



INDUSTRY

Information and Analytics

PROFILE

A leader in industry research provides a complete view of global markets, including oil, gas, power, chemicals, metals, agriculture, and shipping. This research enables their customers to make better, faster decisions at the speed of business



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— Research Director, New Products

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— Director, Data Management



Helping the Energy Industry Reduce Emissions with AI-Powered Analytics

A leading provider of oil and gas research provides intelligence to governments, businesses, and individuals via the right data, expertise, and connected technology. For decades, the company’s Research & Insights team has provided numerous analytics applications and services to a wide range of customers. But the team needed to improve the accuracy of its AI models and the customer experience. The Denodo Platform and Snowflake provided the Research & Insights team with a modern platform to manage more data sources, more data types, larger datasets, and four times as many users.

Understanding the Impact of Methane Gas on the Environment

Governments and regulators have increased the requirements for reducing and tracking methane (CH4) emissions, as it is a far more potent greenhouse gas than carbon dioxide (CO2) over the short term (i.e. a 20-year period). Also, different types and sources of greenhouse gas (GHG) require different controls and abatement technologies. Energy companies also need to provide more detailed breakdowns of greenhouse gas types (CO2, CH4, N2O) and by source, such as combustion, flaring, and venting.

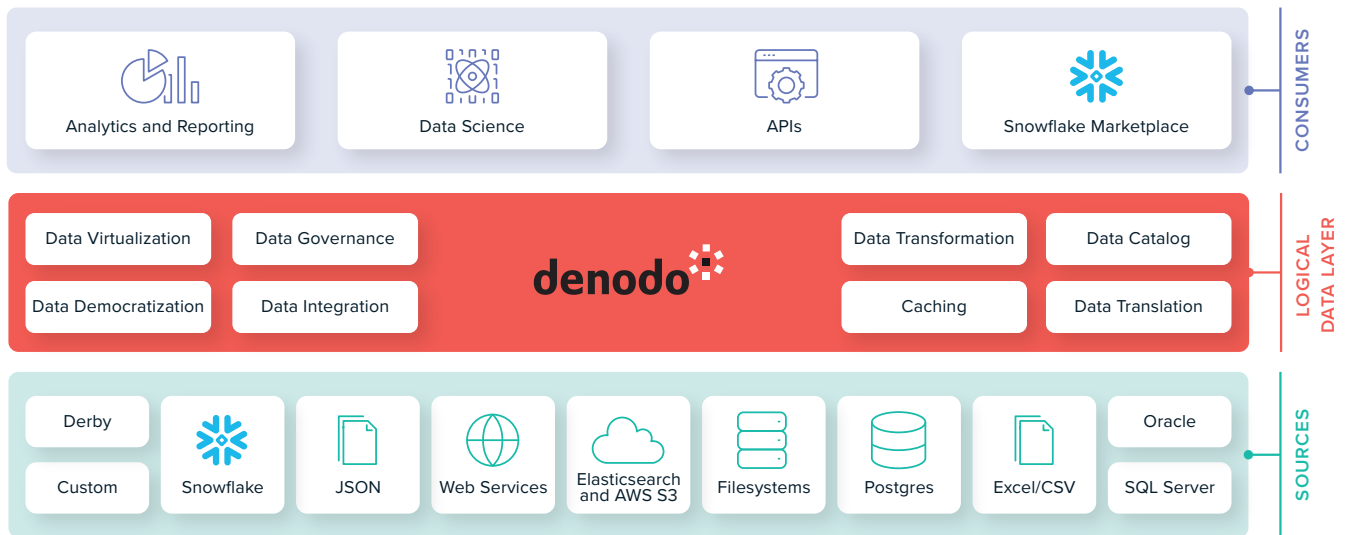
The Research & Insights team had already been using AI models that combine data from millions of wells and data from government agencies, to generate emission estimates. But the team needed to improve the accuracy of the predictive analytics by integrating new datasets, such as satellite data and drone flyover data. Ingesting new data sources of different types significantly increased the amount of data and the complexity of the data. The team decided they needed a new approach to managing, storing, and processing the data.

Deploying Denodo and Snowflake for Better Insights

In collaboration with subject matter experts, the Research & Insights team began its journey to a new data management platform, with the integration of over 50 heterogeneous data sources. The team deployed the Denodo Platform as a logical data management layer, and Snowflake as their new data lake (see figure below).

New Models Help Reduce Emissions and Expand the Company’s Customer Base

The Research & Insights team saw extraordinary results with the Denodo/Snowflake solution: 150% faster model development time, a 4X increase in the number of users, and 200 queries per minute per day. According to the team’s director of data integration, “The Denodo Platform is a powerhouse with a graphical user interface that enables users to add virtually any type of data source. People with limited technical skills are now creating very complex queries.”



The company's new data management platform uses the Denodo Platform and Snowflake to unify

The new predictive models were a huge win for the team's oil and gas customers. The new platform provides customers with the information they need to make more accurate predictions of methane (CH4) gas emissions, which are 25 times more impactful on the environment than CO2 emissions. "The big enemy is CH4. We have a collective mandate to identify and reduce CH4," said the team's research director. "With these new AI models, our customers can now better predict where methane gas leaks may occur." This enables operators to stop leaks before they start, lowering emissions and reducing the costs associated with managing a gas leak. The new platform generated increased demand for the Research & Insights Oil & Gas application. Previously, the data was primarily used by a customer's operations team. Now, the customer's regulatory and compliance teams, as well as their marketing staff, also access the integrated data and generate more accurate predictions of gas emissions. This increase in demand led to an increase in sales and the creation of new data products.

RESULTS OF THE NEW DENODO/SNOWFLAKE DATA PLATFORM

-  150% faster model development time
-  4X increase in number of users
-  200 queries per minute per day
-  New customers and new products generating increased revenue

Unlocking Value with Intelligent Data Delivery

Integrated data management enabled by the Denodo Platform and Snowflake is the foundation for intelligent data delivery. With the success of the improved Oil & Gas application, the company is now launching other new products, including a web-based application that integrates the insights into a single, customizable interface. This AI-powered application aggregates content and streamlines the user experience for professionals in energy markets. "We are looking forward to using Denodo's new AI capabilities," said the team's director of data integration. "The integration with ChatGPT and other GenAI platforms will enable users to make better, faster decisions using natural language queries across external and corporate-only data sources."



Denodo is a leader in data management. The award-winning Denodo Platform is the leading data integration, management, and delivery platform using a logical approach to enable self-service BI, data science, hybrid/multi-cloud data integration, and enterprise data services. Realizing more than 400% ROI and millions of dollars in benefits, Denodo's customers across large enterprises and mid-market companies in 30+ industries have received payback in less than 6 months.

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Snowflake is the only data warehouse built for the cloud, enabling the data-driven enterprise with instant elasticity, secure data sharing, and per-second pricing across multiple clouds. Snowflake combines the power of data warehousing, the flexibility of big data platforms, and the elasticity of the cloud at a fraction of the cost of traditional solutions. Snowflake: Your data, no limits.

Find out more at snowflake.com

