



PowerKonnekt
Powered by iNOVAT

Energy Storage Solutions

The PowerKonnekt Energy Management System, developed by INOVAT, is a comprehensive solution that enables energy transformation with its ***“future-ready”*** approach.



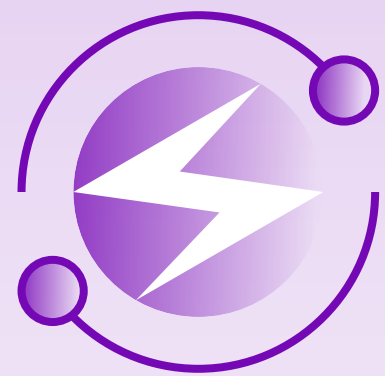
Adaptable

All in One

Energy Management System

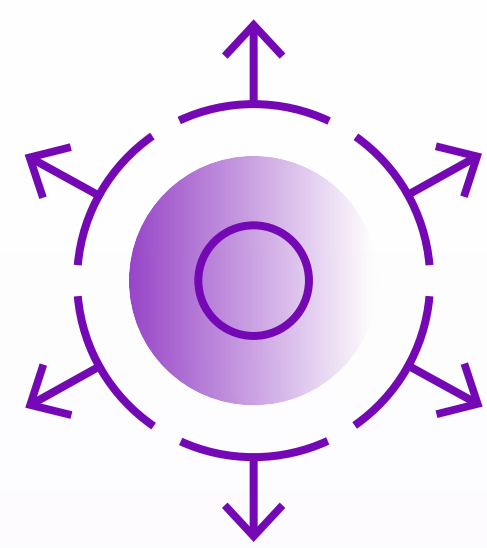
powerkonnekt.com

Core Architecture



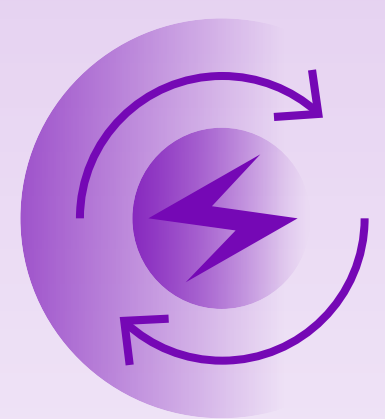
ESS Integration Experience

Developed with attention to the finest details in ESS applications.



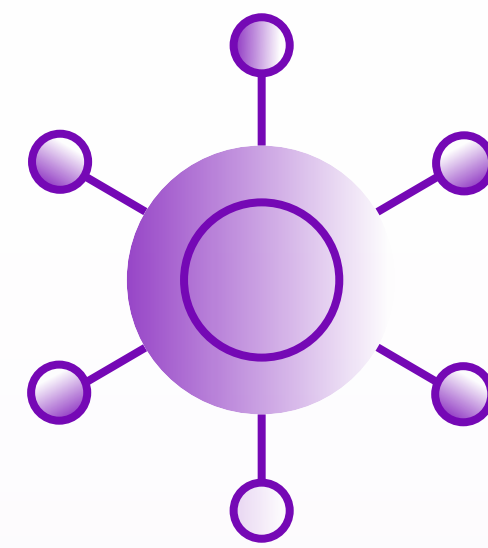
Flexible Approach

Designed to fully adapt to changes in usage.



