

VOLT
OS



✓ Valor Power



Volt OS Modular Approach

Fully integrated, scalable architecture built for flexibility and performance.

A unified operating platform for global energy management, seamlessly connecting storage, renewables and EV charging.

Volt OS at a glance

- The operating system for global Energy management including Energy Storage, Renewable Energy and EV charging
- Modular end-to-end architecture
- Future proof platform in a world of disruption and change
- Designed for large scale Energy network operators
- Significantly reduce operational costs and increase customer satisfaction

Improve energy resiliency of sites

Increase ROI on energy storage, renewables and EV charging infrastructure.



Site



Campus



City



Country



1.1 TWh

Total energy delivered



812,000 Tons

CO2 Avoided



5.7 Billion km

Driven with charged energy.

Enable network operators to optimize how all energy sources at a site are used...



...while considering unmanaged loads, and the varying costs of energy from the grid



Most trusted EV charging networks

2000+

Charger
types

250

Active OCPI
connections

12

Payment gateways
and terminals

27

Currencies and
languages

4.9M+

drivers

11%

Average utilization
all chargers

150K

ports under
management
(x100,000s roamed plugs)

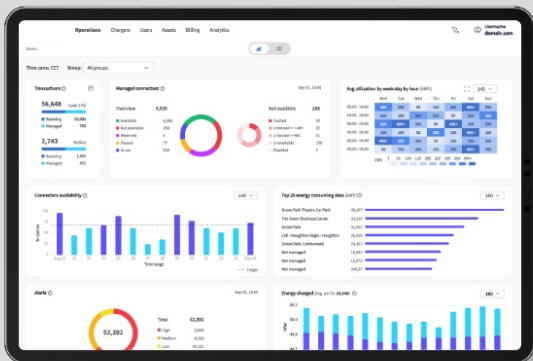
43M

Transactions
processed

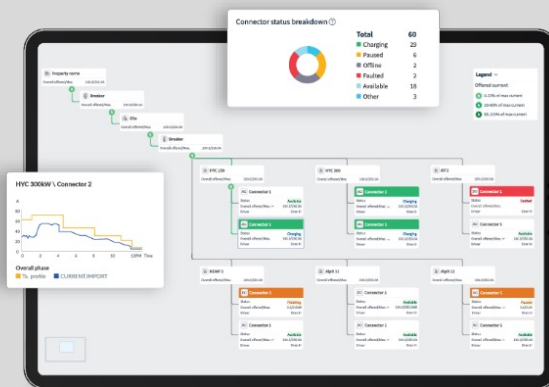
32

Countries
worldwide

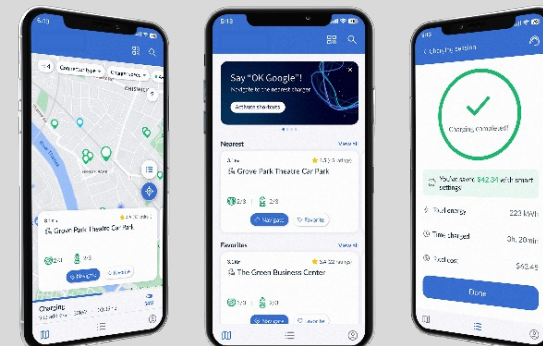
Volt OS Modular Approach



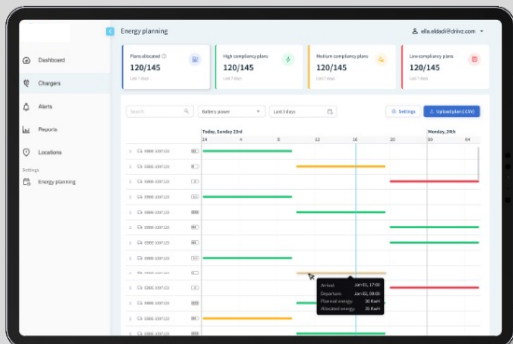
Next Gen Operator Portal



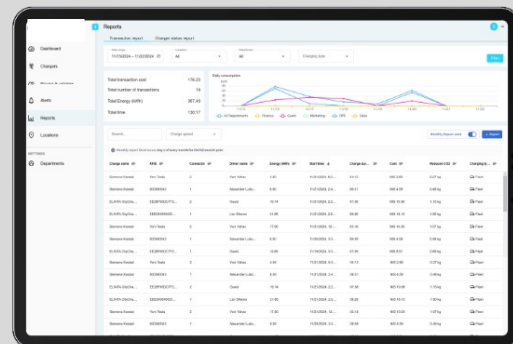
Smart Energy Management



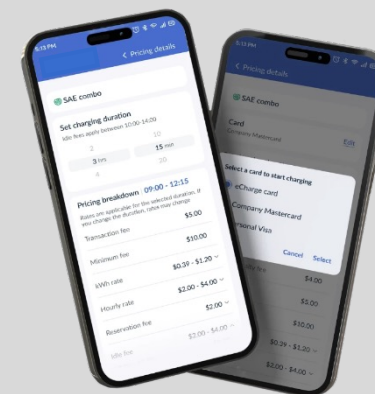
Driver Tools



InSite for Fleets



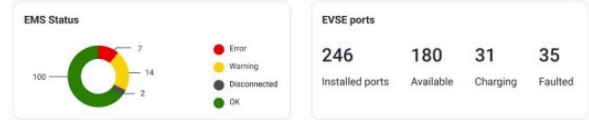
Data Analytics and Intelligence Reports



Billing

Volt OS Control Centre

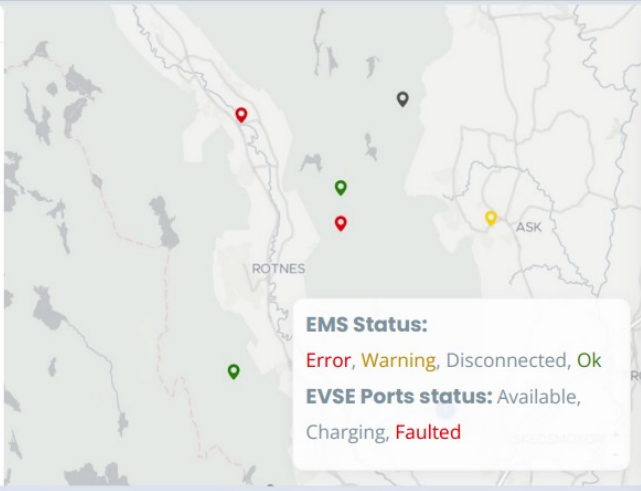
Sites status (123 sites)



