Ogre

RES Generation
AI forecasting solution

Boosting the energy transition

Ogre

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Mission

Revolutionize the energy sector with cutting-edge AI forecasting and energy management technology, providing comprehensive, integrated solutions that enhance efficiency, reliability, and sustainability across the entire energy value chain.

Vision

To be the global leader in AI-powered energy solutions. We envision a future where our integrated solutions platform seamlessly connects all facets of the energy value chain, from generation and distribution to consumption, driving innovation, reducing environmental impact, and creating value for all stakeholders.

Founded in 2021

Bucharest & London

First Financing Round 2022

24 FTEs

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Why Ogre

Expert Team

Our team boasts exceptional industry and AI / ML expertise together with academic and professional resources, with professorship at Oxford University and gold medalists in both international mathematics and informatics Olympiads.

Applied knowledge

We have vast expertise in both electricity and gas sectors, with applied knowledge across the whole value chain: generation, supply and transport and distribution. We work with very large utilities such as ENEL, Engie and E.ON.

State of the Art Forecast Engine

Utilizing the forefront of AI innovation, our forecasting tool is ahead of the curve and produces a customized forecasting engine for every asset or every consumer of every supplier, sometimes producing millions of individual engines for a single client.

Data Proficiency

We excel in integrating complex systems. We are not just data users but creators, boasting proprietary data sources including an in-house developed meteorological model that enriches our forecasting capabilities.

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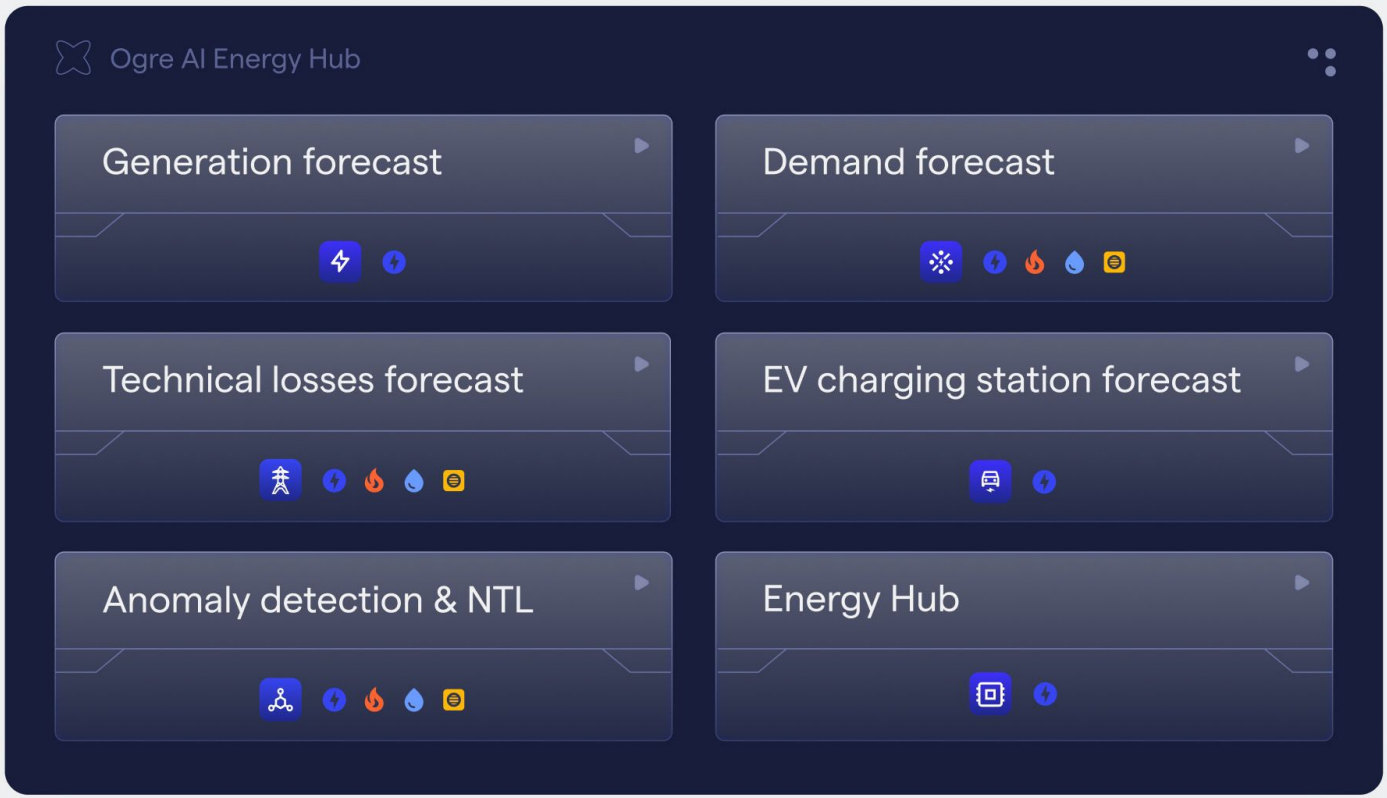
Our integrated platform offers a diverse range of AI modules, uniquely tailored for the needs of our valued partners