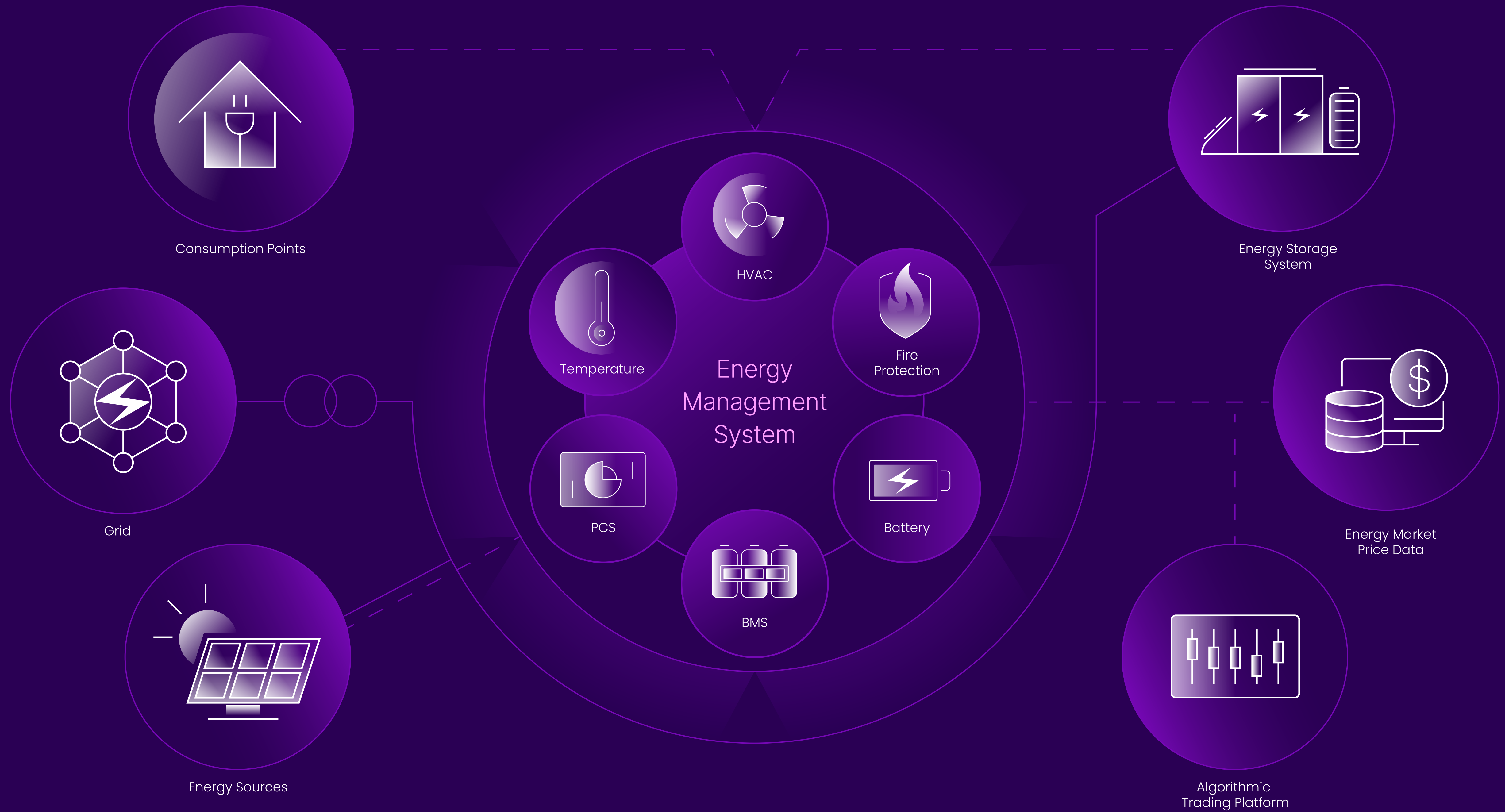
Energy Automation

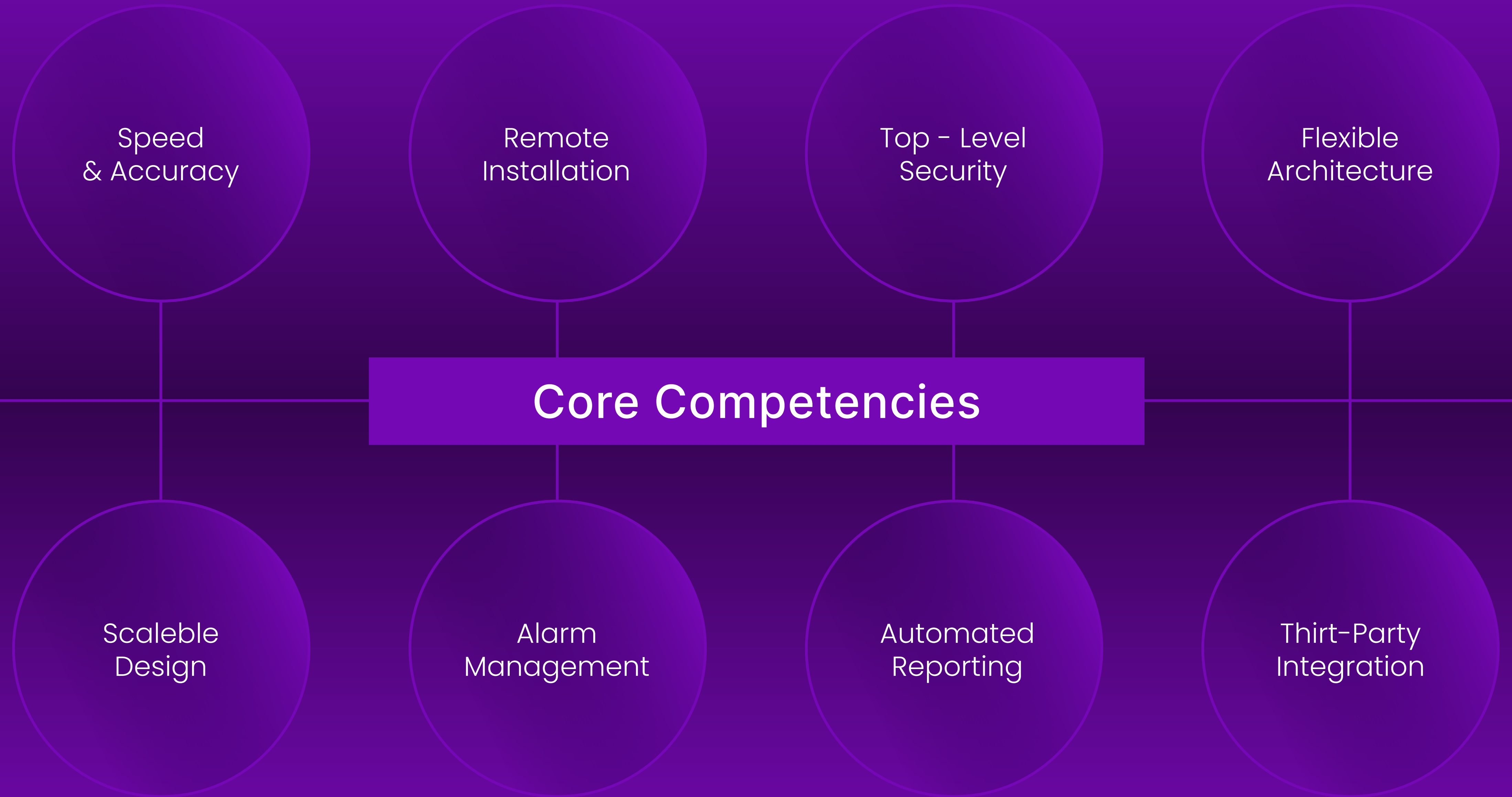
Developed with accumulated knowledge of various energy sources.



Technology Independence

Ready to implement current and future storage technologies.





Integrated Management Function



The diagram features a horizontal sequence of five dark blue circles, each containing a management function. These circles are set against a background of light blue and white geometric shapes, including a large light blue triangle on the left and a white triangle on the right, with a light blue curved line separating them. The circles are connected by a thin, light blue line.

