

CASE STUDY

**ACCELERATING
EV CHARGING
SUCCESS AT
HYPERCHARGE**

Executive Summary

Within eight weeks mindzie turned raw charger, gateway, and payment-provider logs into a single, end-to-end digital twin of Hypercharge's "Tap-to-Charge" journey—from cable plug-in, through token authorization, to power delivery. Continuous analytics uncovered where connection attempts stalled, why payment hand-shakes failed, and how long each micro-step truly takes. Armed with these insights Hypercharge slashed failed starts by 71 %, tightened cycle time to under 12 seconds, and built an always-on alerting loop that keeps chargers—and revenue—flowing.

Quantified results

\$3.1M

Increased Annual
revenue (failed sessions)

+16%

Successful first-time
charges

58%

Reduction in Average
plug-in → power-on

71%

Reduction in Payment
handshake failures

75%

Reduction in Loop / retry
attempts per session

Business Challenge

Drivers expect a tap, beep, charge experience. Yet Hypercharge's data showed:

- Payment tokens timing out against three different PSPs
- Cloud authorization lag spikes during peak use
- Repeat plug-in attempts eroding user satisfaction and station throughput

Lacking end-to-end visibility, the ops team could not pinpoint which component—mobile app, charger firmware, payment gateway, or cloud API—caused each failure.

Project Overview

End-to-end “Tap-to-Charge” journey—from cable plug-in through cloud authorization, payment token exchange, and relay energization—across 2,300 public and fleet chargers in North America and Europe.

mindzie worked with the Hypercharge team to transform charger firmware logs, mobile/RFID app events, three payment-service-provider (PSP) gateways, and the cloud API layer— into a unified process-mining event log.

Analysis Focus

- Cycle time for each micro-step (plug-in → handset token → PSP auth → cloud ack → power-on)
- Failure root-cause identification by component, error code, geography, and time of day
- Re-work / retry loops per session and their impact on customer experience
- SLA compliance against the ≤ 2 -second payment-handshake target

Key Actions

Enabled auto-scaling API pods before peak hours, real-time fallback to alternate PSPs on timeout, firmware enforcement of single token source, and proactive alerts for stations exceeding failure thresholds.

Looking Ahead

Hypercharge is expanding mindzie to dynamic pricing optimization and charger maintenance workflows, aiming to cut hardware downtime and maximize station ROI.

Conclusion

By converting charger and payment events into actionable intelligence, mindzie empowered Hypercharge to deliver a near-frictionless EV charging experience while recapturing millions in revenue and boosting customer loyalty.

Ready to electrify your operations with data-driven speed and reliability?

Visit www.mindzie.com or email info@mindzie.com to see how mindzie can transform your processes today.