Search by site name or organization EMS Status ▼

1-3 of 65 < 1 2 3 >

Site Name	Organization	EMS Status	EVSE ports	View site
Charge Hub	Pit Stop	Error	9 Available	View
Viking Power Point	Pit Stop	Error	2 Available / 11 Charging / 1 Faulted	View
Fjord Charge Station	Pit Stop	Error	N/A	View
Aurora Electric Dock	Pit Stop	Warning	9 Available	View
Midnight Sun Power	Pit Stop	Warning	N/A	View
Net Charge	Pit Stop	Disconnected	N/A	View



Financial Operations

Choose billing period
Billing period #7: Jul 01, 2023 - Jul 31, 2023

Savings from BESS
Total savings up until today: **\$3,604**

Savings from demand charges mitigation: **\$1,964**
Savings from energy shifting: **\$1,640**

Utilization
EVSE energy utilization: **12%**

CO2 Emission Saved
Equipment trees planted: **3**
CO₂ emission saved due to EVs: **1,413 Kg**
CO₂ emission saved due to solar: **125 Kg**

Energy Rates: BESS vs Utility

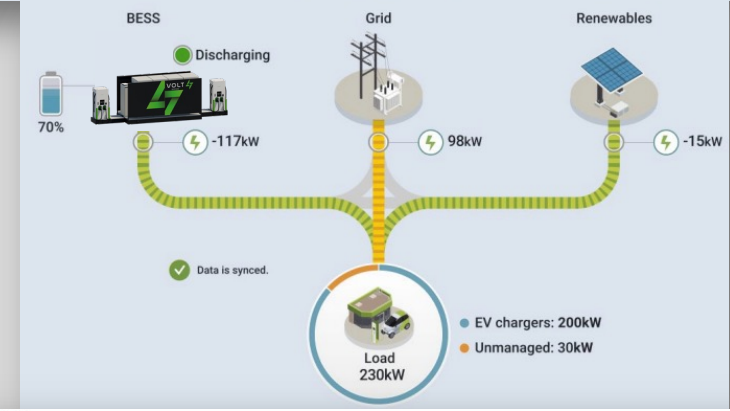
Energy Flow Summary

Power Usages

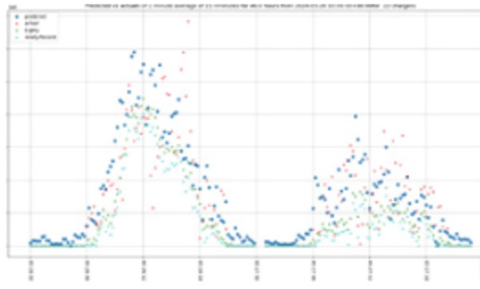
EVSE Energy Consumption: Last 7 days vs Average

Power Usage Time Percentage: Last 7 days vs Average

Detailed Power Usage

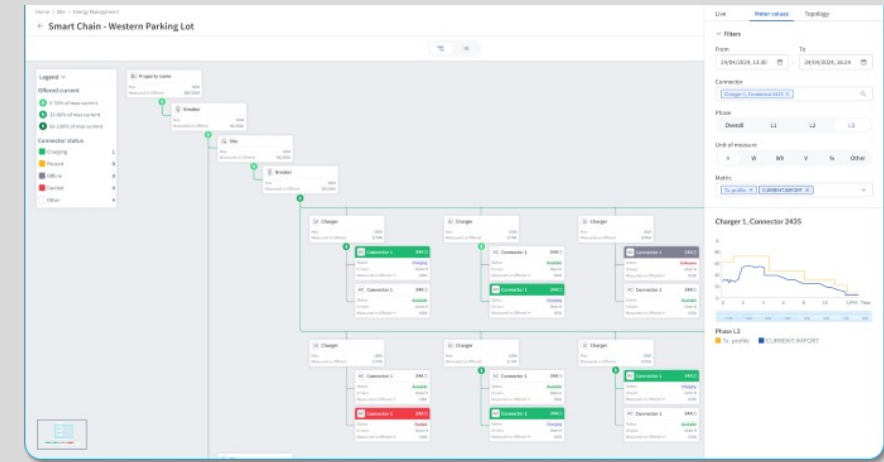
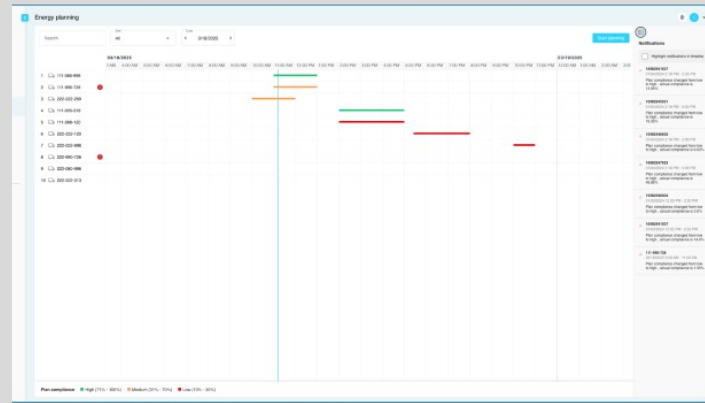
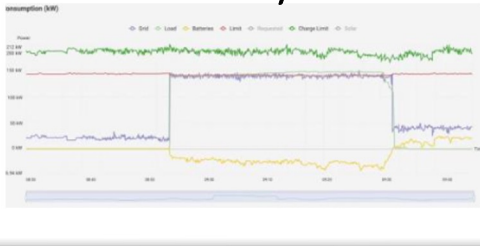