Our utilities industry and machine learning expertise can be leveraged to integrate complementary AI modules, seamlessly adapted to different domains or players and with a clear eye on scalability

Every module is a product in itself, and we are already selling and integrating them for some of the world leading utilities.



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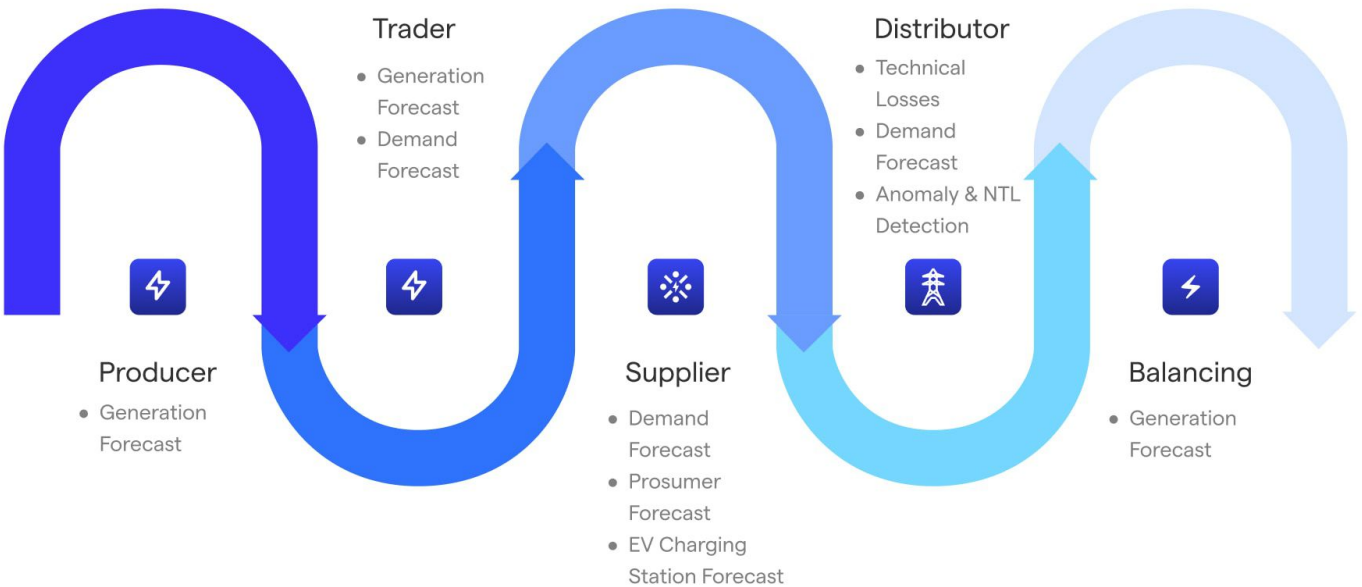
Comprehensive Coverage: spanning the entire Energy Value Chain from Generation to Consumption



