

Elia supports energy sector transformation and data centricity through open data portal

26 million

average monthly API calls

49,000

average monthly users

96

datasets

CONTEXT:

DRIVING THE EUROPEAN ENERGY TRANSITION

Elia Group is one of the top 5 leading electricity transmission system operators (TSOs) in Europe. Through its subsidiaries in Belgium (Elia) and in the northeast of Germany (50Hertz), it operates 19,276 km of high-voltage connections that supply power to over 30 million end-users, covering both large industries and households.

“We started to work with open data as part of our transversal shift to data centricity, and wanted to ensure we offered our stakeholders accessible, usable, and discoverable data. Opendatasoft was a good match for our ambitions, thanks to its central data catalog and advanced search functions to help with data discoverability.”



Cédric Charlier
Group Head of Data & Integration



CHALLENGES:

EMBRACING A SHIFT TO DATA CENTRICITY

As a major player in the European ecosystem, Elia produces 50 million data points every day. It is committed to driving decarbonization and meeting the European Union's digital ambitions around opening and sharing data for the public good, looking to become data centric by treating data as a corporate asset and providing it to its multiple stakeholders in tailored ways.

“To build Elia's data platform and to deliver the components that will ensure it is a success for users, we needed a proven solution that has a strong track record with other utilities, combined with proactive, fast support. Opendatasoft is the perfect match, meeting the needs of our users around data quality, legal clarity and seamless availability. Positive feedback from our user community and the well-governed integration of Opendatasoft into our wider platform have more than exceeded our expectations.”

Gaetan Leydens
Principal Consultant

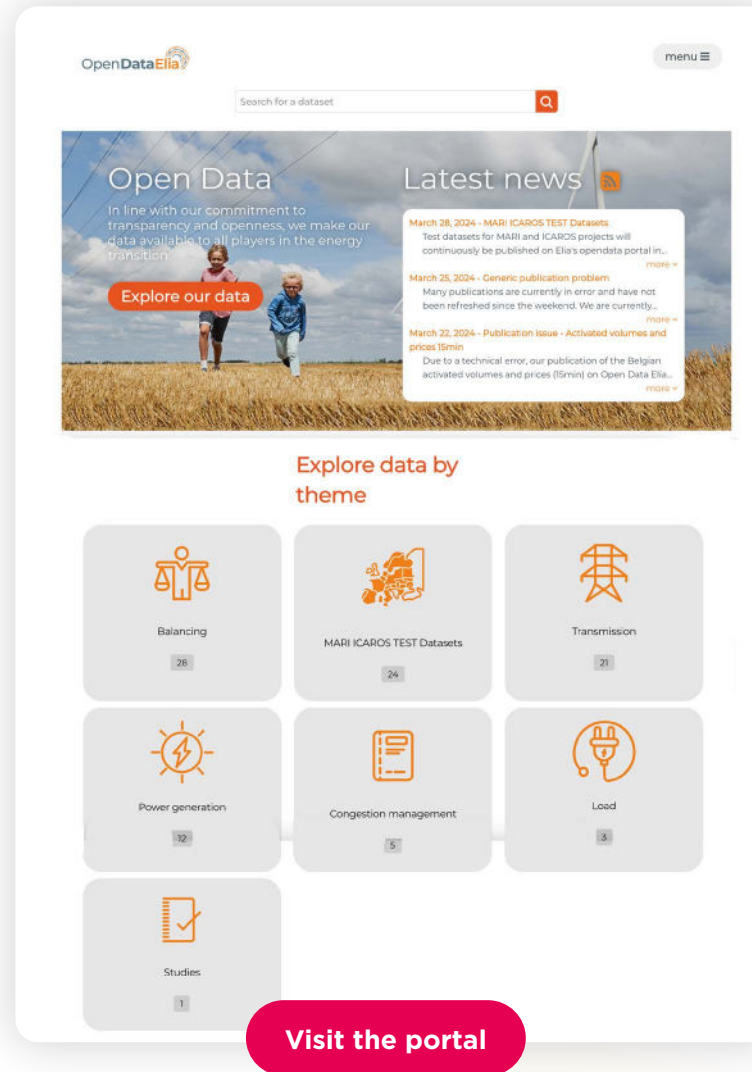
DATA EXPERIENCE:

OPEN DATA AS A STRATEGIC PILLAR OF CHANGE

After listening to feedback from stakeholders, who include electricity market participants, regulators, authorities, energy service companies, individuals and data service providers, Elia knew that its open data platform needed to meet four key requirements:

- ▶ Accessible and usable by all
- ▶ Open by default, with users clear what they could legally use it for
- ▶ Comparable and interoperable, for example using consistent units of measurement
- ▶ Trustworthy and high quality

After reviewing the market, Elia chose to work with Opendatasoft, as its platform provided the best match for its challenging requirements. After a nine month development period, its OpenDataElia portal was launched in July 2021.



Available in English, French and Dutch, datasets span six key areas - balancing of electricity production against consumption, transmission, power generation, congestion management, load and internal studies/research. There is a rich diversity in the types of data that is available. Some is produced on a near real-time basis, while other datasets are only updated four times per year. Publication frequency also varies, depending on user need and the speed at which data can be collected and processed through Elia's data architecture.

