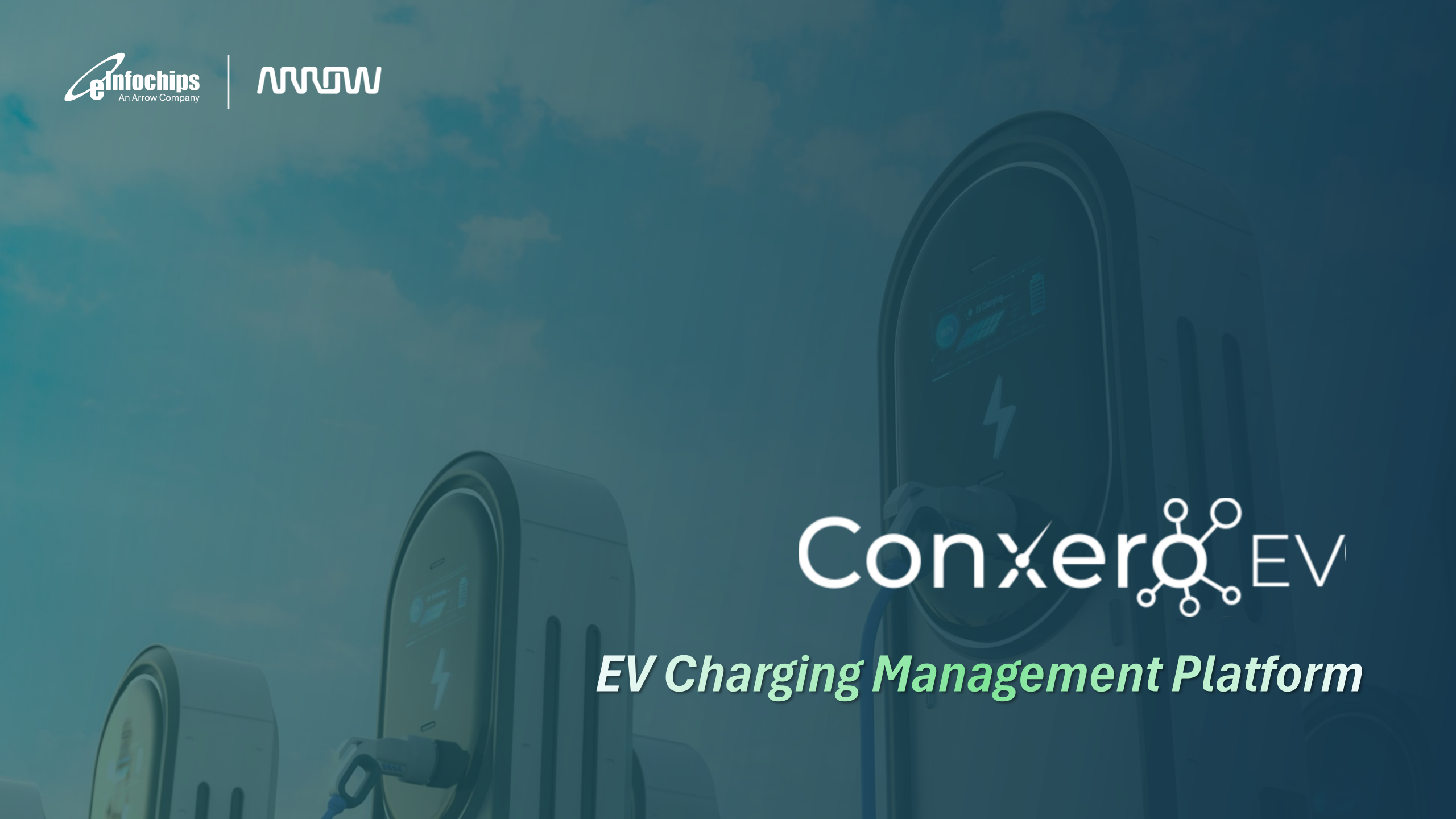

eInfochips
An Arrow Company
Conxero EV
EV Charging Management Platform

Agenda

01 The EV Charging Market & Challenges

- Key market trends and future growth opportunities.
- Challenges faced in **scalability, interoperability, and grid integration**.

02 What is Conxero EV?

- Overview of Conxero EV's capabilities, differentiation, and industry relevance.
- How it addresses current market gaps with a future-ready approach.

03 How Can Conxero EV Help?

- Stakeholder-specific benefits for CPOs, Fleet Managers, Utilities, and OEMs.
- Impact on cost savings, efficiency, and deployment speed.

04 Architecture

- High-level system architecture ensuring seamless scalability and integration.

05 Conxero EV - Solution Overview

- Charging Management Software - Centralized charger monitoring and control.
- Smart Charging Mobile App - User-friendly, feature-rich mobile experience.
- Cloud-Based Infrastructure - Scalable, highly available, and API-driven.
- Reusable Assets - Pre-built modules and frameworks for faster deployment.
- OCPP Server - Ensuring charger interoperability and remote management.
- OpenADR 2.0b Implementation - Intelligent demand response and energy optimization.