Prediction



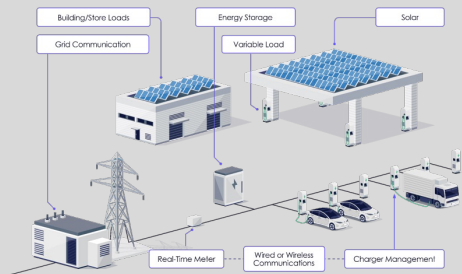
Bidding

Delivery

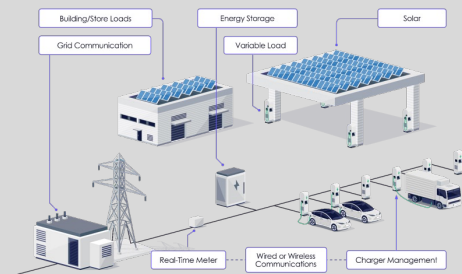


Wake-up functionalities built into the software to suspend the EV charging session during the night, resuming the charging session after the pre-heating is enabled to ensure the battery is charged to full when the driver is picking up the vehicle the next morning.

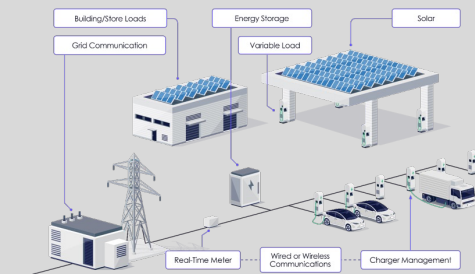
- V2X
- Scheduling Charges
- Dynamic Load Balancing
- Demand Charge Mitigation
- Fleet Management
- Renewable Integration
- Battery Storage Integration
- Grid System Services



500kW



1.2MW

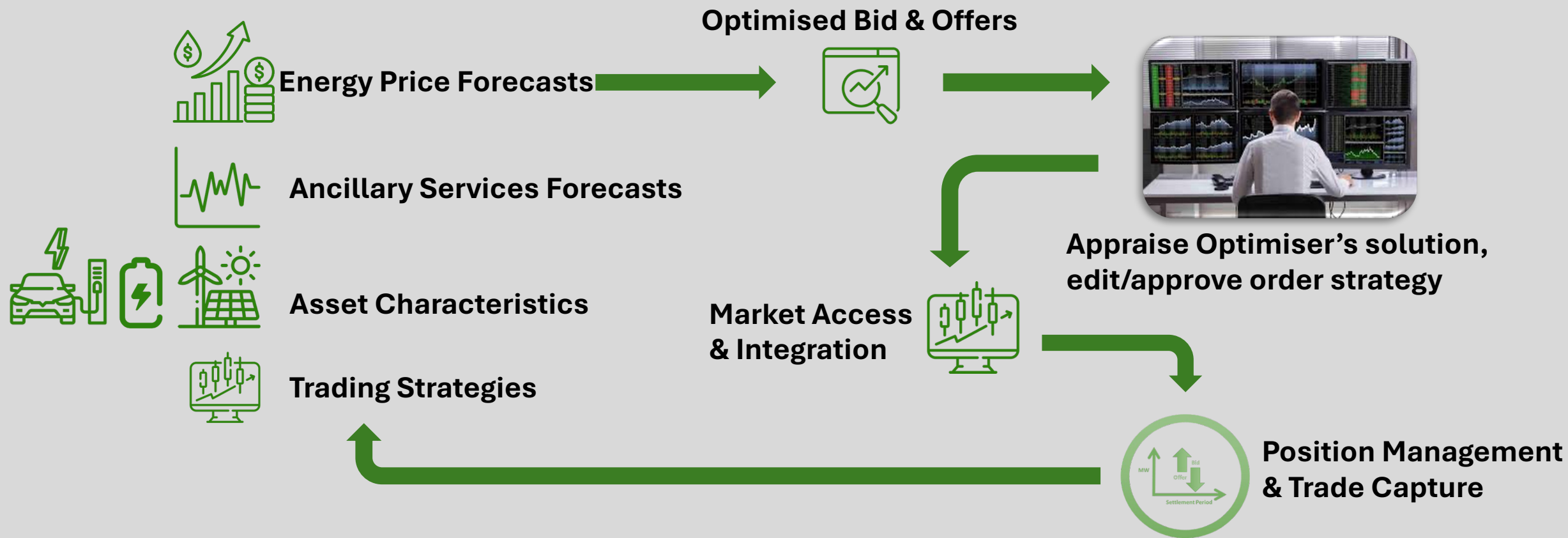


750kW

⚡ Dynamic Trading Capabilities

Maximize additional revenues for your assets

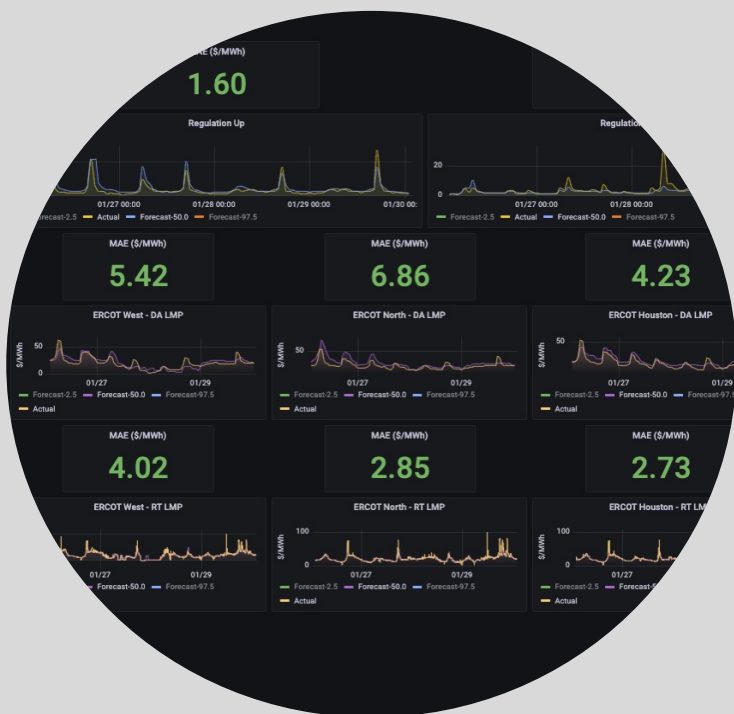
Volt OS Trading combines energy market experience and data science expertise to create a forecasting and optimisation tool to produce an optimised trading strategy for your assets



