

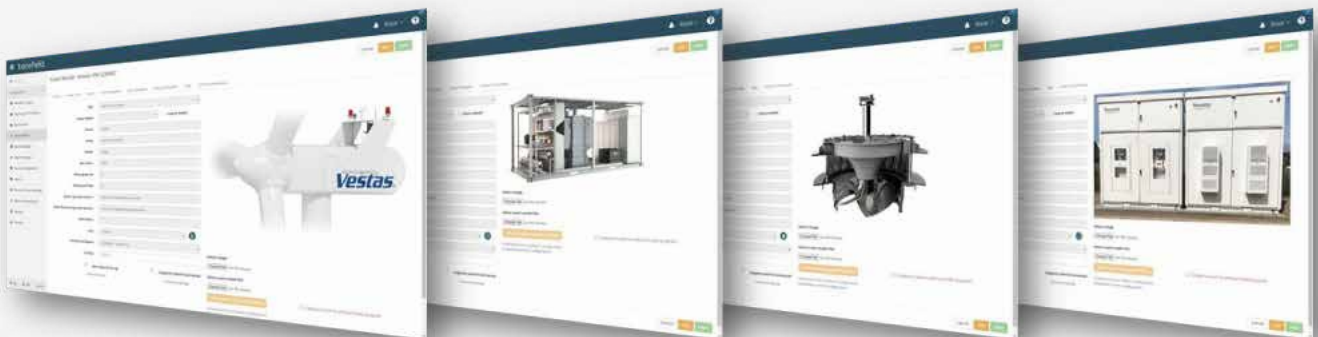
# Product Overview



Bazefield is a market-leading cost-effective operation management system using extensive asset model library across all technologies: solar, wind, storage, and hydro.

## Key benefits

- 01 Improve availability of your renewable assets
- 02 Integrates operations & ROC
- 03 Reduced time spent on reporting and data management
- 04 Increase negotiation power towards OEM's
- 05 One centralized system for daily operation cross solar, wind, storage and hydro
- 06 Increase energy value
- 07 Reduces downtime through 24/7 monitoring and notifications
- 08 More confidence for all stakeholders
- 09 Builds better plants from previous data sets
- 10 Improves forecasting accuracy
- 11 Predicts reliability and failures



For more information, write to [sales@bazefield.com](mailto:sales@bazefield.com) or call +47 94 000 414

Ask for a Demo



# Bazefield® is the most comprehensive, flexible, and scalable renewable asset management system in the market

The system is in use by a range of notable clients and is serving +150GW daily across +1900 renewable sites, including wind, solar, storage, and hydro. The system is based on the same foundation that has shown its scalability, performance, reliability, and robustness for many clients over decades in different industries.

Bazefield is vendor-independent and based on the latest international standards such as IEC 61400-25, NERC GADS, OPC, IEC 60870, and more. The system is scalable from a single asset to large multisite portfolios and captures real-time data. Bazefield supplies monitor and control of asset and site levels, and contains several tools for visualization, analysis, operations, and supports workflow through permit-to-work application. It provides calculation, overviews, and reporting of key performance measurements of the operations. This also includes flexible dashboard design and independent mobile device support, such as iPad, iPhone, Android devices, and others.

The system is offered either as a cloud Software as a Service (SaaS) or in-house delivery. A turnkey delivery includes the following: software, integration to SCADA, all necessary services including engineering, installation, configuration, documentation, training, 24/7 operational services and support.

## Architecture

Bazefield has an open layer architecture that can be simplified in the data collection layer, the platform layer, and the application layer. This is illustrated in the overview below:

### Data Collection

Integration of different sources (systems, databases, instruments, adapters, drivers etc.)

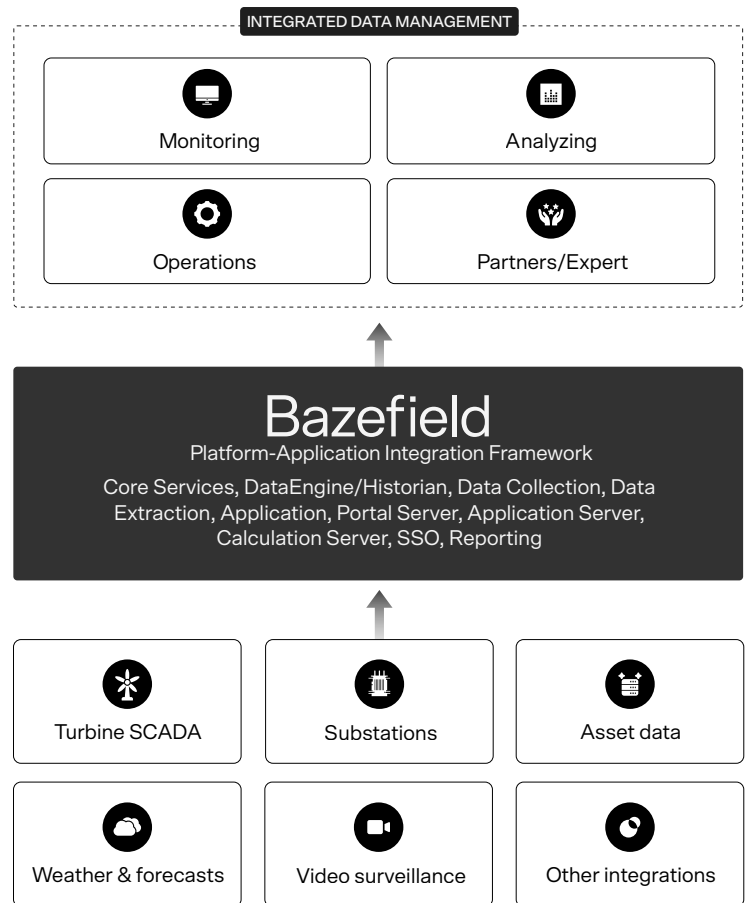
### System platform

Core services like Data Engine/Historian, real-time databases, relation databases, integration framework/SDK, portal server, application server, calculation server, SSO, Active Directory, report engine, etc.

