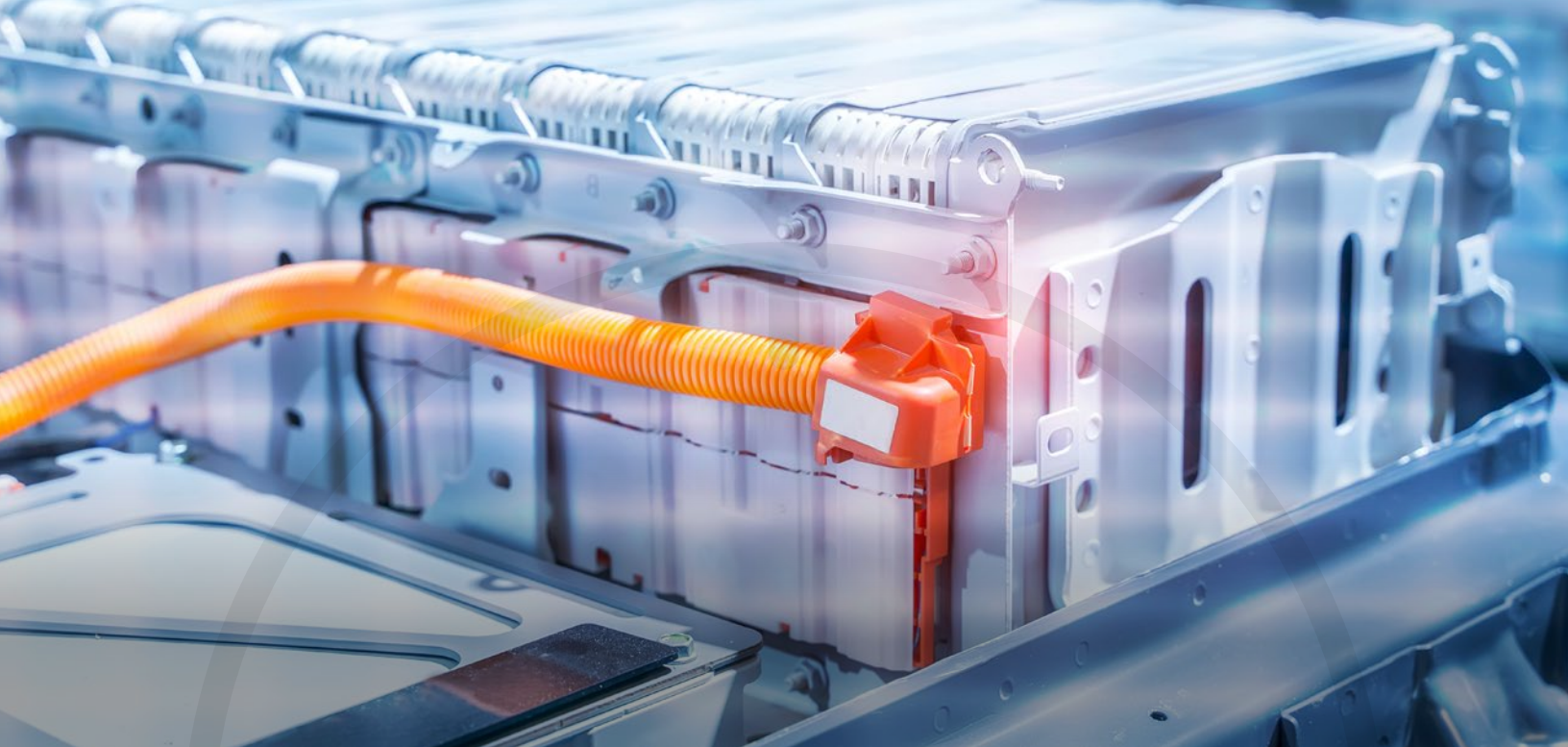




DRIVING RESULTS



How QLS Transformed Rework Operations for a Battery Systems Manufacturer

PROJECT
Battery Service Line

INDUSTRY
Heavy Truck & Bus

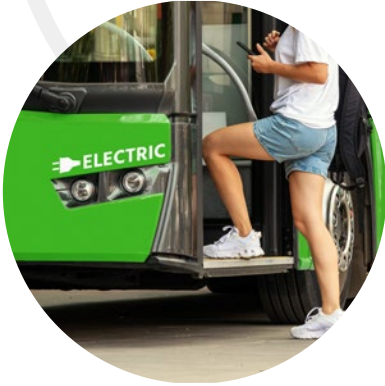
LOCATION
Midwest



QLS
QUALITY LIAISON SERVICES



THE CHALLENGE



A leading manufacturer of lithium-ion battery systems for electric buses and other mobility applications faced a critical operational challenge at its Midwest facility. More than 2,400 battery packs had malfunctioned in the field and were returned under warranty, which placed its customer relationships, brand reputation and financial performance at risk.