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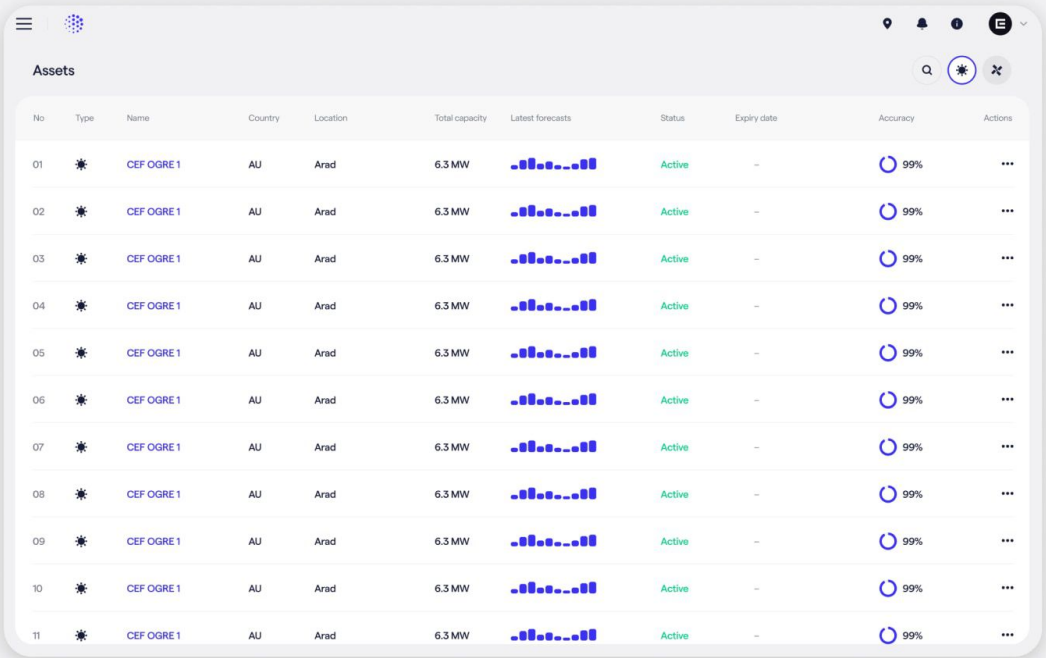
Generation Forecast Module

Introducing the next generation in renewable energy forecasting: an AI powered solution that leverages advanced machine learning algorithms to accurately predict energy generation from renewable sources

Our innovative solution uses real-time data from weather sensors, satelite imagery, and other sources to deliver highly accurate forecasts, allowing energy providers to optimize their operations and reduce costs. It also makes use of our proprietary weather model.



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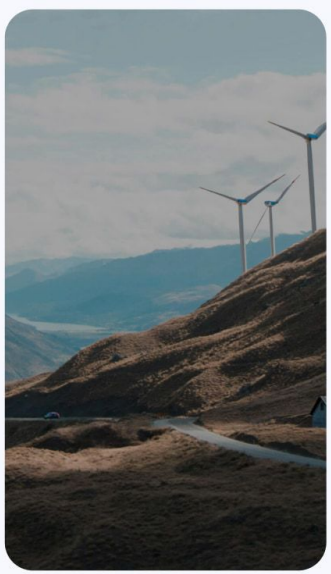
Generation Forecast Module



Features

- Real-time data processing
- Accurate forecasts
- Data visualization
- Integration with existing systems
- Cybersecurity
- User-friendly interface
- Virtual Power Plants
- Scalability
- Continuous improvement

Benefits

Improved grid integration

Enable renewable energy assets to integrate more smoothly into the grid, providing operators with reliable information on expected energy production.