06 Why Conxero EV?

- Competitive advantages (scalability, security, interoperability, and cost savings).
- Proven impact on reducing time-to-market and improving ROI.

07 Service Offerings

- Stakeholder-specific benefits for CPOs, Fleet Managers, Utilities, and OEMs.
- Impact on cost savings, efficiency, and deployment speed.

08 Customer Success Stories

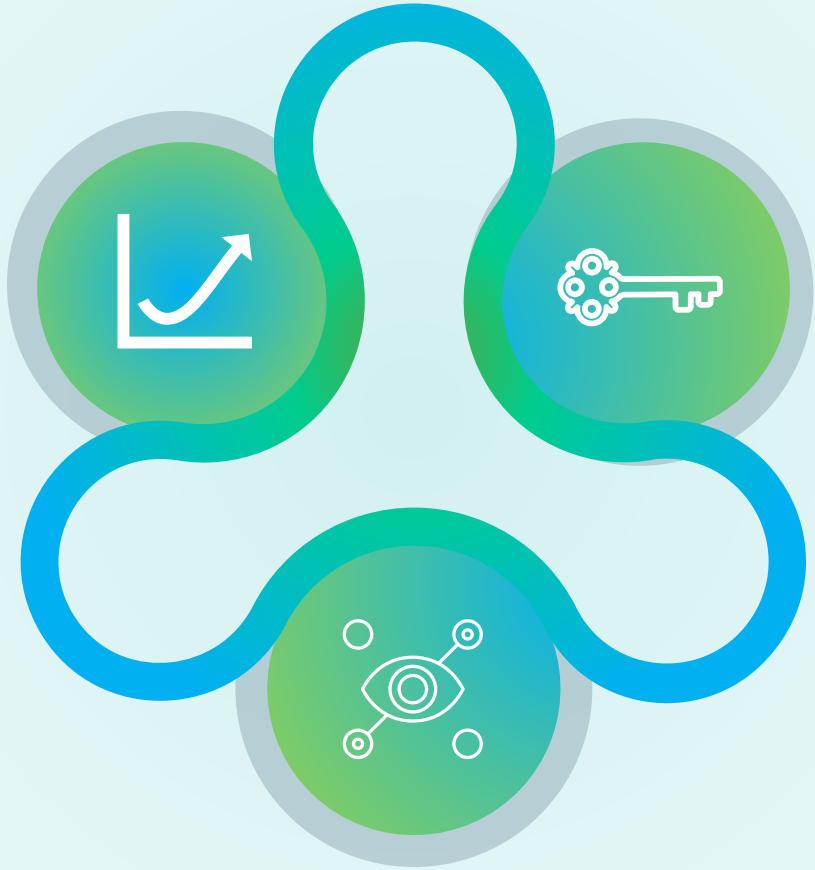
The EV Charging Market & Challenges

The EV industry is growing exponentially

- With millions of EVs expected on the road by 2030, creating a massive demand for **scalable and intelligent charging infrastructure**.

Why a unified, intelligent, and open-standard solution is required?

- The industry needs a flexible and scalable platform that can bridge the gap between chargers, networks, and utilities, ensuring faster deployments and seamless operations.



Key Challenges in EV Charging Today

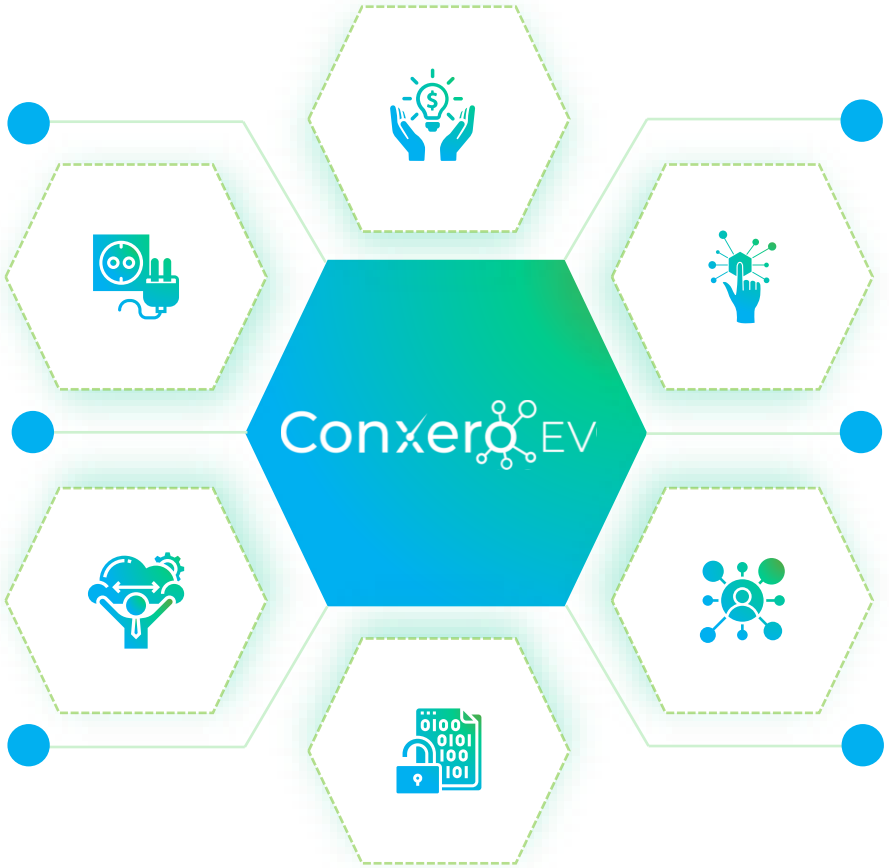
- Fragmented ecosystem: Multiple standards and inconsistent interoperability
- Grid strain & energy inefficiency: Lack of smart load balancing, demand response, and dynamic pricing.
- Slow deployment: High development costs and long integration cycles delay go-to-market for CPOs and fleet operators.
- Security concerns: Lack of secure authentication, encrypted data transfers, and compliance with industry standards.