Virtual
Power Plant
Management

Maintenance
and Warranty
Management

Centralized
Operation of
Distributed
Energy
Resources

Price, Demand,
and Production
Optimization

Microgrid and
Multi-Source
Optimization

Scope

Scope

Benefits

Ancillary Services and Grid Support

- Frequency Control
- Reactive Power Support
- Load Pick-Up / Shedding Scenarios
- Contribution to Grid Stability

Energy Trading and Market Integration

- Automated energy trading algorithms
- Real-time price-based trading
- Integration with energy markets (DA, ID, DGP, etc.)

Renewable Energy Integration

- Compatibility with solar and wind power plants
- System adaptation based on variable generation profiles
- Load shifting/charging and carbon-free energy optimization

Imbalance and Flexibility Management

- Participation in balancing
- Ability to operate in sync with the grid
- Charging/discharging scheduling and load balancing
- Scenario-based smart rules

Aggregation

- Pooling distributed energy systems into a single platform
- Centralized Control
- Collective Reporting and Monitoring
- Management of corporate consumer fleets

Demand Response

- Response based on grid congestion
- Converting demand flexibility into profit
- Automatic signal reading and reaction
- Reducing energy costs for industrial users

Time-of-Use Tariffs

- TOU (Time-of-Use) optimization
- Battery discharge during peak hours and low-cost charging during off- peak
- Smart scheduling based on billing scenarios

Commercial & Industrial Uses

- Protection of critical loads
- Peak shaving
- Grid-independent operation

PowerKonnekt Edge



Local Energy Management System

With

Long-Term Performance Goals

1

Active Power Management

Dynamic control of active power to regulate system frequency and balance energy supply with real-time demand.

2

Energy Quality Management

Regulation of voltage using reactive power and frequency using active power to maintain overall energy quality.

3

Planned Charging / Discharging

Battery charging and discharging cycles are managed according to system goals.

4

Production Optimization

Losses caused by overproduction and curtailment are prevented, creating value.

5

Real-Time Data Processing

Millions of data points are processed with zero latency.