Dynamic Operations and Trading

Maximize additional revenues for your assets

Price Forecasting



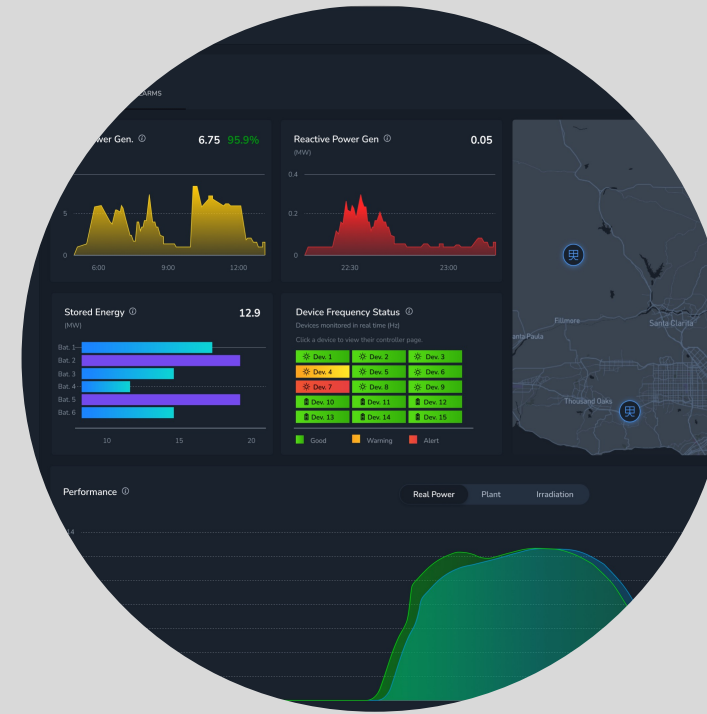
Short term forecasts of market price and wind generation

Bid Optimization



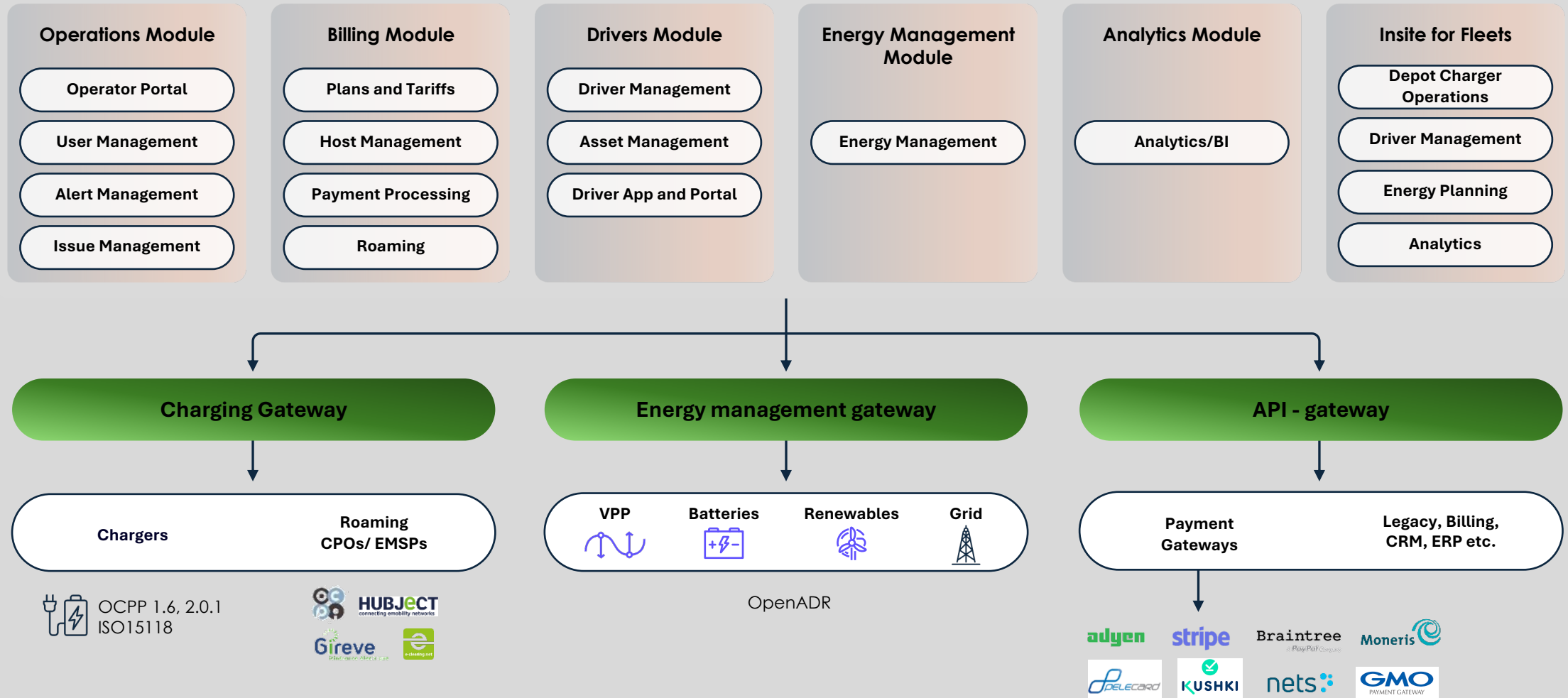
Recommend trading decisions via asset simulation

Managed Service



End-to-end management of trading and settlements

Volt OS Platform





The VOLT Operating System is a groundbreaking, first-of-its-kind platform engineered to tackle the toughest challenges in EV charging and on-site power management.

It empowers operators with seamless control, real-time monitoring, and resilient energy solutions, delivering reliability and efficiency at scale.



