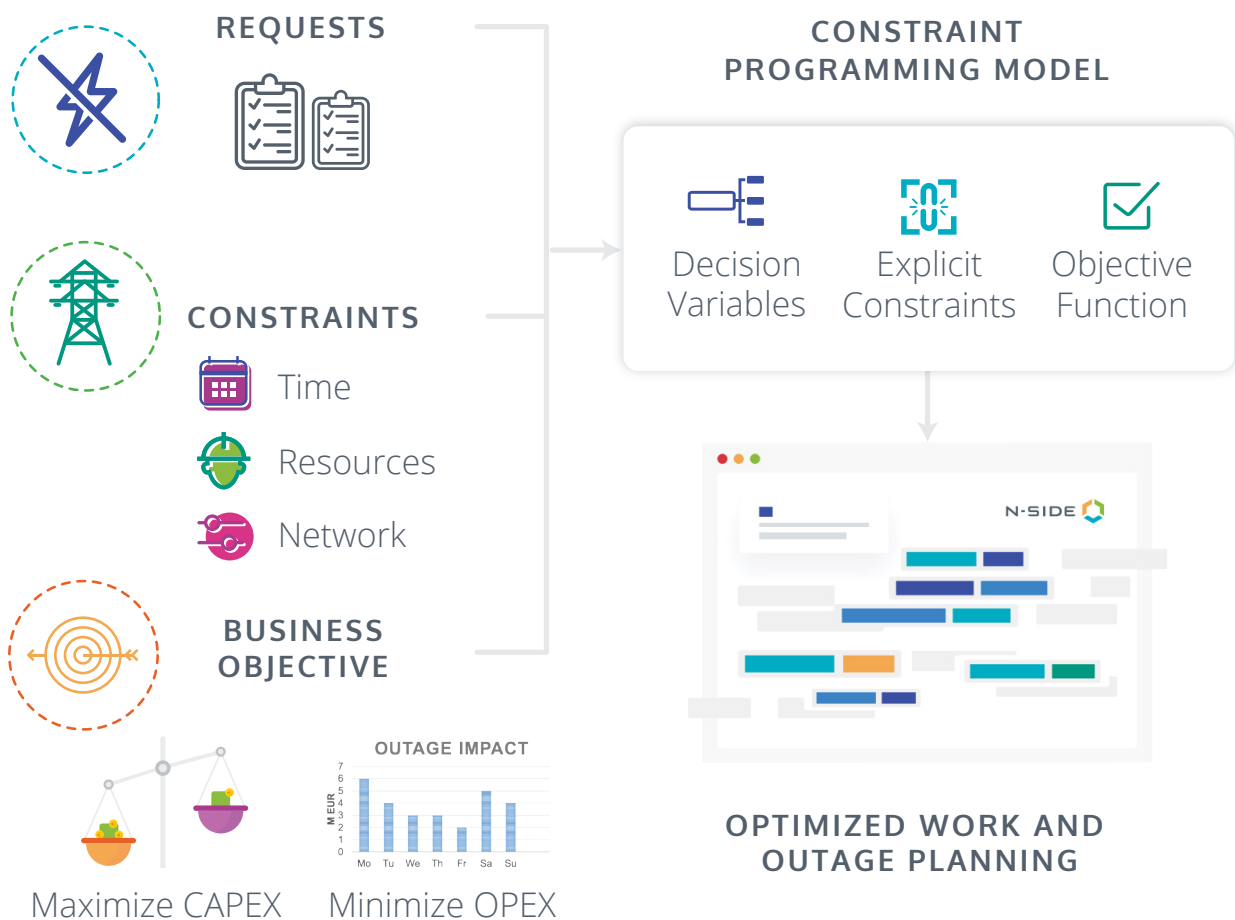
Moreover, this unique mathematical modeling enables multiple users to collaborate with a single tool taking into consideration the specificity of their respective areas of responsibilities.

- ✓ **Workforce management and planning:** enable planners and foremen to keep track of planned interventions and frequently update grid activity needs and resource availability with a daily granularity
- ✓ **Outage planning and grid constraints management:** enable network analysts and planning engineers to schedule and track planned outages over the time on multiple voltage levels and adapt network constraints based on the evolution of the grid
- ✓ **Strategic planning:** enable key decision makers to understand the impact on the planning of prioritizing one business objective over the others by performing what-if scenarios and sensitivity analysis



**Based on the proof-of-concept performed with Elia*





An optimized planning of grid activities and planned outages

Achieve annual targets

Increase the number of maintenance works and new infrastructure projects executed each year by optimizing the distribution of your grid activities and the use of your operational teams.

Ensure security of supply

Reduce stress on the grid by grouping activities on the same network assets and scheduling works on critical assets during the least risky periods.

Boost collaboration

Get the full picture of your planning in a single tool and improve the connection between the planners, network analysts, and foremen involved in the process.

Reduce operational expenses

Reduce the workload of your planners, network analysts, foremen, and switching operators by combining their business expertise with the power of advanced analytics and by reducing the number of required switching operations.

Increase stability and agility

Optimize your planning based on explicit parameters to increase stability. Then re-optimize your planning more frequently to quickly adapt to unexpected changes in operating conditions.