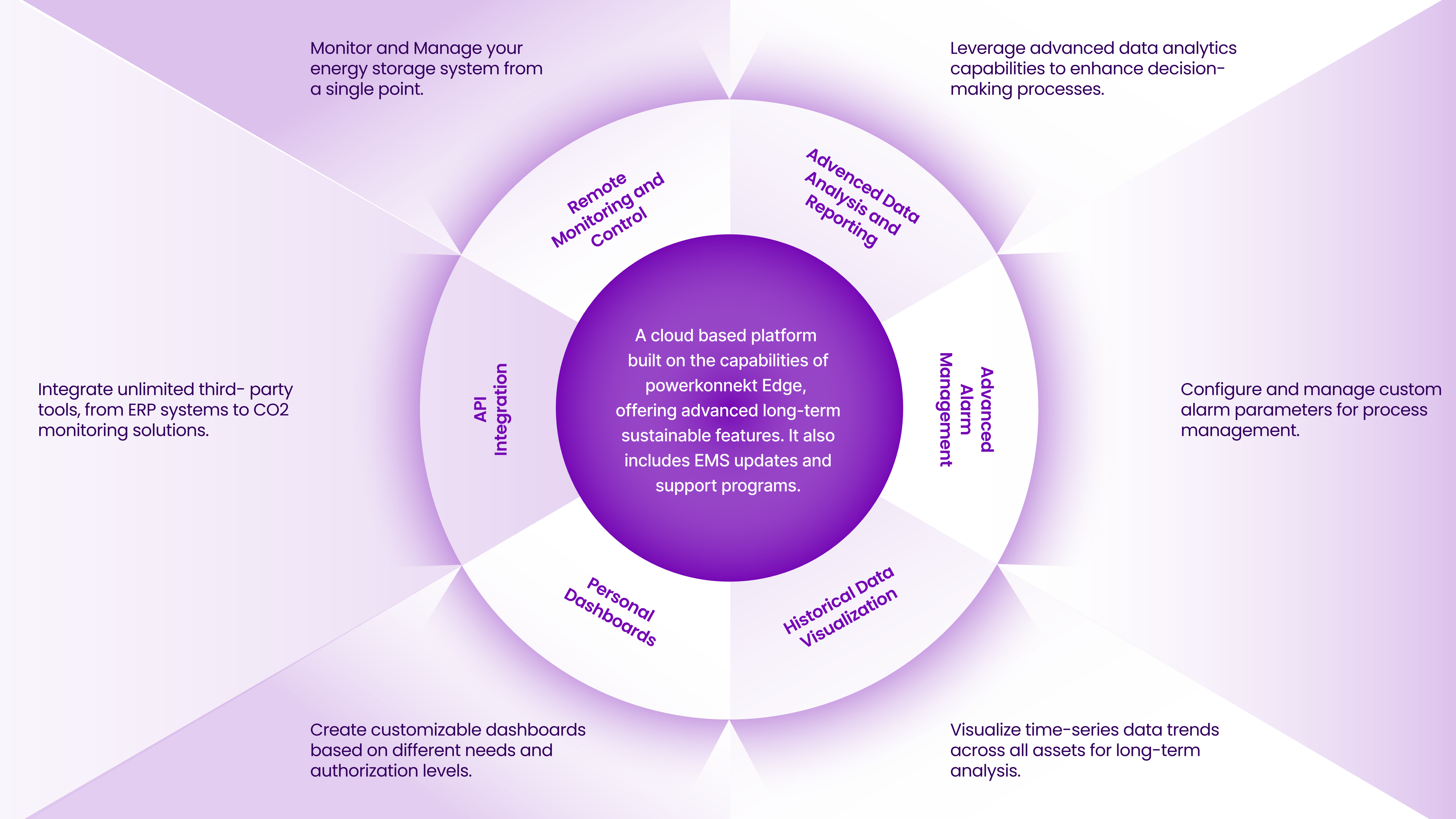
6

Battery Performance Optimization