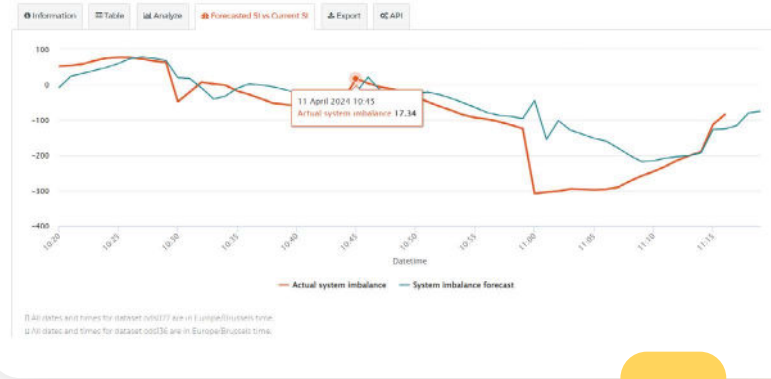
As part of its shift to becoming data centric, open data is just part of Elia's broader data platform, which covers processing, repositories, analytics, data management, data services and integration with internal and external services. Aligning the open data portal with these capabilities is critical to success, particularly around data governance and lineage.

Overall, this major project is transforming how Elia handles and uses data across the organization, enabling the company to become more data-driven and efficient. Key to achieving these aims is empowering business users and delivering compelling data experiences to the right audiences.

Elia is therefore automating the publication of data flows, with new events captured, transformed and automatically published on the open data portal, following data governance rules. This removes any obstacles to data publication, saving the IT team time and enabling business people to share data more easily.

Since it was introduced Elia's open data portal has been constantly improved and developed, with new datasets being regularly added, particularly in response to user requests.

System imbalance forecast current quarter hour (near real-time)



STRONG DATA GOVERNANCE:

BRINGING COHERENCE AND CONSISTENCY TO OPEN DATA

Effective data governance is central to successful management of all data across Elia. The company has created a single data glossary to provide a unified list of definitions that are used across the organization, including within the open data portal. The glossary, which now has over 5,000 entries, provides information on what every term within data management means, naming conventions, what data is available, and who is responsible for individual datasets. This is supported by data lineage processes that track data from its creation all the way through the architecture, mapping any dependencies to track the potential impact of any changes. Together, this delivers coherence across all datasets and amongst all data users within Elia.

OPENDATASOFT:

THE ALL-IN-ONE PLATFORM FOR OPEN DATA AT ELIA

After a thorough technical evaluation, Elia selected the Opendatasoft platform as it delivered the strong functionality and flexibility it required for effective open data sharing.

CLOSE INTEGRATION WITH WIDER DATA PLATFORM WITH API

Elia's overall data architecture includes a large number of different tools. The openness of the Opendatasoft platform and the powerful capabilities of its API Automation feature, which automates back office management to enable it to integrate seamlessly into Elia's wider data platform, reducing administration costs and ensuring the company gets full value from its data.

CENTRAL DATA PORTAL AND USER-FRIENDLY PLATFORM

With all data accessible from a single place, users can easily navigate the portal and locate the most relevant datasets for their needs. Every dataset is presented in the same way, with standardized definitions, APIs and metadata, along with a harmonized, easy-to-use interface, aiding reuse. This makes it simple for non-specialist users to confidently access the information they require.

ROBUST PLATFORM ABLE TO SCALE API REUSE

Making data easily available to users in the right formats is vital to driving reuse. A significant number of Elia's users want to automate data downloads through APIs to ensure that they are accessing the latest information from specific datasets. The Opendatasoft platform scales to handle the nearly 1 million API calls per day that Elia is receiving.

RESULTS: BUILDING A DATA CENTRIC ORGANIZATION

Successfully harnessing open data as part of its wider data-centricity strategy has unlocked major business, technical and ecosystem advantages for Elia. Key benefits achieved so far include:

▶ Increasing data usage across its ecosystem

Previously external stakeholders found it difficult to find, understand, or use the open data provided by Elia as it was inconsistent, not always updated and hard to locate. Its new open data portal has solved these challenges and dramatically increased usage. Currently, there are 49,000 monthly users visiting the portal on average and over 26 million API calls. Usage is growing at 10% every month. Elia is benefiting from the reliability of the Opendatasoft platform, which scales seamlessly to meet its fast-growing needs.

▶ Using data to engage stakeholders in new ways

Not only do users benefit from access to consistent, understandable datasets and a multilingual portal but data is available through compelling data visualizations, such as maps and graphics as well as via APIs. For example, by bringing together multiple datasets from different departments Elia has created a data visualization that clearly shows the current physical flows of electricity across the Belgian high-voltage grid. Through clear color-coding it shows exactly which lines are operating at close to capacity, helping explain to the public why certain parts of the grid require upgrading.

▶ Effective data governance

By taking a holistic view that integrates open data within its wider platform, Elia has been able to create an effective data governance strategy across all of its data, including the current 96 open datasets it offers. Strong governance enables better control over data and thus increases confidence and trustworthiness amongst users. Importantly, governance involves both business and technical users involved in the creation of datasets, creating a holistic approach. This provides the foundations for Elia to become a more data-driven organization, where data is treated as a corporate asset.

“We’ve learnt a lot over the course of our continuing open data journey. For example, it is vital to integrate your portal with all of your other data capabilities and focus on key areas such as governance, data lineage and closely engaging with users if you want to be successful.”



Cédric Charlier
Group Head of Data
& Integration



“Elia’s project shows the real power of open data to meet real-world objectives around decarbonization and becoming more data centric. Thanks to its work it is leading the sector through its strong governance, user-focused approach and holistic approach to putting data at the heart of everything it does.”



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