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E-REDES increases decarbonization collaboration through intuitive data portal

20,000
annual unique users

26
datasets

350,000
monthly API calls

CONTEXT:
DELIVERING THE PORTUGUESE ENERGY TRANSITION

An independent subsidiary of the Energias de Portugal (EDP) group, E-REDES is the principal operator of mainland Portugal's high, medium and low voltage electricity distribution networks, transmitting power via its 245,000km energy grid to its 6.4 million customers.

CHALLENGE:
DEMOCRATIZING ACCESS TO DATA

The growth of solar power and the adoption of electric vehicles (EVs) and smart meters is accelerating the energy transition in Portugal. E-REDES knew that sharing its data with key stakeholders was a vital part of supporting this shift, helping its wider ecosystem better understand the current situation and effectively plan their decarbonization efforts moving forward.

> *At E-REDES we have a clear vision of how data can underpin a cleaner, greener and more efficient future for all. Democratizing access to our data for all stakeholders is central to increasing transparency, delivering innovation and driving greater collaboration on the road to net zero.*

Luís Tiago Ferreira
Head of Smart Cities & Streetlighting

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DATA EXPERIENCE:
DELIVERING A TAILORED DATA EXPERIENCE TO KEY AUDIENCES

To deliver on its data sharing strategy, E-REDES wanted to provide all of its stakeholders with seamless, intuitive access to its comprehensive energy data. With diverse audiences, from energy producers and local municipalities to researchers and consumers, it was vital that the data sharing process was simple, straightforward and tailored to the needs of each group.
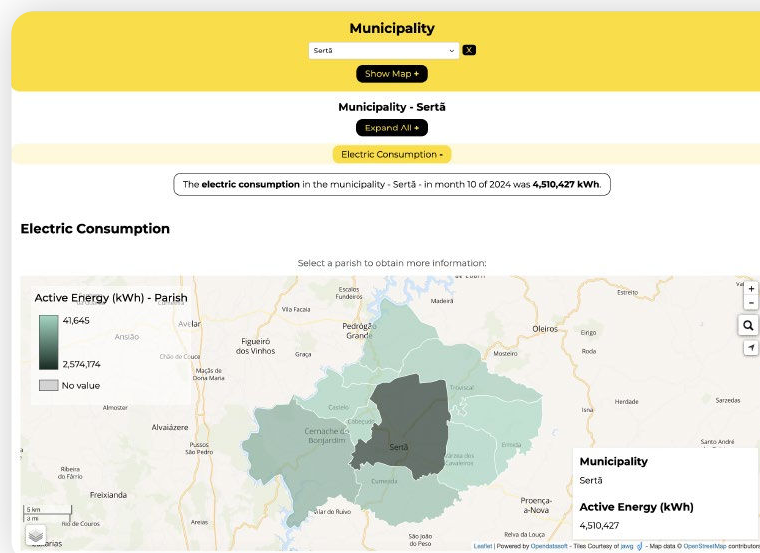
E-REDES therefore created its open data portal to share data with its community, increasing transparency, strengthening the ecosystem and supporting overall net zero goals. To power its portal E-REDES adopted Opendatasoft's data portal solution, due to the company's strong energy sector experience and scalable, user-friendly, self-service technology,

The bilingual portal provides free, open access to data on areas such as renewables production, electricity consumption, electric mobility, network availability and network connection requests. To meet the different needs of its audiences it delivers a customized experience, with data organized by theme and usage profile, allowing tailored navigation for specific groups and accelerating access to relevant data.