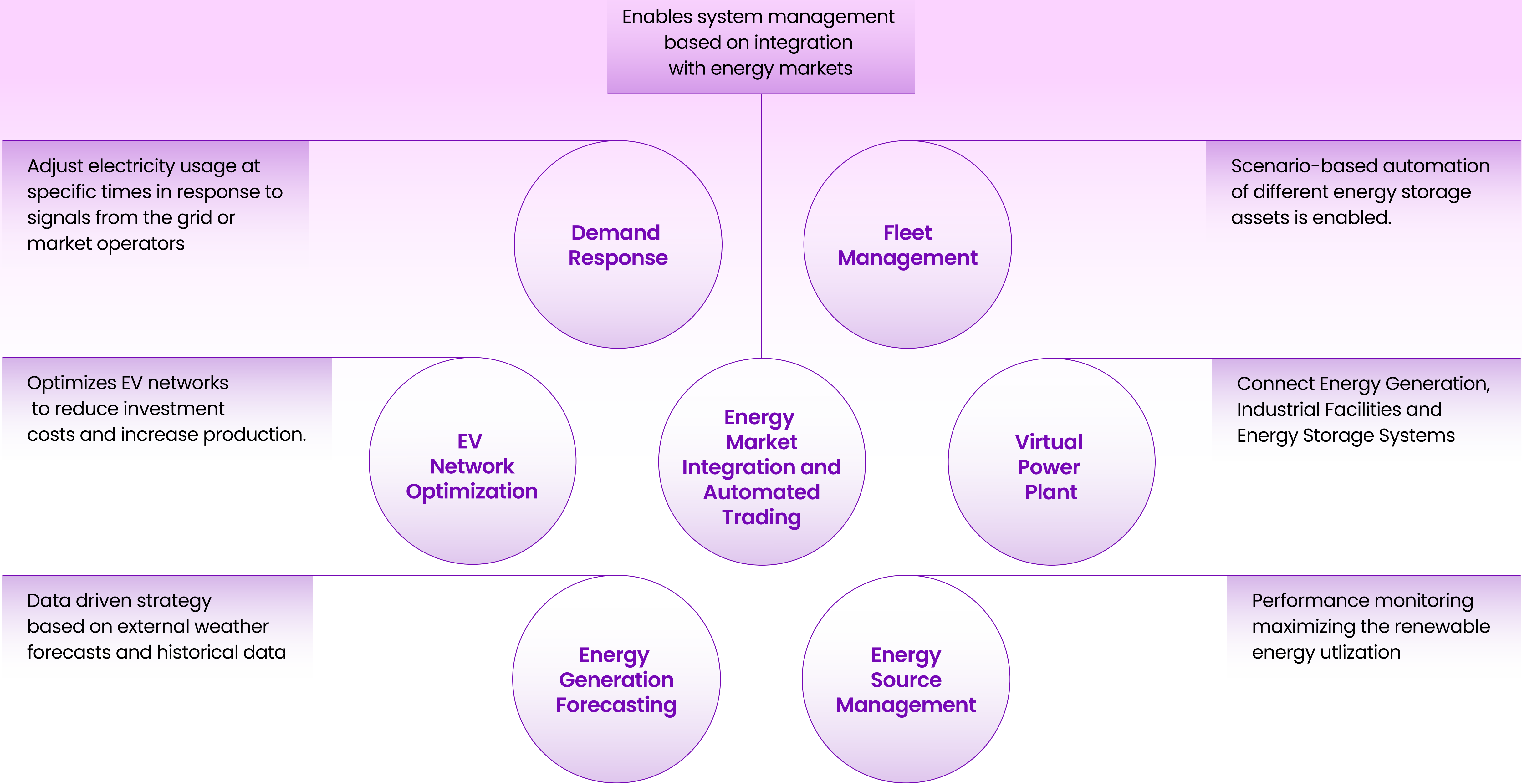
System goals are balanced with long-term battery performance.

