

How an EV Charging Operator Fixed Preventive Maintenance, Spares, and Technician Logs to Eliminate Silent Downtime

CLIENT PROFILE

A fast-growing EV charging network operator managing public and semi-public charging stations across multiple urban and highway locations. Their infrastructure includes AC chargers, high-speed DC fast chargers, charging cabinets, connectors, cooling systems, and metering hardware, each critical for delivering consistent charging availability to EV users.

As the market expanded rapidly, the client needed to ensure high uptime, quick fault resolution, and accurate technical logging to protect both revenue and brand reputation.

CHALLENGE

Operating a distributed charging network brought forward several recurring issues:

- Silent hardware downtime caused by missed preventive maintenance cycles.
- Inaccurate or incomplete technician logs, making root-cause analysis difficult.
- Poor tracking of spares and consumables, leading to repair delays.
- Stations with “OK” status on paper but actually non-operational on-site.
- Fragmented information across spreadsheets, WhatsApp groups, and manual checklists.
- No centralized view of charger health, service history, or MTTR (Mean Time to Repair).

These challenges resulted in avoidable outages, reduced charger reliability, user complaints, and loss of charging revenue.





Solution Provided by Asset Infinity

Asset Infinity deployed a centralized digital maintenance and asset tracking ecosystem across all EV charging sites. The solution included:

Preventive Maintenance Automation

- PM schedules generated automatically for each charger based on OEM rules.
- Mobile app-based PM checklists with mandatory validations.
- Alerts, reminders, and escalations when PM tasks were overdue.

Technician Activity Logging

- Technicians recorded visits, repairs, and diagnostics in real time.
- Every intervention stored with timestamp, images, voltage/temperature readings, and signatures.
- Geotagged technician logs ensured on-site verification.

Spares & Inventory Control

- Real-time visibility of available spares such as connectors, cables, control boards, contactors, fuses, cooling fans, and software upgrade modules.
- Automated low-stock alerts and reorder recommendations.
- Complete traceability of which part was used, where, and by whom.



Live Asset Health Dashboard

- Centralized system showing charger status, live faults, last maintenance, pending repairs, and cumulative downtime.
- Highlighted “critical chargers” at risk of imminent failure.



MEASURABLE BENEFITS

9.4% recovery in overall network uptime within the first 90 days.

35% reduction in repeated breakdowns due to structured PM compliance.

Faster repairs through improved spare-part availability.

100% technician accountability with geotagged service logs.

Accurate failure pattern insights that helped reduce MTTR and improve charger performance.

IMPLEMENTATION & ROLLOUT

- Deployment across all charging hubs and city clusters in phases.
- Operators, technicians, and regional teams trained through hands-on sessions.
- Integration with existing charger management system (CMS) for synchronized alerts.
- Zero disruption to daily charging operations.



OUTCOME & IMPACT

The EV charging operator achieved:

- Significant uptime improvement, directly boosting charging sessions and revenue.
- A reliable service experience for EV users with fewer surprise outages.
- Better coordination between maintenance teams, inventory managers, and cluster supervisors.
- Real-time visibility and complete confidence in charger performance.

CONCLUSION

By digitizing preventive maintenance, technical logs, and inventory workflows, Asset Infinity helped the EV charging operator eliminate silent downtime and create a scalable, reliable operations backbone. The 9.4% increase in uptime aligned directly with improved revenue, customer satisfaction, and brand trust in a rapidly growing EV ecosystem.