What is Conxero EV?

Built for Charge Point Operators (CPOs), Fleet Operators, Utilities, and OEMs who need a **reliable, scalable, and complaint solution.**

Supports diverse charging needs, including Residential, Private commercial & public commercial

Flexible deployment - host on **Azure** based on business requirements.



A next-generation EV charging management platform designed to help businesses deploy, operate, and optimize their EV charging infrastructure at scale.

Compliant with leading EV charging standards, including **OCPP 1.6J/2.0.1, OpenADR 2.0b, and ISO15118,** ensuring **seamless integration across networks.**

Delivers enterprise-grade security, data intelligence, and advanced charging controls to optimize **energy usage, operational costs, and user experience.**

Key Takeaways

1. **Designed for large-scale EV infrastructure**
   Handles thousands of chargers across multiple locations.
2. **Smart, secure, and future-ready**
   Offers advanced load balancing, demand response integration, and energy optimization.
3. **Fast go-to-market solution**
   Pre-built modules reduce deployment time by 50% compared to custom-built solutions.
4. **Open-standard interoperability**
   Works seamlessly across different hardware, networks, and energy providers.

How can Conxero EV help?

Conxero EV empowers businesses by providing a seamless, scalable, and future-ready EV charging management solution. Designed for various stakeholders, it enhances efficiency, optimizes energy usage, and ensures interoperability across networks.

EV Users (Residential, Commercial, Fleet Operators)

- Mobile app to **onboard, reserve, and manage charging** in real-time.
- **Smart scheduling for cost-efficient charging**
- **Demand response participation** with utilities for dynamic load balancing.
- **Support for RFID, QR-code-based, and remote authentication** for seamless access along with access to charging history and usage reports.

Charger Manufacturers & OEMs

- **Pre-built OCPP-compliant backend** for seamless charger integration.
- **Vehicle-to-grid (ISO15118) support**
- **Remote diagnostics, monitoring, and firmware updates** for improved charger uptime.

e-MSPs (eMobility Service Providers) & CPOs (Charge Point Operators)