Operations management

Maximize network stability and availability

Full awareness of network health

- Intuitive visual dashboards
- Comprehensive Alert Management System (AMS)
- 24/7 proactive monitoring of network
- Immediate notifications of charger issues that need attention.

Maximize charger stability and availability

- Auto-detection of issues and self-healing algorithms by AMS **Fix up to 80% of charger issues remotely and automatically.**

First-Time-Right

- Maximize first-time success rate for EV charging
- Ev charging network data-based insights



Smart Energy Management

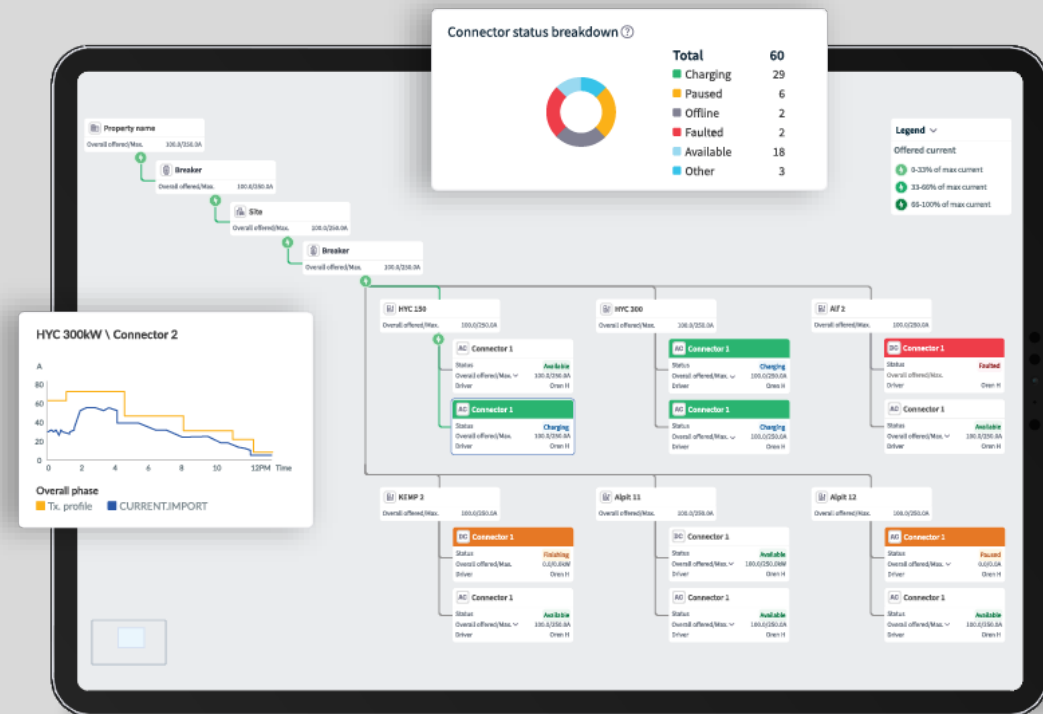
Increase capacity for EV charging and lower costs

Charge up to 6X as many EVs compared to unmanaged charging without upgrading electrical infrastructure

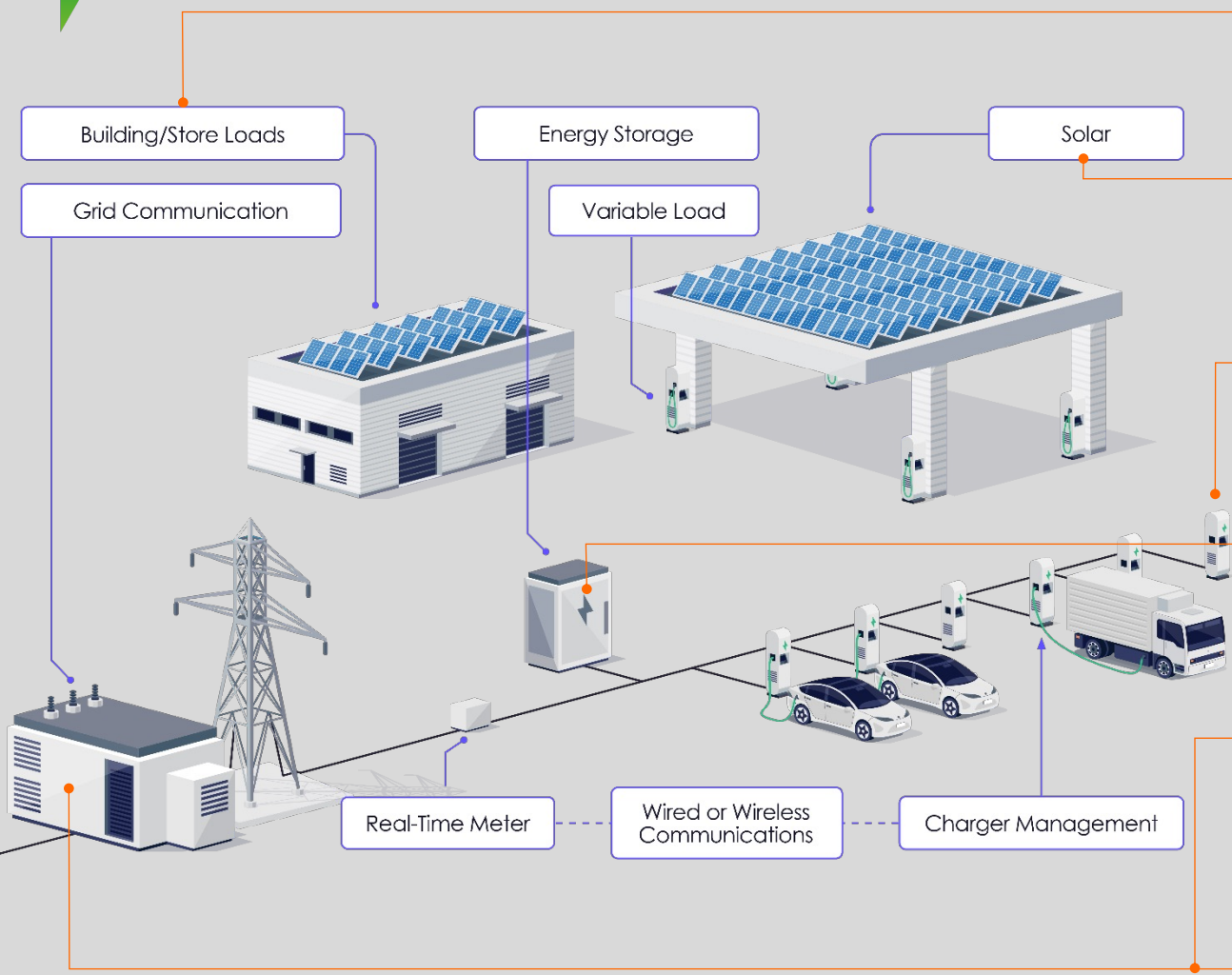
- Real-time dynamic load balancing distributes power
- Peak-shaving prevents exceeding site capacity
- Reduce TCO