### Portal

Device independent web portal with system applications and tools.

Build upon open API's and with the use of open standard protocols, the system is capable of interfacing any third-party systems. In addition to SCADA integrations, other integrations such as substations, met masts, weather forecast services, market prices, ERP/CMMS, etc. can be connected. It includes extensive built-in model configuration from all market leading vendors within wind and solar. It also includes configuration tools for client customizations.



# Monitoring applications

The Monitoring module allows to monitor and remote control a multi-technology portfolio, including tools for setting up dashboards, trends, reporting, and includes the following applications:

## Portfolio monitoring

Overview and monitoring of all sites in a portfolio by using pre-configured dashboards and visualizations.

## Site monitoring

Site dashboards by technology using flexible widgets and dashboard technology.

## Asset Monitoring

Powerful turbine, inverter, and storage performance monitoring extends the operations surveillance to also include monitoring performance statuses of assets.

## Asset Operations

Powerful application for following up on turbine operations, status changes, and control.

## Alarm Log

Lookup and root cause statistical analysis of historical alarms by flexible filtering.

## Dashboard Tool

Tool for creating and managing all dashboards in Bazefield. Includes a range of visualization widgets like bar graphs, trend, pie, table, gauges, etc.

## Report Tool and Reporting

Tool for creating reports and preconfigured site O&M reporting templates.

## Control and Commanding

Remote control features for single and multiple asset control. Set points and special commands and advanced control with built-in back-end support for vendor specific interface security (session ID, password, etc.).

## Remote Operations Centers

Built-in special purpose control room dashboard widgets for remote operation centers including full screen utilizations, compact views, themes, and configurable visualization of alerts and alarms, etc.



# Analysis applications

The Analysis module is used for downtime analysis, loss and performance analysis, weather analysis among others, and includes the following applications:

## Availability

Powerful application that includes everything about time-based, contractual or other availabilities, categorizations and losses, event management, allocation and alarm drill-down, and grouping. Comprehensive analysis including cost impact in MWh and revenue through user-friendly application.

## Alarm Statistics

Application for advanced alarm analysis and statistic. Analyze frequency, duration, MTBF figures, comparison, and more to improve on availability and preventive maintenance.

## Power Curve

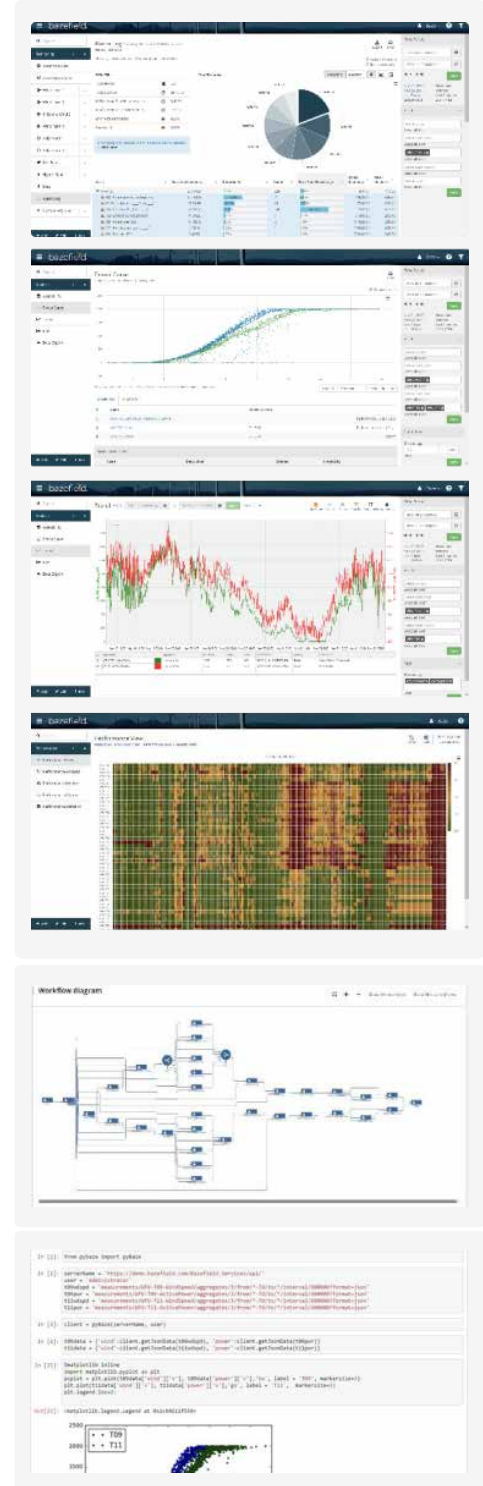
Unique and powerful application which covers performance analyses of wind turbines or solar inverters. Compare between assets, time periods, wind sector filter, curve fitting, data condition filtering, and more.

## Trend Tool , Plotter (2D/3D)

Very strong visualization and analytics tools with built-in data filter support for user-friendly ad-hoc and advanced performance or availability analysis.

## Performance Plots

Intuitive graphical intensity visualizations of performance KPIs like performance index, production, losses, wind, irradiation, or other configurable measures.



# Operations management

Operations Management applications contain applications for site activity with work order management, comment, document, task, and event management, production and availability planning including support for external production balance nomination and more. It also includes a strong application for Permit to Work. Ask for more details.

# Expert module

Expert module allows programming of additional modules using the Application Programming Interface (API), and advanced data extraction tools . Ask for more details.

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