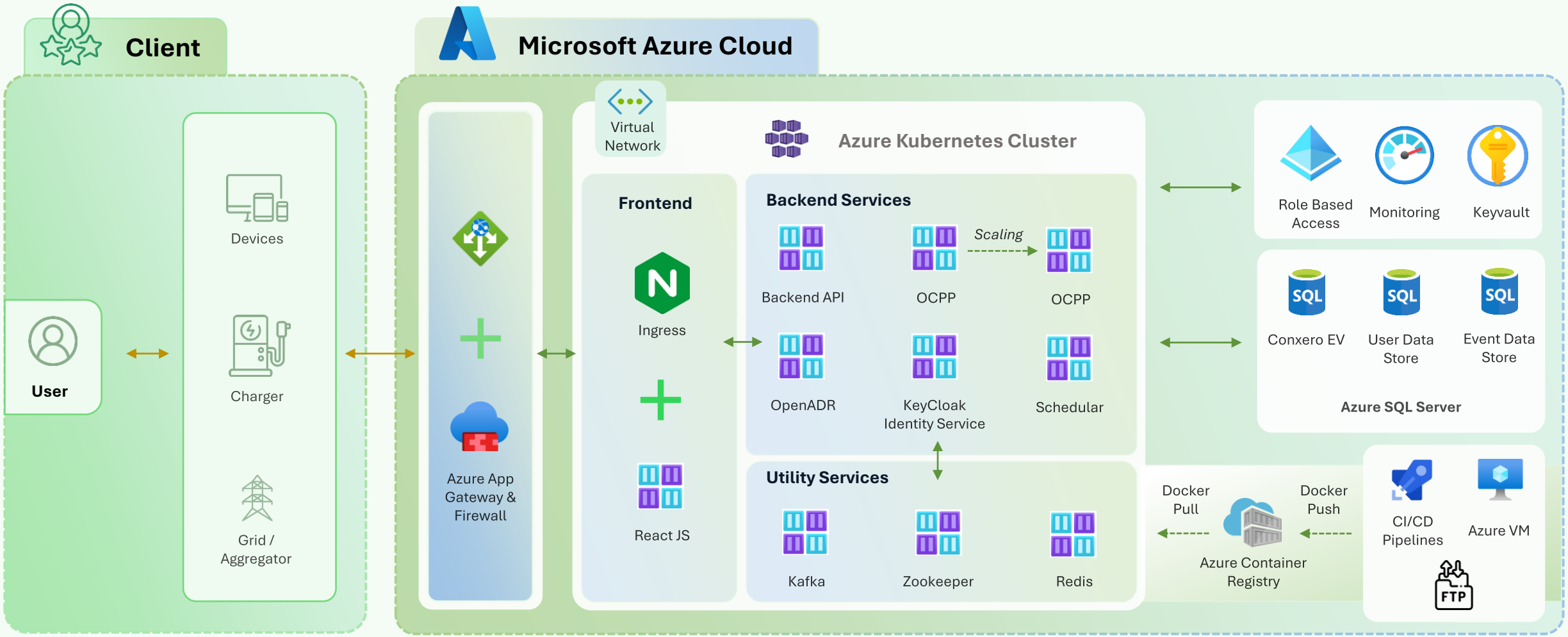
- **Unified platform to manage multi-site charger networks** efficiently.
- **Dynamic pricing engine** to optimize operational profitability.
- **Automated load balancing and real-time fleet energy management.**
- **Integrated billing & payments** with multiple payment gateways (Stripe, Payter).

Utility Companies & Energy Aggregators

- **OpenADR 2.0b compliance** for automated grid response & demand-side energy management.
- **Real-time energy analytics** for sustainability tracking & regulatory compliance.
- **Automated demand response events** to manage peak-hour charging loads effectively.

Architecture

High-Level System Architecture

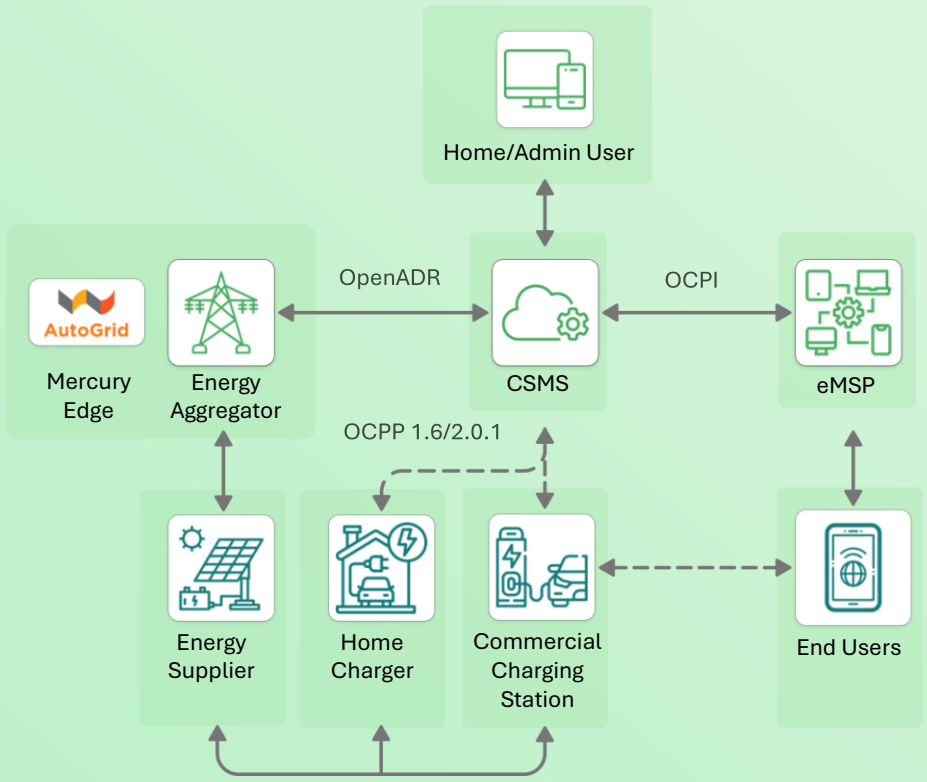


Conxero EV

Solution Overview

Conxero EV is a comprehensive, Azure-powered EV charging management platform designed to provide seamless, scalable, and secure operations for Charge Point Operators (CPOs), Fleet Managers, Utilities, and OEMs. It enables businesses to deploy, manage, and optimize EV charging networks with real-time insights, intelligent energy management, and open-standard interoperability.