Boosted storage management

More efficient usage of storage by determining the best times to store energy or release it back into the grid.

Reduced operational & balancing costs

and ancillary services, as well as decreased imbalances due to forecast accuracy.

Maximized energy production

Helps operators predict the optimal times for energy production & allows for the adjustment of operations to maximize output during peak price periods, increasing revenue.

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CEZ GROUP

Background

The leading producer was in need of a more efficient solution to improve the forecasting results for its 600 MW wind farm

Challenge

The geography and size of the wind farm as well as the local grid limitations brought great difficulties in predicting power output

Solution

We implemented our generation forecast solution together with the Ogre reporting tool.

Our partner now has access to leading real time forecasting as well as an easy to use reporting tool.

Results

17% Forecast error reduction

5-12% NMAE 15 mins

3-5% NMAE monthly

Testimonial

"I am incredibly impressed with the AI solution used for our 600 MW wind farm operations.

Its accurate forecasts have optimized our resource planning and generated significant financial gains, making it an invaluable tool for our company."

Ondrej Safar
CEO

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Business Model Overview - from Pilot stage to Yearly license

Test

Pilot program

Limited to 1-3 months

Ogre solution

Yearly Subscription

- Unlimited usage
- One time payment for integration
- Monthly / Yearly / Multi-Year Payments

Flexible pricing

Opex vs. Capex

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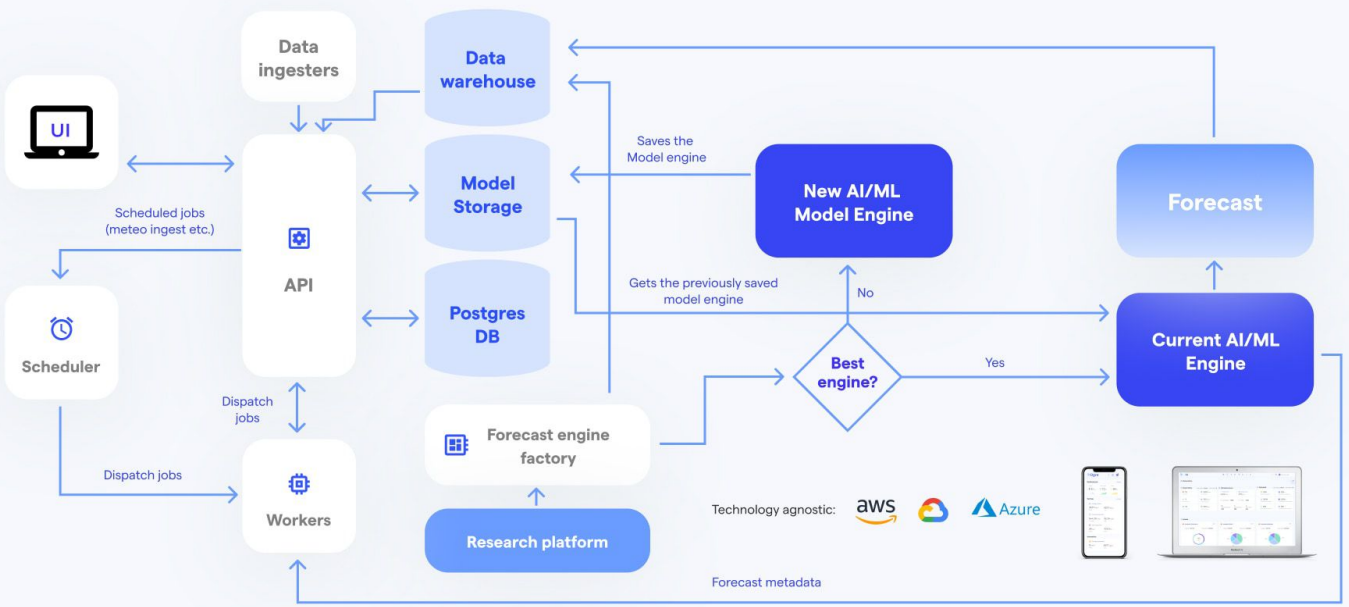
Ogre Forecast Engine