Reduce energy costs

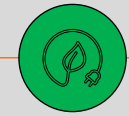
- Leverage Time-of-Use contracts
- Avoid overage penalties
- Use renewable energy and battery storage when energy costs are high
- Replenish local battery storage when energy costs are low



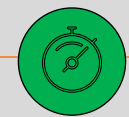
Support any EMS use case



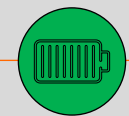
- Balance local energy consumption**
- Balance unmanaged consumers such as a building, store, or car wash
 - Handle short spikes in energy consumption



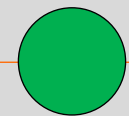
- Renewable load-shifting**
- Use energy prices to decide when to use renewable energy and when to store it



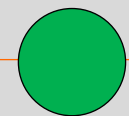
- Time of use**
- Use day ahead and spot pricing via direct integration
 - Use live vehicle, driver, and site data to plan distribution of energy



- Battery Management**
- Deep API to control charge/discharge battery behavior
 - Cell level control for battery optimization



- Limit power consumption**
- Balance supply with consumption at the level of a charger, site, campus, or city
 - Use renewables and battery storage to balance loads

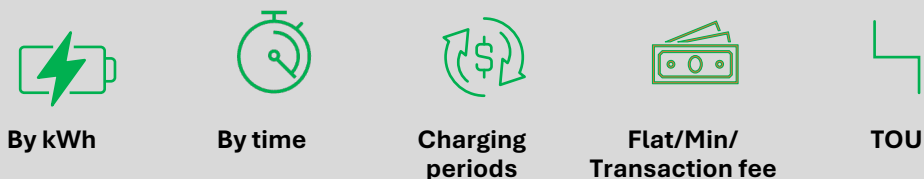


- Demand response**
- Integrate with the grid and aggregators via advanced protocols to receive real-time signals
 - Predict energy consumption to participate in flexibility markets

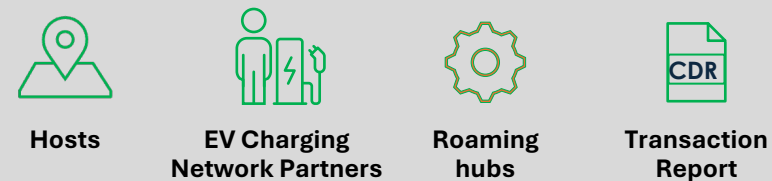
Extremely flexible Billing

Extreme flexibility to build tailored tariffs, plans, and products

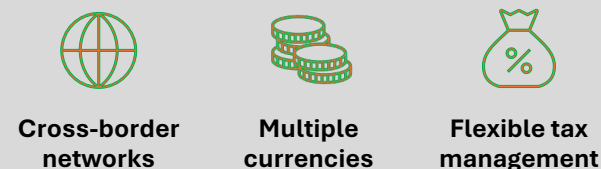
Largest number of billing parameters



Robust and error-free monthly settlement



Supports international growth



Comprehensive payment processing

- Support most industry standard payment gateways
- Handle multiple forms of payment - RFID (cards, tokens), Credit card, OTP, Subscription
- Provide white-labelled invoices compliant with international regulations

Integrates with legacy billing systems

- Extensive set of billing APIs



Insite for Fleets

Accelerate fleet electrification to meet net-zero emissions goals.

Ensure charger stability and availability

- Maximize charger uptime while lowering costs

Monitor and manage EV charging

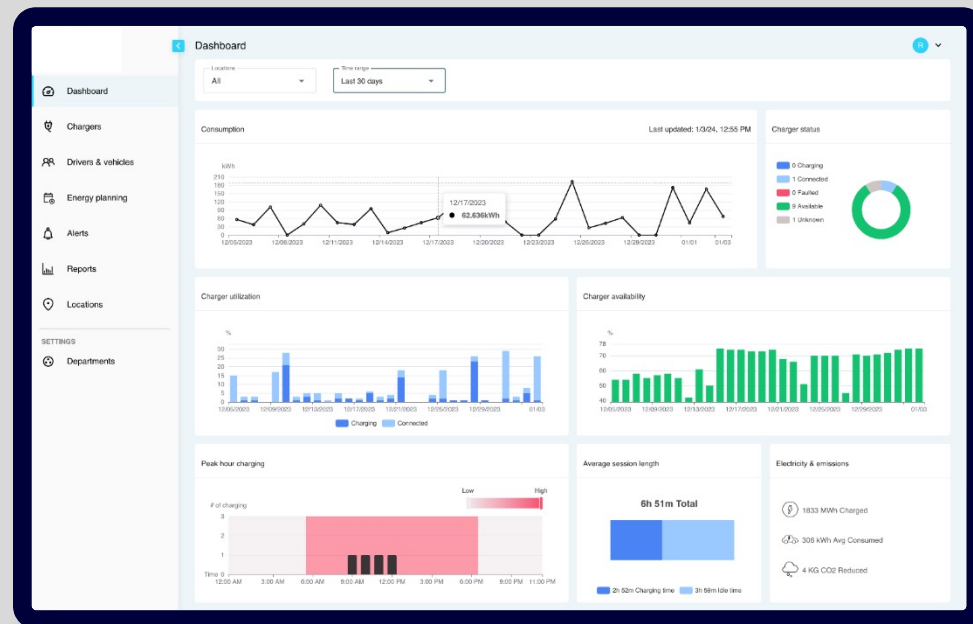
- Ensure fleet EVs are always charged up and ready to go