Eco *System*



Key *Capabilities*

Charger Management Software

A **centralized dashboard** for real-time **charger monitoring, remote diagnostics, and pricing optimization.**

OCPP 1.6/2.0.1 Server

Fully compliant **OCPP 1.6J/2.0.1 server** ensuring **charger interoperability, remote management, and future-ready scalability.**

Smart Charging Mobile App

User-friendly application enabling **charger discovery, reservations, and billing management**.

OpenADR 2.0b Implementation

Automated **demand response integration with utilities** to optimize **energy load balancing and pricing strategies.**

Cloud-Based Backend Infrastructure

A **highly scalable and secure Azure-native** platform ensuring **seamless data processing, integrations, and energy optimization.** .

Reusable Modules & Assets

Pre-configured components that **accelerate deployment, reduce customization efforts, and enhance interoperability.**

Solution *Overview*

Charging Management Software

*Conxero EV's **Charging Management Software** is a **comprehensive, cloud-powered** platform that provides **real-time monitoring, intelligent fleet control, and seamless user management.** Designed for **Charge Point Operators (CPOs), Fleet Managers, and Utilities**, it ensures **optimized charger operations, dynamic pricing, and automated diagnostics** for **maximum efficiency and uptime.***

Multi-Tenant Cloud-
Based Platform

Enables centralized charger management across multiple locations with high availability.

Automated Workflows
& Intuitive UI

Reduces manual efforts with custom workflows, intuitive dashboards, and AI-driven insights.

Role-Base
User Management

Granular access control for administrators, operators, and customers.

Comprehensive Energy
& Sustainability Analytics

Tracks carbon footprint, charger efficiency, and operational KPIs for better decision-making.

Real-Time Charger
Monitoring

Diagnostics - Live tracking of charger health, automated fault detection, and remote firmware updates.

Seamless Payment
Integration

Supports multiple payment gateways for secure, hassle-free transactions.

Dynamic Pricing
& Load Balancing

Implements flexible pricing models, demand-based energy allocation, and optimized grid utilization.