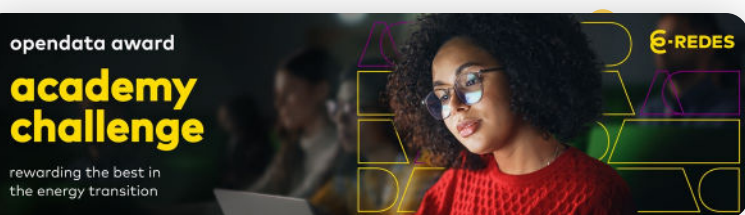

Visit the portal

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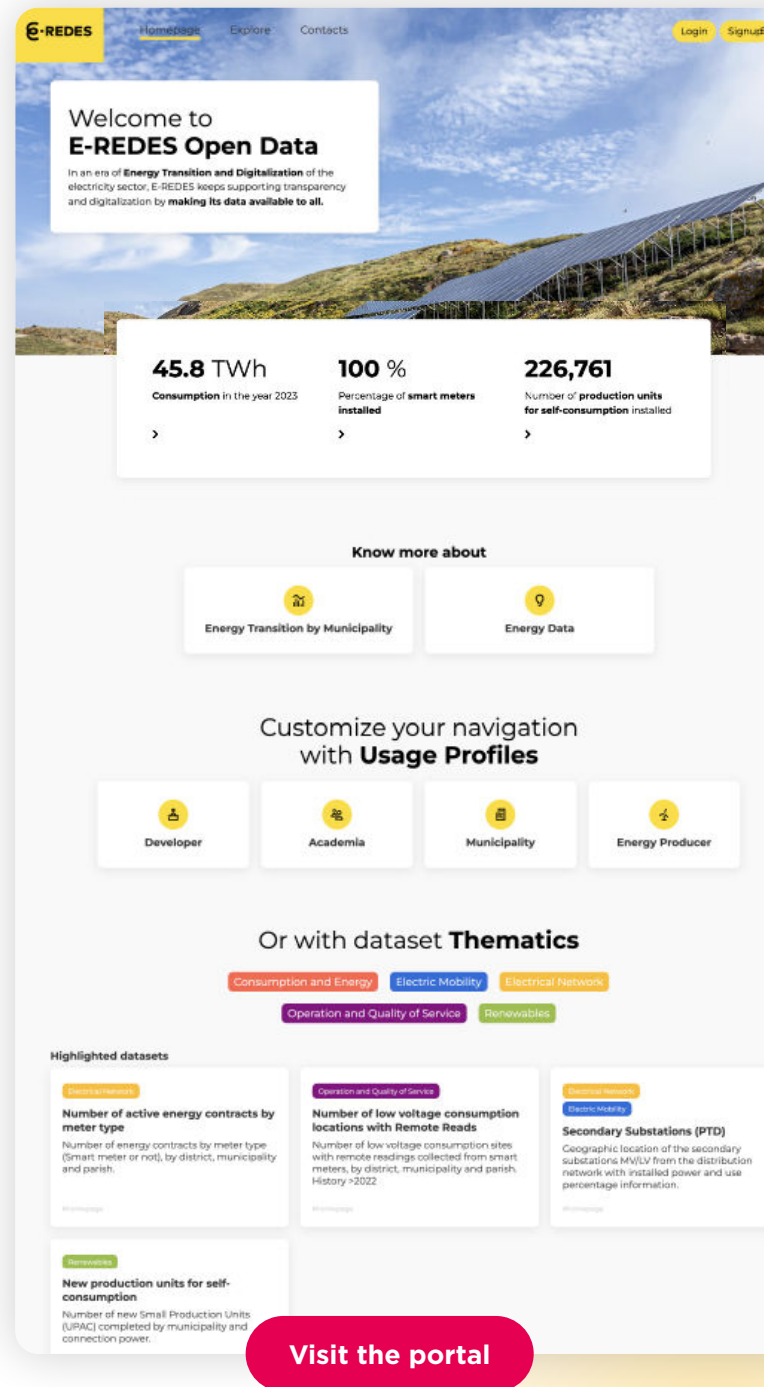
Focusing on municipalities

Portugal's 278 mainland municipalities are one of the largest users of the portal and E-REDES consulted them extensively before launch to ensure it delivered on their requirements. To provide a focused experience it has created a specific drill-down municipality dashboard. Staff and citizens can find their municipality by searching by name or via a clickable map and then access local metrics on areas such as monthly consumption, renewable generation, public EV charging points and planned/actual energy interruptions. Through visualizations users can see how specific municipalities compare to others and change over time, delivering transparency and enabling administrators to focus on making better-informed decisions to drive the energy transition.

Using self-service to boost efficiency and reduce cost

The decentralization of the energy grid means that a growing number of companies need to connect to E-REDES' high, medium, and low-voltage networks. For example, EV charging point operators have to know if there is sufficient capacity at the nearest substation when they plan new facilities, while power generators want to be sure they can easily connect to the medium-voltage grid. Before, all of these requests had to be handled manually by E-REDES, taking considerable time and resources. However, now that this information is available via open data, users can self-serve to find the data they require, accelerating the process for themselves and increasing efficiency by reducing the costs of handling data requests.
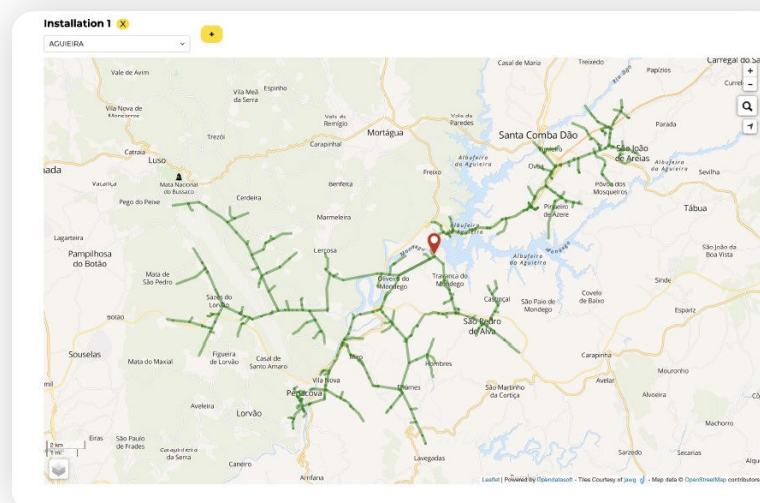