Smart energy management

- Increase capacity, reduce costs, generate new revenue streams

Provide drivers with a seamless charging experience

- Any fleet, any driver, anywhere



Reporting and analytics

Identify trends to effectively plan future investments in new infrastructure

Stay on top of network health

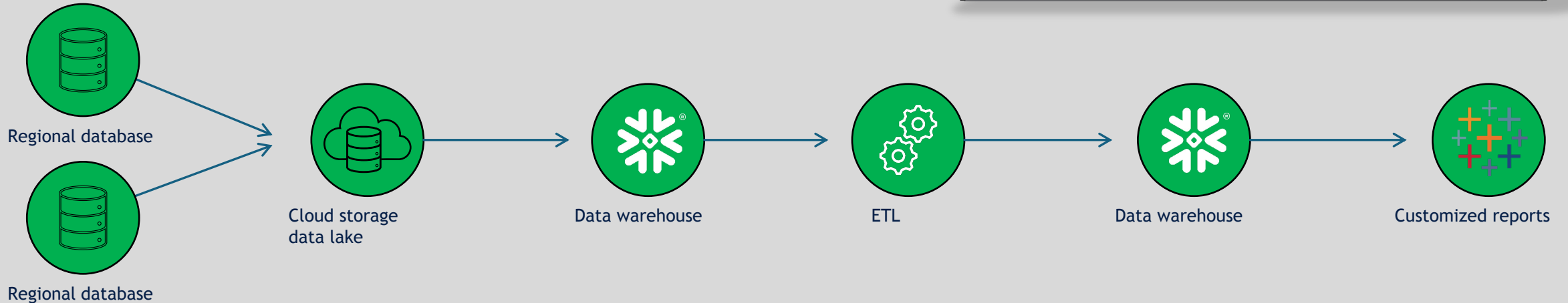
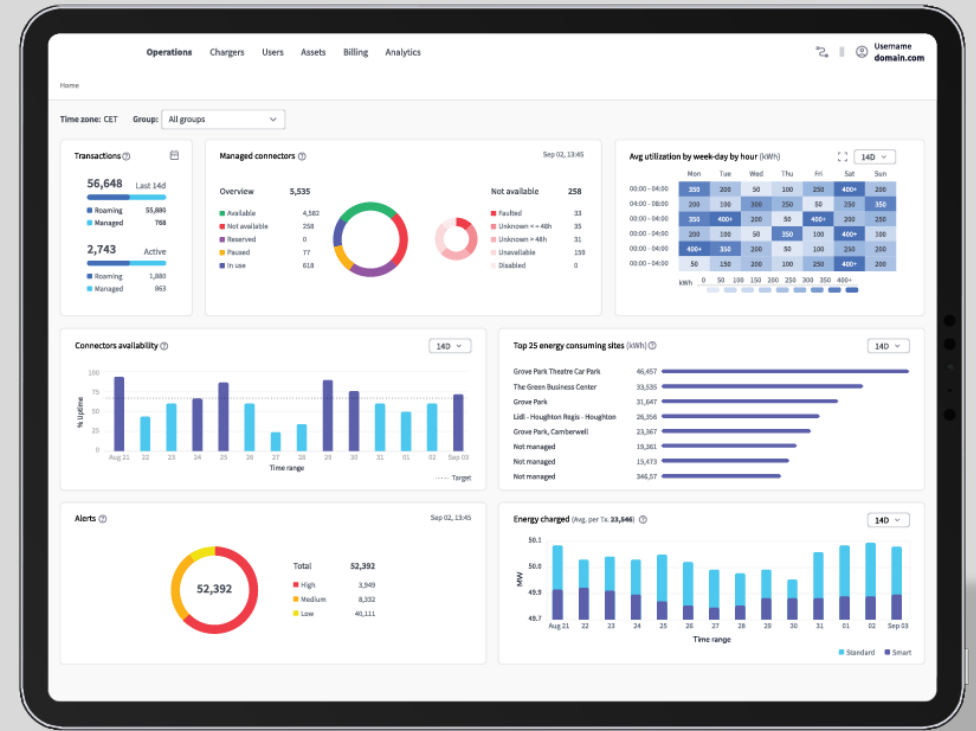
Intuitive visual dashboards | Easily identify trends | Views customized by role

Drill down for detailed analysis

Clickable dashboard elements | Analyze data at any level

Use built-in reports or create your own

Dozens of built-in reports | Leverage exported data to customize reports | Integrate with legacy systems



Deploy fast.
Scale instantly

Reliable performance,
zero compromise

Built for real-world
demand



Valor Power

Extensive API for external development

Operations

- Charger management, operations, models
- Charger host management
- Event notifications