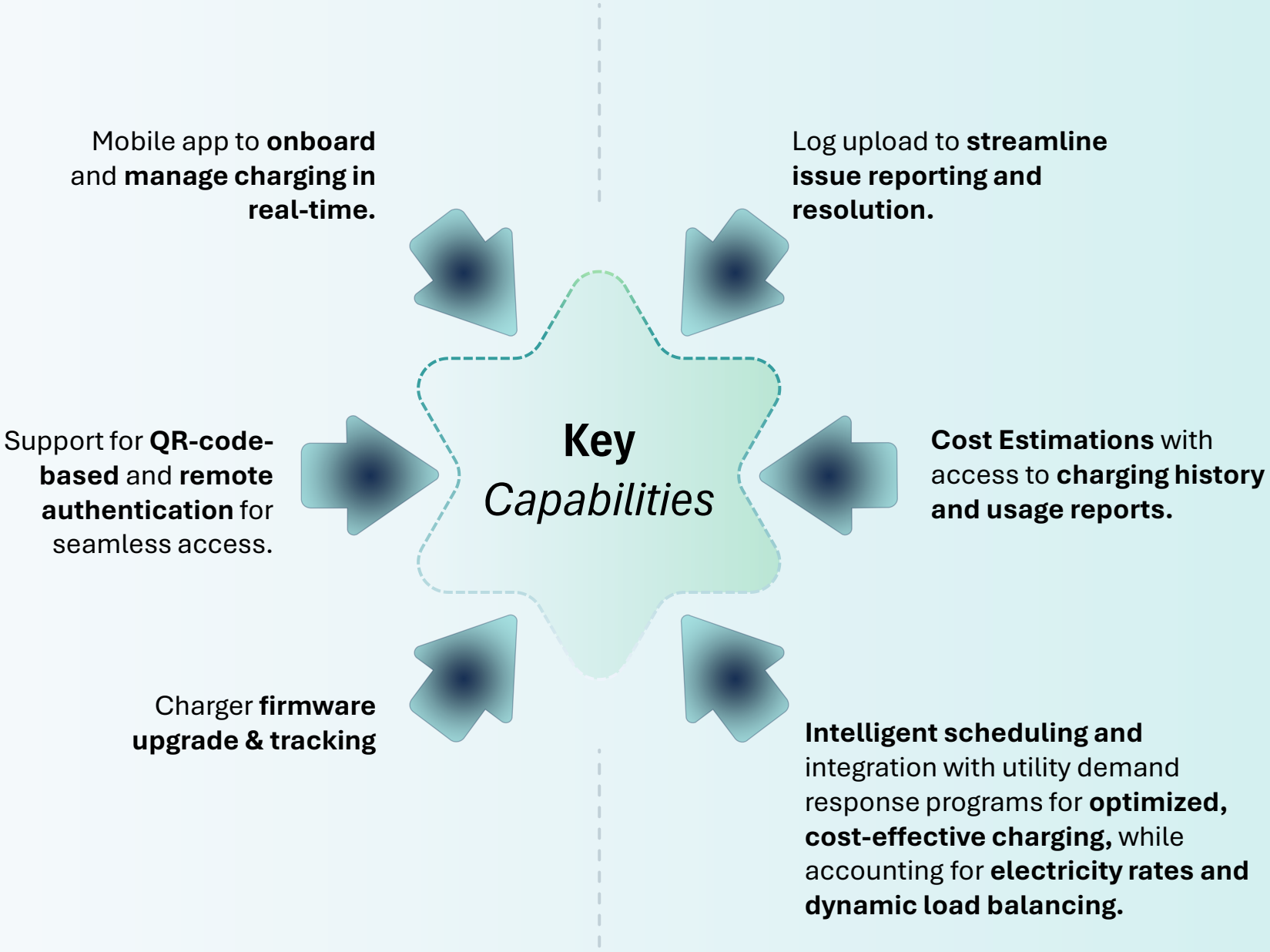
Scalability for Large
Scale Deployments

Designed to manage thousands of chargers across global networks with minimal operational overhead.

Solution *Overview*

Smart Charging Mobile App

*Conxero EV's **Smart Charging Mobile App** is designed to provide **EV users with a seamless, intuitive, and feature-rich experience** for managing their charging needs. With **real-time charger discovery, dynamic pricing, smart scheduling, and secure transactions**, the app **empowers EV owners with full control over their charging journey.***



Solution *Overview*

Cloud-Based Backend Infrastructure

*Conxero EV's **Cloud-Based Infrastructure** delivers a **high-performance, scalable, and secure foundation** for managing large-scale EV charging networks. Designed for **real-time data processing, seamless integrations, and intelligent automation**, it ensures **maximum uptime, optimized resource utilization, and monitoring.** It is empowering businesses with **fast, secure, and efficient EV network management***

Scalable Multi Cloud-
Tenant Cloud Architecture

Supports thousands of chargers, users, and transactions with high performance and reliability.

Automated Workflows
& Notifications

Integrated real-time monitoring, predictive maintenance alerts, and event-driven automation for seamless operations.

Real-Time
Data Processing & Insights

Ensures instant communication between chargers, mobile apps, and admin portals for better decision-making.

Serverless & Containerized
Deployment

Uses event-driven architecture and microservices-based backend for optimized resource utilization.

Secure API & Authentication
Framework

Implements role-based access control, API security, and encryption standards for data protection.

Integrated Payment
& Billing Systems

Supports multi-currency transactions and custom pricing models for CPOs and fleet operators.