Cloud Platform





Advanced Functions



PowerKonnekt Support



Support

```
graph TD; Support((Support)) --- RC[Remote Configuration]; Support --- RM[Remote Monitoring]; Support --- Training((Training)); Support --- UCA[Use Case Adaptations]; Support --- PU[Periodic Updates]; Support --- S24((24/7 Support));
```

**Remote
Configuration**

**Remote
Monitoring**

Training

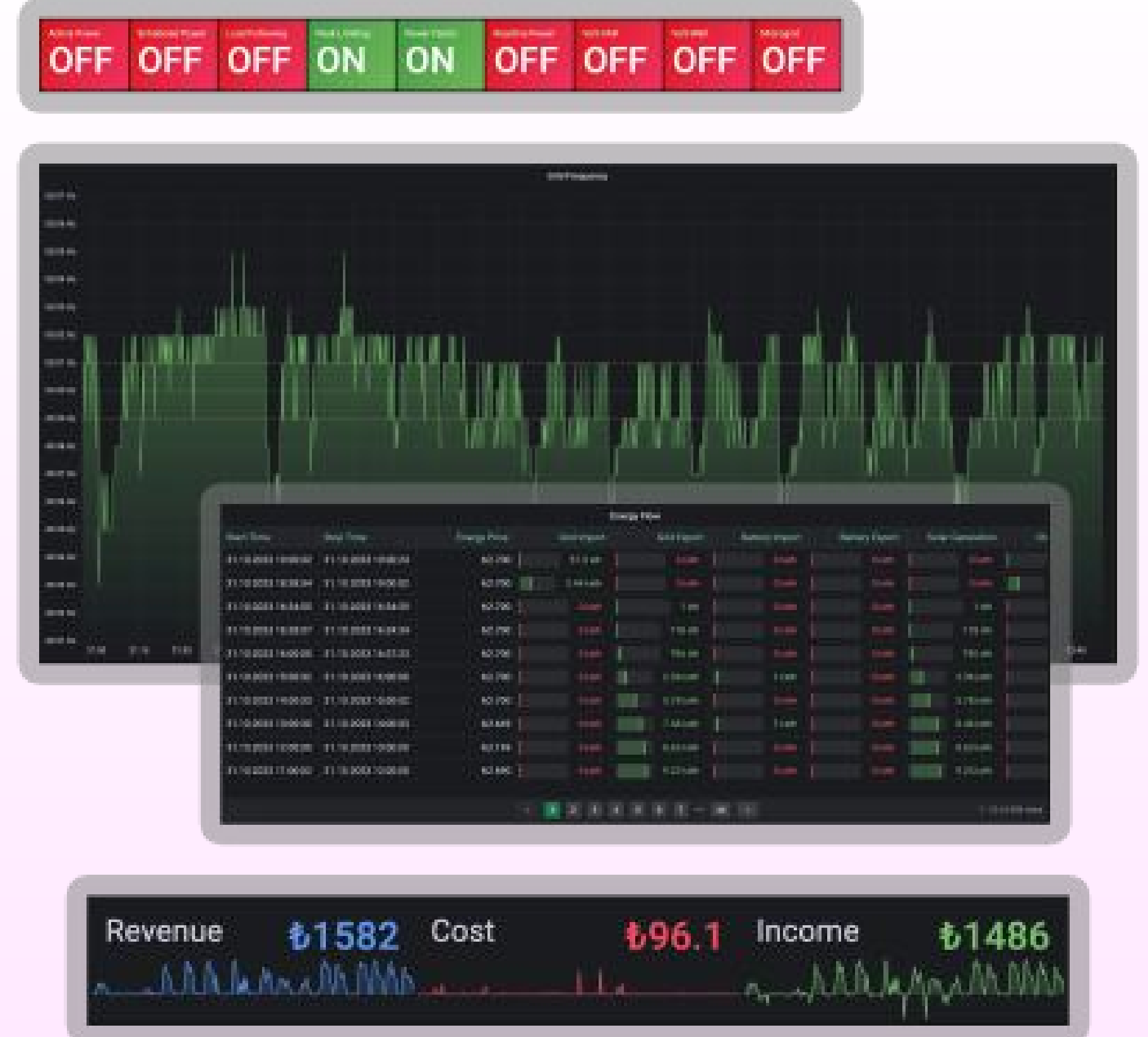
**Use Case
Adaptations**

**Periodic
Updates**

**24/7
Support**

Dashboard





Plans



Plans

EDGE

- ✱ Local Monitoring
- ✱ Direkt Charge / Discharge
- ✱ Scheduled Charge / Discharge
- ✱ Load Following
- ✱ Peak Limiting
- ✱ Battery Monitoring
- ✱ Voltage Regulation
- ✱ Power Factor Correction
- ✱ Reactive Support

- ✱ Advanced Monitoring
- ✱ SoH Tracking
- ✱ Microgrid
- ✱ Ancillary Services

Platform

- ✱ EDGE Functions
- ✱ Cloud Access
- ✱ Remote Monitoring and Control
- ✱ Advanced Data Analytics
- ✱ Advanced Alarm Management
- ✱ Automated Reporting
- ✱ Customizable Dashboards
- ✱ API Integration
- ✱ Automated Updates

Custom Functions

- ✱ Platform Functions
- ✱ ESS Fleet Management
- ✱ Virtual Power Plant
- ✱ Energy Market Integration
- ✱ Automated Trading
- ✱ EV Charge Network Optimization
- ✱ Generation Forecasting
- ✱ Energy Resource Integration
- ✱ Custom Development

- ✱ Standard Features
- ✱ Advanced Features

References

SUNGROW

AEG POWER
SOLUTIONS

epc**power**
excellence in power conversion

INDRIVETEC
Innovative Drive Technologies AG



JinkO^{ESS}

Narada

 **Rolls-Royce®**

SINEXCEL

SAMSUNG


POWER ELECTRONICS

 **LG**

CATL


POWIN



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PowerKonnekt

Konnekt With The Future