Assets

- Companies
- Property and site management
- RFID Cards and tokens
- Vehicles

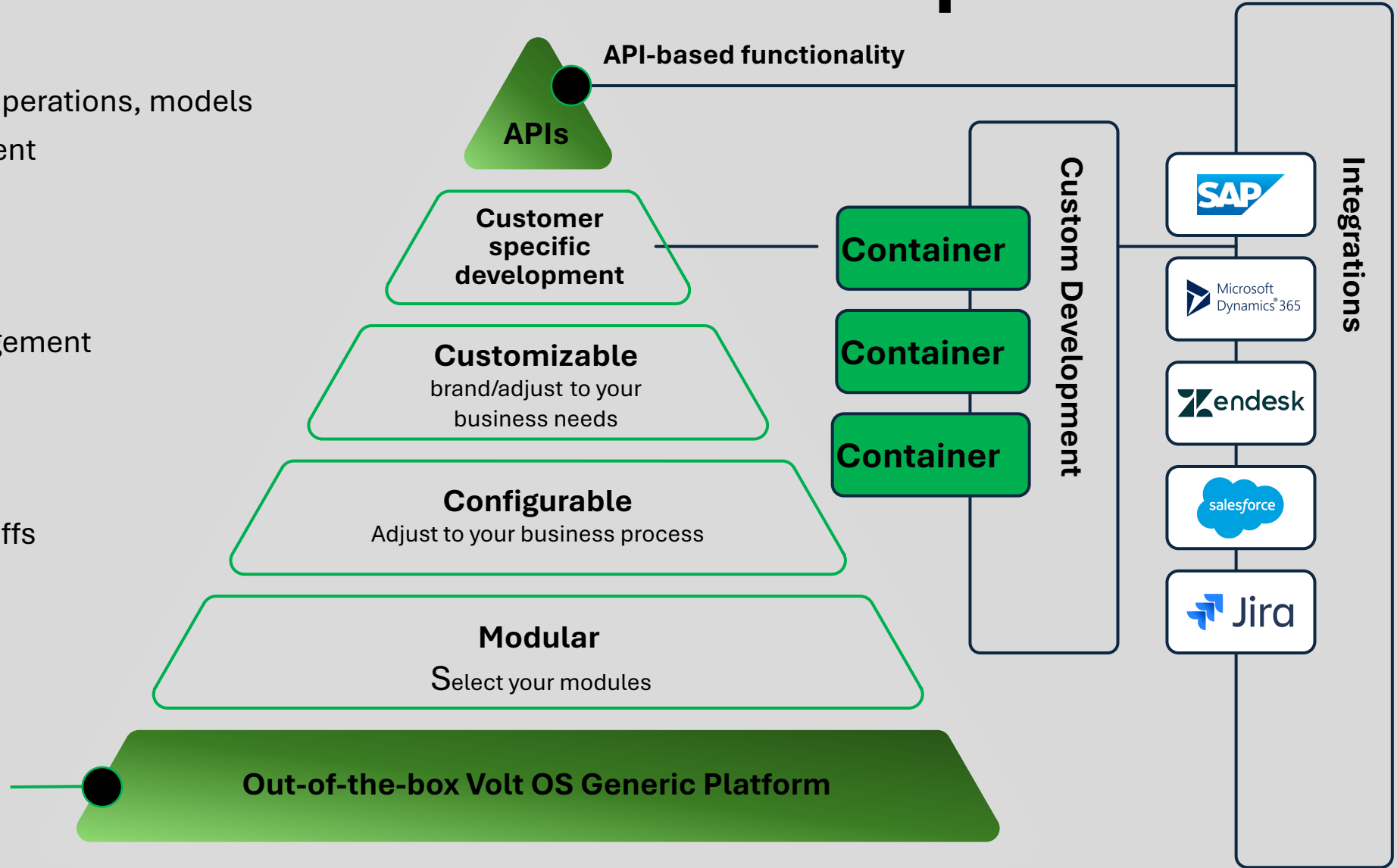
Billing

- Customer plans and tariffs
- Utility tariffs
- Billing transactions
- Payment gateway

User management

Energy management

... and much more



Volt OS security at a glance



Advanced Threat Detection

Proactive monitoring to identify and respond to security threats in real-time.
Managed SOC 24/7.



Compliance with Industry Standards

Adheres to the latest cybersecurity standards, such as ISO 27001, GDPR, NIS2, SOC 1 and 2.
Full OCPP security compliance.



Comprehensive Access Control

Multi-level user authentication and role-based access control to safeguard sensitive systems.



CSA Data Encryption

Ensures that sensitive customer and operational data are securely encrypted during transmission and storage.



Secure API Integrations

Robust API security protocols to protect external integrations from vulnerabilities.



Regular Security Audits

Continuous vulnerability assessments and security audits to maintain a highly secure infrastructure.

⚡ Technology strengths



Self-Healing Algorithms

Automatically resolves up to 80% of charger issues remotely



Open System

Provides both Interoperability and portability



High Availability

SaaS solution guarantees 99% uptime & stability



High Scalability

Supports your evolving business needs



Hardware Agnostic

Supports more than 1600 OCPP-certified chargers. Golden node for OCPP certifications



Robustness

Tools, methodologies, and proven experience based on large-scale network migrations and deployments



Vertical-Specific Solution

Deep vertical – specific knowledge and best practices



Modularity

Choose the modules you need now and grow as you go



Easy to Use and Implement

Intuitive and user-friendly solution



Volt OS Connected Services



Level 1 - Call Center

Rapidly deployed, turn-key call center solution.

Promote driver satisfaction and retention

24/7 assistance to drivers

- Support for App and driver portal
- Multi-lingual
- Omni-channel - voice, chat, in-app

Premium contact management

- Registration
- Comprehensive user management
- Start/Stop sessions
- Subscriptions and renewals
- Resolve straightforward issues
 - Password resets
 - General troubleshooting
 - Supporting transaction payment queries



Level 2 - Network Operations Center

24/7 proactive monitoring and maintenance of the charger network.

Maximize network availability and stability



24/7 proactive monitoring

- Rapidly deployed, turn-key, intuitive visual dashboards
- Easily navigable platform
- Alert handling
- Security



Remote handling of charger issues

- Reset charger
- Update firmware
- Proactive remote diagnostics and reactive troubleshooting



Track and manage issues

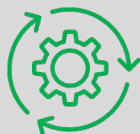
- Advanced analytics
- Onboarding/removing chargers
- Roaming connectivity
- Escalation point to L3
- Training and advisory

Volt OS Proven success

Business Scalability Supports the Entire Project Lifecycle with:



Best Practices



Methodologies

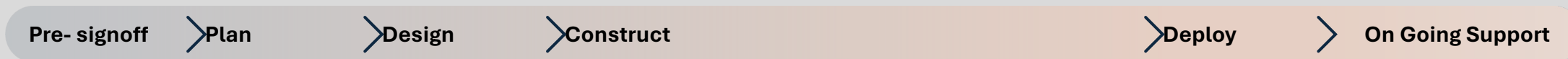


Professional Support teams



Strict Security Standards

Ongoing Professional Process:



Ready to power your future?

Contact us today to learn how Volt Station can be customised to fit your specific energy and charging needs.

Contact Us

info@valorpower.co.uk

www.valorpower.co.uk

www.valorpower.co.uk

 **Valor Power**