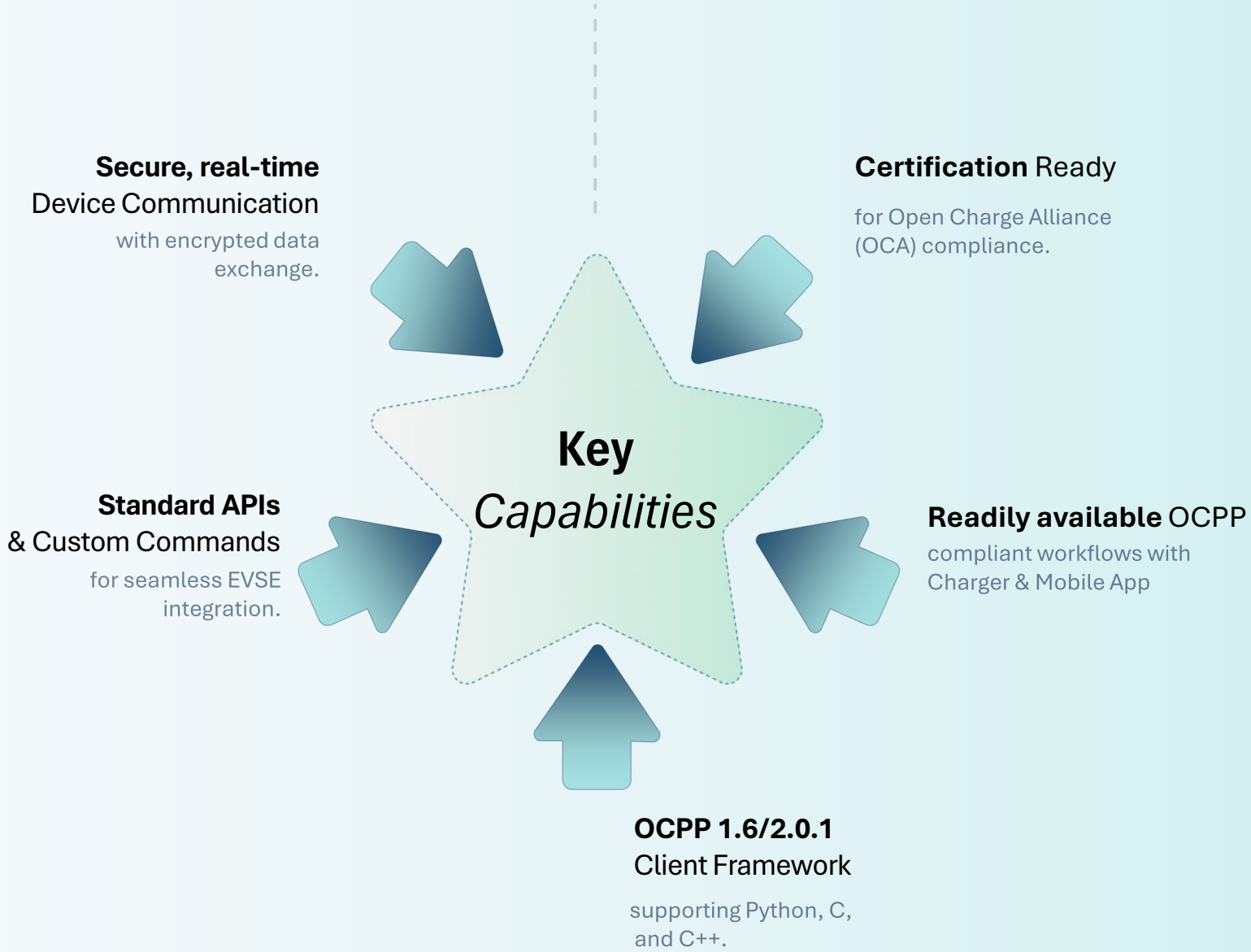
Solution *Overview*

OCPP Server

*Conxero EV's **OCPP 1.6J/2.0.1 Server** is a **fully compliant, scalable, and secure communication framework** that enables seamless connectivity between **EV chargers and backend management systems**.*

Reusable Assets

- ***Core Profile: 100%***
- ***Firmware Management: 100%***
- ***Local Auth List Management: 100%***
- ***Reservation: 100%***
- ***Smart Charging: 70%***
- ***Remote Trigger: 100%***



Solution *Overview*

OpenADR 2.0b Implementation

*Conxero EV's **OpenADR 2.0b implementation** enables seamless **energy optimization, real-time demand response, and grid-aware charging** for **utilities, energy aggregators, and charge point operators (CPOs).** By integrating with **utility demand response programs**, it allows **smart load balancing, dynamic energy pricing, and grid stability enhancements**, ensuring **cost-effective and sustainable EV charging operations.***

Automated Demand Response (DR) Integration

Enables **chargers to respond dynamically to grid signals, reducing peak load stress.**

Telemetry Data & Energy Analytics

Provides **detailed telemetry usage, status history, and grid performance analytics.**

Real-Time Event Management

Supports **opt-in/opt-out mechanisms for grid events, electricity pricing, and load dispatching.**

Dynamic Load Management

Adjusts **charging rates based on real-time grid demand and renewable energy availability.**

Secure Communication & Compliance

Implements **x.509 security encryption for safe and authenticated data exchange.**

Certification & Standard Compliance

Built **to meet OpenADR 2.0b standards for seamless energy aggregator connectivity.**

Solution *Overview*

Reusable Assets

*Conxero EV's **reusable assets** are designed to **accelerate time-to-market, reduce development complexity, and ensure seamless interoperability** for Charge Point Operators (CPOs), Fleet Managers, and Utilities. By leveraging **pre-configured modules, test cases, and workflows,** businesses can rapidly deploy and scale their EV charging infrastructure with minimal customization efforts.*

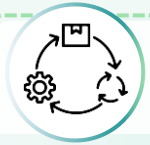
Key Differentiators

1. **Industry-Compliant & Future-Ready -** Built on **OCPP, OpenADR, and ISO15118 standards for global interoperability.**
2. **High Code Quality & Best Practices -** Ensures **optimized, modular, and well-documented implementations.**
3. **Azure-supported Architecture -** Fully optimized for **scalability, security, and high performance.**
4. **Database-Agnostic Design -** Seamlessly integrates with **existing enterprise databases.**

Key Components of Reusable Assets

OCPP 1.6/2.0.1 Server Assets

- Fully compliant **OCPP 1.6J/2.0.1** implementation for **charger interoperability.**
- **Remote management capabilities,** including **firmware updates, diagnostics, and session control.**
- **Smart charging profiles** to optimize **energy usage and demand response integration.**
- **Pre-built APIs** for seamless integration with **third-party applications and billing systems.**