Increasing innovation

By encouraging the use of its data within the academic and research community, E-REDES is looking to unlock innovation and the creation of solutions that transform energy data into value for society. As part of this, it has launched the Open Data Academy Challenge Award. This rewards dissertations and master's projects that focus on the theme of the energy transition and that use data from its data portal as a source for research, providing monetary prizes to the three best projects, inspiring innovation and new ideas.

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INCREASING ECOSYSTEM ENGAGEMENT

With a diverse range of stakeholders, E-REDES understood the importance of engaging them to drive data usage at scale. As well as providing an intuitive interface to connect audiences to relevant data, it has put in place an extensive outreach program, visiting key events and stakeholders to explain the portal and its benefits. It launched the Municipalities dashboard at the annual Portuguese municipality congress, presenting it to all participants and outlining how it supported their decarbonization strategies while carrying out a university roadshow program to explain the Open Data Academy Challenge Award to students, encouraging them to take part.

OPENDATASOFT:
THE DATA MARKETPLACE FOR DATA SHARING AT SCALE AT E-REDES

Thanks to the Opendatasoft platform, E-REDES is able to accelerate data sharing with its ecosystem. In particular, it is benefiting from three key features:

DATA AVAILABILITY IN MULTIPLE FORMATS

All data assets on the portal automatically generate their own structured APIs, complete with an exploration console and reference documentation. This makes them easy to consume at scale by other solutions, and reduces the requirement for technical skills. For example, the city of Porto automatically integrates data from the portal on planned and unplanned outages into its app for residents, providing them with relevant information at a zip code level.

POWERFUL VISUALIZATIONS AND DASHBOARDS

E-REDES has multiple audiences for its information, many of whom don't have expert data skills. It has therefore used Opendatasoft's built-in visualization capabilities to create compelling graphics, maps and dashboards, tailored to different audiences such as municipalities and local energy agencies. These make it simple for users to drill-down, access and act on relevant data, such as when making decisions and strategic plans around decarbonization.

INTUITIVE INTERFACE FOR EASE OF USE

The E-REDES portal contains an enormous amount of information, making it vital that users can quickly discover data that is relevant to their needs. Opendatasoft's intuitive interface, modeled on an e-commerce marketplace, makes it easy to find the right data by delivering a tailored experience, supported by the ability to customize navigation through different user profiles or by exploring relevant themes.

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RESULTS: BUILDING A DATA-DRIVEN ENERGY ECOSYSTEM

E-REDES is seeing large-scale benefits from its external data marketplace, including:

Closer ecosystem relationships

By sharing relevant data in the right formats for its stakeholders, E-REDES has been able to strengthen relationships with key audiences, such as power generators, municipalities, EV charge point operators, academics and consumers. The data portal is supporting greater transparency and delivering a closer working relationship across the ecosystem. Demonstrating its impact, the portal has seen 5.73 million API calls since it went live, with users now each making three times as many API calls as when it launched, showing that they are now using it in a more involved, ongoing way.

Greater efficiency

E-REDES previously had to allocate substantial resources to manually handle incoming queries about its network from stakeholders such as charge point operators and renewable generators. Now that data can be easily accessed via the portal, the volume of questions has reduced considerably as users are able to research information themselves, increasing efficiency. For example, the monthly number of requests for medium-voltage grid information has dropped from 300 to a minimal level, freeing up two full-time staff to work on other projects.

Innovation through collaboration

Collaboration is key to delivering net zero, and E-REDES is using the portal to share data with its wider ecosystem, adding new datasets as their needs change. For example, it is currently working with municipalities as they develop their mandatory climate change adaptation plans, providing data in the right formats to harmonize the process and standardize approaches across the country.

"Our data portal is a core part of our net zero strategy, enabling us to collaborate with our ecosystem and provide them with a tailored data experience that makes data easy to consume. Working with Opendatasoft, we are continually extending the portal to meet changing stakeholder needs and drive decarbonization.
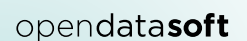
Luís Tiago Ferreira
Head of Smart Cities & Streetlighting

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"Delivering the energy transition requires an ecosystem approach that brings stakeholders together to drive change. As the success of E-REDES' portal demonstrates, sharing the right data in the right formats through an intuitive experience is key to increasing engagement and accelerating decarbonization through close collaboration and data-driven planning and action.

Chloé Charland
Customer Success Manager

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