

**Elia Grid
International**

Asset Performance Analysis


We are your
agile partner
to increase
your reliability,
protect
your people
and improve
your bottom
line through
Asset
Performance
Analysis



part of
the Elia Group

Asset Management

Asset Performance Analysis



Caroline Bosschaerts
Head of Asset
Performance Analysis
Elia System Operator

“Asset Performance Analysis (APA) is core for reaching the targets of an asset intensive sector such as the distribution and transmission of electricity. It allows Elia System Operator to analyse and draw lessons from each incident or rare electrical phenomena, but also to highlight major asset performance trends in order to make better-informed asset management decisions. Through its neutral and centralized APA Division, Elia System Operator, works every day at developing a more reliable, available, compliant and safer grid. Elia System Operator has a system availability of 99,999% and the aim to keep average interruption time below 2 minutes per year. “



Elia Group and its international branch Elia Grid International have been active in assisting other Transmission System Operators in the world to develop their Asset Management capabilities.

Utilities worldwide face the perfect storm



Renewables, new technologies, ageing assets and growing demand are only a small share of the challenges faced by the Electricity sector, while retention of knowledge becomes increasingly difficult.

Grid incidents and the performance of the network literally keep executives of the electricity sector awake. Not only because they influence the organization's **image**, but also because of their direct impact on **reliability, safety and revenue** of the company.

All organizations perform incident analysis in some way, but most of them do not get the most out of this activity. Some organizations perform Asset Performance Analysis because it is imposed on them; while others do not perform this activity **systematically** or in a **coordinated** way. In many cases the balance between performance, risk and cost is not taken into account when performing incident analysis.

Although incidents are an opportunity for all utilities to obtain **hands-on experience feedback** from the field, many utilities do not exploit this opportunity, and rather develop incident analysis as an ad hoc and ex post activity. System Operators all over the world are confronted with the same issues: incidents continue affecting the networks and little is done to predict them.

Incidents affecting the grid are unique opportunities to **test the whole system** too. Each disturbance affecting the grid, be it at the system level or at a single asset level, provides unique insights on how the system is reacting to external events and is an opportunity for your organization to assess if the system is prepared to sustain similar disturbances that might occur in the future or to take decisive actions to correct latent flaws.

By focusing only on fixing local failures through post-mortem analysis, organizations typically miss the chance of **detecting disturbances long before their occurrence**. Highly performing organizations trend historical data and make use of well-designed leading indicators to identify and fix hidden flaws before the occurrence of failure affecting the system and its performance.

Best performers are able to make **better informed decisions**. The absence of asset and asset system performance analysis is like driving your car without looking in the rear-mirror and ignoring the messages sent by the engine.

Elia Grid International (EGI), with more than 35 years of experience and expertise in solving incidents on its medium and high voltage grids, has developed innovative and flexible solutions that can fit to your reality.

EGI focuses on five pillars to ensure successful implementation:

1. Ensure one source of the truth by developing a **strong central authority** for fault analysis and asset performance analysis
2. Enforce **strong technical governance** to ensure the right selection of tools and equipment to perform state-of-the-art analysis of complex power system incidents
3. Secure data to provide your organization with valuable information for detecting **historical trends** in grid disturbances
4. Develop and train **people to improve** their analytical skills, technical competencies and secure field operations
5. Assist in the design and implementation of **supporting IT tools**

Elia Grid International **implements processes, standards and methodologies** it has improved over the past decades on its own Belgian and German grids. We provide our clients with **knowledge and innovative solutions** proven to be successful in professional environments.

The experienced teams of Elia Grid International will first ensure **commitment** of your executive committee, before developing a **centralized** entity with the responsibility to **control the complete process** of asset performance analysis. This involves putting under control data acquisition, root-cause analysis and rigorous follow-up of recommendations for improvements.

Our teams will also ensure that data related to incidents are managed consistently with the required quality of the analyses. Our experts will develop your teams to acquire competencies in calculating and interpreting **leading and lagging indicators**.

Your organization will benefit from Asset Performance Analysis by:

1. **Avoiding** future **incidents**
2. Making the right decision and **optimize Total Cost of Ownership**
3. Increasing reactivity to contingency and **increase availability** of the grid
4. Centralizing governance to **increase productivity** of your teams
5. **Streamlining reporting** channels to concerned stakeholders

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