Reusable Common Modules

- **Pre-integrated messaging services** for real-time **notifications and alerts.**
- **Role-based authentication framework** with **secure identity management and access control.**
- **Multilingual support modules** for **global scalability.**
- **Ready-to-use API connectors** for seamless **integration with utility aggregators and financial services.**

Functional Assets

- **Library of 240+ automated test cases** for **OCPP compliance and system validation.**
- **12+ pre-configured workflows** for **charger management, fleet monitoring, and energy analytics.**
- **Standardized UI/UX wireframes** for rapid **frontend development.**
- **Branding and customization templates** to align with **corporate identity and customer preferences.**

Scalability & *Growth-Ready Architecture*

- Supports multi-location, multi-charger deployments with a modular, high-performance network.
- Ensures enterprise-grade resilience and efficiency for large-scale expansion.

Seamless *Connect & Control*

- Real-time monitoring, remote diagnostics, and command execution via web and mobile apps.
- Enables instant session control, fault detection, and energy load balancing.

Advanced *Problem Diagnosis*

- Automated fault detection and proactive issue resolution minimize downtime.
- Predictive analytics and real-time alerts enhance charger performance.

Seamless *Integration with Open Standards*

- OCPP 1.6/2.0.1 & OpenADR 2.0b compliant for seamless charger and energy grid integration.
- Third-party API integrations for billing, fleet management, and energy optimization.

Faster *Time-to-Market with Lower Risk Connect & Control*

- Pre-built modules and reusable components reduce development efforts by up to 50%.
- MVP ready in 8-12 weeks, accelerating market entry.

Why *Conxero EV?*

Business *Impact*

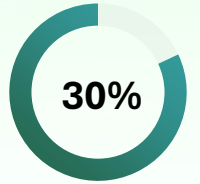
- **30% reduction in implementation efforts**, ensuring **cost savings and faster ROI**.
- **MVP ready in just 8 to 12 weeks**, accelerating **go-to-market strategies.**
- **Saves 3 to 4 months** in initial setup and **reduces onboarding complexities**.
- **Integrated branding and customization**, creating **a seamless and unique user experience**.

US based EV charging solution provider

OCPP 1.6 Full (W/O workflow)

Advantages (Ready to Use / Reference)

- Design Architecture
- Database Design
- OCPP Implementation
- Test Scenario



In 150 days
Overall effort

In ~50 days
Can be build for new customer

Accelerated Implementation Using Significant Reutilization

EU based EV charger manufacturer

E2E Solution with OCPP 1.6

- For building E2E solution for Mobile App (Android & ioS) & OCPP server*
- Delivery would depend on customer defined workflow

275 days
Overall effort

In ~130 days
Can be build for new customer

Service Offerings

Conxero EV offers flexible engagement models to meet diverse business needs, ensuring faster time-to-market, optimized costs, and seamless scalability.

Available As

Accelerated Deployment

- Pre-built frameworks and APIs
- Faster development cycle
- Balanced between customization and speed

Custom Deployment

- Fully tailored solution with Digital Migration
- Deep customization
- Ideal for enterprises with unique requirements

Next Step & Call to Action

How to Engage!

Request a Demo

Get a live demo of platform

Talk to our Experts

Our consultants will engage to understand your need

Get an Assessment Report

We will assess, identify customization & provide assessment report

Get a Private Offer

We will make private offer with customization cost
Support to deploy on Customer Azure subscription

Customer Success Stories

EV Charger Management Platform Development Experience

Challenges

- No software/tool available to **remotely manage fleet** of residential chargers.
- Lack of expertise in cold-native solutions development and handling high volume of telemetry data
- Unsecured APIs to manage chargers.

Benefits

- Developed all-integrated EV charging solution – EV charger, hardware, smart charging app and management software
- **30% reduction** in support issues with remote management
- Reduced time-to-market by **6 months.**

ISG Award Winning Solution

Solutions

- **Interactive dashboard** (charger scheduling, history, energy usage, etc.)
- **Data aggregation** and analytics for reports & notifications
- **Open ADR 2.0b** support for connection with grid-suppliers
- Role-based access control of web portal (users, client)
- App analytics, **Crashlytics,** Azure cloud spending assessment
- **Multi-language** support (English, French, Spanish)
- Azure Services – WebApp, SendGrid, SQL, Application Insights, VMS, Monitors, Key Vault, Git

Client: Leading provider of EV charging stations in **North America**

OCPP 1.6J compliant app & web-based charger management platform

- Web-based application for remote device tracking & management
- OCPP server implementation, integration testing and load balancing
- Setup Azure cloud-based infrastructure and build data pipelines
- 5+ DERMS integration with leading energy/utility aggregators (EnergyHub, AutoGrid, MercuryEdge, Virtual Peaker, etc.)

Get in Touch

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