Ogre Platform keeps cost at a minimum while still delivering results and optimal performance of our systems and machine learning proprietary models

High Level Architecture



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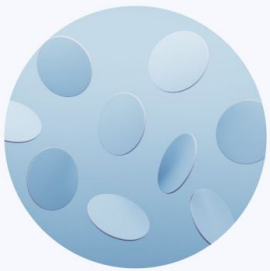
Ogre

Ogre Forecast Engine



Ogre Forecasting Engine is an assembly of individual smaller pieces, that can have various roles in the Forecasting Process

Data Set calibrators:

- Some data sets need specific calibration to incorporate client specific information.
- E.g calibrating the meteorological data for a specific geography terrain or equipment properties.

Data processing:

- Data is processed in a format compatible with forecasting algorithms.
- This includes removing atypical or erroneous data, and/or performing other cleaning and processing operations. Automated processing is essential.

Data set ingestors:

- To make accurate forecasts, Ogre forecast engine needs relevant and comprehensive historical data.
- This data can be collected from several sources, such as databases, smart meters or consumption monitoring devices.

Model Aggregators:

- Given a set of sub-engines compute an ensemble forecast by various methodologies, ranging from simple model stacking to more complex aggregation neuronal networks.

Forecast Algorithms:

- The core of the Ogre forecast engine
- Used to generate forecasts and predictions based on historical data.
- Various types: linear regression algorithms, machine learning algorithms or time series algorithms

Forecast Transformations:

- Smoothing, regularizations and other transformations of the forecasting time-series to respect given constraints that are imposed by client specifications and technical knowledge.

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References


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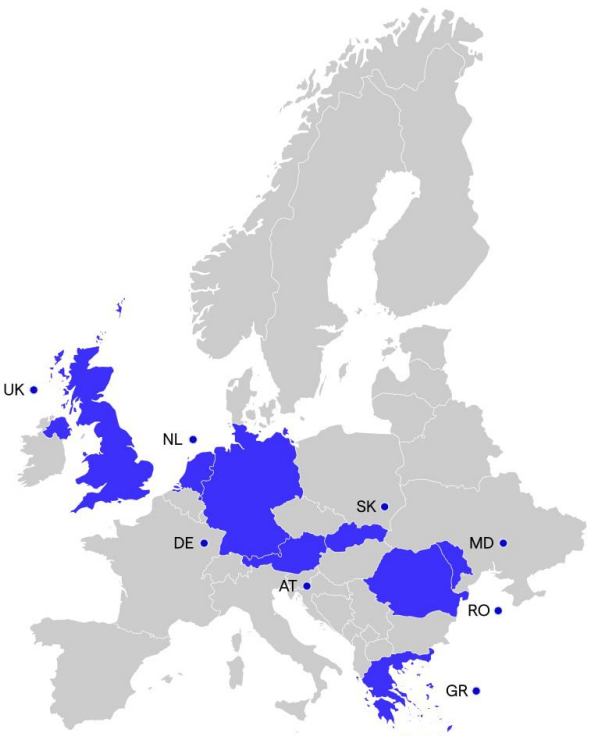
We have a presence in several European markets

Providing accurate forecasting for energy companies in the UK, Netherlands, Germany, Austria, Greece, Romania, Slovakia, Moldova



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We have all the relevant ISO certifications

Certificate S-MC
nr. 2906, SR EN
ISO 45001:2018

Certificate SI-MC
nr. 1103, SR EN ISO
27001:2018

Certificate M-MC
nr. 3517, SR EN ISO
14001:2015

Certificate C-MC
nr. 3286, SR EN ISO
9001:2015

Certificate
SR EN
ISO 37001:2016

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