



## Industry

Energy

## Geography

France

## Challenges

Future innovation depended on the energy company's ability to centralize as much internal and external data as possible and share it flexibly, efficiently, and securely with internal and external teams.

## Solution

AMPLIFY™ API Management

## Results

ENGIE can now accelerate the development of data-driven services and enable faster and more secure collaboration with external partners. Data requests have been cut by a factor of three resulting in reduced costs.

# ENGIE

## Creating a data-driven, API-first enterprise

ENGIE Group provides innovative low-carbon energy and services. With customers increasingly keen to switch to zero-carbon energy from renewable sources, ENGIE has embarked on a transformation of its business model, addressing the need for renewables and zero-carbon energy, as well as introducing energy-as-a-service solution.

Gérard Guinamand, Chief Data Officer, ENGIE, says: "Data must become a shared asset so we can maximize its business value. Our Common Data Hub enables us to gather, store, and enrich the group's data, which we then need to share as widely as possible. This challenge inspired us to become an API-first, data-driven enterprise."

ENGIE's Common API initiative aimed to create a master portal on which to publish documentation on all APIs across all business units (BUs) and enable business users to register for access to their chosen APIs. This "portal of portals" would ultimately make it easier to bring in external data, and to share data with external partners and customers.

Renaud Ribal, Operational Director at Ineo Tinea – ENGIE's IT and automation division – comments: "Sharing data is a crucial enabler of innovation. For example, machine learning and artificial intelligence require vast quantities of data. We need to be able to exchange data with partners in a responsive, controlled and secured way, so the Common API portal is a technical response to genuine business challenges."

## Comprehensive solution from Axway

A key objective for ENGIE was to provide the new group-wide API management capability without changing existing APIs or compelling BUs to abandon their preferred API management tools.

“We selected Axway as an international vendor with credibility and professionalism in the API domain,” says Guinamand. “The other decisive element was the richness of Axway’s offer, providing both a standard way to build APIs in the future and an open platform for integrating existing APIs.”

## Open APIs and metrics

ENGIE chose AMPLIFY™ API Management as its new group-wide API management and analytics platform running in the AWS cloud. In addition, Axway consultants are working alongside their ENGIE counterparts to refine the Common API portal and to optimize Continuous Integration/Continuous Development (CI/CD) practices. By exposing API functionality as microservices in the portal, ENGIE has enabled BUs to continue using their existing API management layer if they prefer. Open APIs make security and privacy high priorities for ENGIE. Both Axway and AWS have many well-recognized compliance certifications and adhere to privacy laws from around the world.

“BUs can now access key API-related functionality transparently without having to change tools,” says Ribal. “This helps us spread API best practices as widely as possible: we want any business user to be able to look up APIs, see who’s using them and how much, see trends over time, and so on. Having the portal as a layer of abstraction means that we can keep the interface the same regardless of the underlying technology.”

The Metrics API in the Common API portal exposes analytics functionality from API Management and from ENGIE’s other API analysis tools, enabling BUs to access standardized metrics for global visibility of application usage. As ENGIE prepares to monetize its APIs – initially for internal charge-back, and later for selling services externally – BUs are making heavy use of consumption metrics to understand the future costs and opportunities. “The business is also very interested in seeing failure and error rates, so that they can address any instances of poor user experience,” adds Ribal.

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## Cutting costs and accelerating deployment

The introduction of API Management and the Common API portal has already made a significant impact, delivering cost-savings and increased standardization in working practices. One major success is Weather Standard Solution, an API that centralizes access to meteorological data, helping ENGIE develop new algorithms for predicting the consumption and generation of energy.

“To drive innovative services around intelligent buildings and smart cities, we need to understand the weather,” says Ribal. “Before, each of our 26 BUs might have had its own contract with the same data provider. We developed Weather Standard Solution as a standard API, with microservices behind it so BUs can choose their supplier. The incoming information goes into the Common Data Hub, so if we see a new request for the same data, we can deliver it without having to buy it a second time. As a result, ENGIE now makes three times fewer requests to weather-data providers. In addition to saving money, this gives us a large amount of centralised data for research and analysis.”

## Building a more efficient future for all

ENGIE’s Common Data Hub and Common API portal are parts of a much bigger strategic transformation within the company as it gears up for a data-driven future.

Guinamand comments: “We have many clients who are hungry for data services to help them achieve their zero-carbon transformation, not only at the level of their energy consumption but also by modifying the way they use energy and their technologies, by gaining the ability to generate electricity for themselves, and by connecting intelligently to the grid so that they can sell or buy energy. We’ve recently signed a 50-year contract with Ohio State University which depends in large part on the ability to share data – a great example of how innovative services have been made possible by our API-first strategy.”

Having recently renewed its contract with Axway, ENGIE is continuing to transform its business culture by promoting the use of APIs. Developers using the Common API portal are seeing the benefits in terms of reduced time-to-market for new solutions and more frequent non-disruptive updates. The API-based approach means that developers can focus on back-end functionality, which the business can then “plug into” its own chosen front-end.

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Equally, using APIs enables greater flexibility and modularity, as Ribal explains: “When you work with external partners and customers, you may only be providing parts of their environment. Using APIs, we can provide ‘bricks’ of functionality that customers can easily assemble into their own solutions. Then both sides have much more flexibility: we can refine the underlying functionality without breaking the customer’s application, and the customer can integrate other elements into their solution without needing to ask us to make any changes to our element.”

API Management on AWS gives ENGIE a comprehensive, cost-effective, flexible, and secure environment that they can scale up or down as needed.

Ribal concludes: “As we ramp up the API-zation of our business in the coming years, we’re very happy with the quality and reliability of our cloud-based Axway services. Our KPIs enable us to see what is being used and how, and to keep improving our API practices while adhering to the security and quality standards of the group. Ultimately, this is helping us to innovate faster and collaborate with external partners without risk.”

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**Learn how you can build innovative, data-driven services faster with AMPLIFY API Management** 