In an effort to better manage the labor-intensive rework process, the manufacturer initially engaged another third-party service provider. However, inconsistent staffing, missed production quotas and recurring quality issues quickly derailed that effort. Some reworked battery packs were even returned by customers for a second time. Daily penalties of \$500 per late pack loomed, and the outsourced support cost nearly double what Quality Liaison Services (QLS) would later provide.

“At that point, our customer needed more than just a vendor,” says Jeremy Burke, vice president of operations at QLS. “They needed a partner that could quickly build a team with the right skillset, scale with precision, and meet high-stakes production targets with zero margin for error.”

QLS stepped in at roughly half the hourly rate of the original service provider, delivering exceptional service and the technical expertise required to properly rework high-voltage battery packs.



THE SOLUTION



QLS launched a rapid-response engagement to regain control of the project and deliver on the customer's warranty obligations. The team began with just three technicians and a regional manager, undergoing a three-week training period alongside the customer's internal team.

Within one week of active rework, QLS was already outperforming the previous provider—exceeding daily production targets and achieving an average of 9 to 12 battery packs reworked per shift.

From there, QLS gradually scaled operations, onboarding one to two locally based quality control technicians per week until reaching a full team of 16 across two shifts. This structured ramp-up allowed for strong quality assurance and rework of the battery packs while accommodating evolving production demands.

IPC certification is a globally recognized credential that validates expertise in IPC standards for electronic assembly, printed boards and wire/cable assemblies.

"We didn't just throw people at the problem," says Burke. "We brought in skilled local talent with experience in battery systems, soldering and electrical work, and we trained them in a structured, methodical way. That's what made this project so successful."

While IPC certification was not required for this rework application, QLS's ability to recruit technicians with adjacent expertise ensured efficient, high-quality repairs. These skills also laid the foundation for future services, including wire harness repair and potential field work on customer vehicles.

Although much of the customer's project data remained paper-based throughout this engagement, QLS began identifying opportunities where it could integrate its proprietary Dot platform to enhance future transparency, digital tracking and inspection reporting for the manufacturer.



THE RESULTS

The impact of QLS's engagement was both immediate and measurable. Over the course of the project, QLS reworked more than 500 battery packs—representing over \$14.8 million in product value—with zero quality returns attributed to the team. This performance preserved critical customer relationships while helping the manufacturer avoid costly warranty claims and reputational damage.



Production efficiency also improved dramatically. QLS consistently completed weekly rework quotas by Thursday rather than Friday, giving the customer flexibility to manage unexpected changes in demand. As a result, the company avoided the \$500-per-day, per-pack penalties tied to late deliveries.

The cost savings were equally compelling. QLS cut the third-party labor cost in half, while increasing output—delivering a total savings of more than \$430,000 compared to the prior provider. Weekly labor hours ramped from 35 to over 500 without requiring overtime, and all deadlines were met.

"On a project that was supposed to cost \$12 million, that's a game-changing level of ROI," says Burke. "And we did it while hitting every delivery milestone and maintaining a perfect rework record."

The customer also appreciated QLS's high level of agility. As schedules shifted and technical needs evolved, QLS responded quickly with the skill, structure and leadership needed to keep momentum.

"We've become far more than just a vendor for this customer. Now, we're a trusted extension of their team," says Burke. "The relationship we've built is going to fuel future projects together."

A MODEL FOR BATTERY SYSTEMS MANUFACTURERS

As electrification accelerates and battery systems become more complex, manufacturers servicing electric vehicles and other mobility applications face increasing pressure to deliver not only high-performing products but also responsive, effective warranty and repair programs.

This rework project demonstrates how QLS can serve as a scalable and proactive partner for high-stakes quality assurance engagements, even under the most challenging operational conditions.

This approach offers clear benefits for other battery and energy storage manufacturers:

- ✓ **Structured Scale-Up:** QLS's phased staffing model helps battery manufacturers scale rework quickly without sacrificing quality, which is critical for recalls, warranty issues or surges.
- ✓ **Technical Expertise:** QLS recruited technicians with battery systems, soldering and electrical expertise to reduce ramp-up time, boost quality and ensure safe, efficient rework operations.
- ✓ **On-Site Support:** Strong local leadership, supported by highly skilled quality technicians, enabled QLS to make real-time decisions and adapt quickly in a high-change environment.

With additional future projects like wire harness rework and field-based services already underway with the battery systems manufacturer, QLS has positioned itself as a long-term quality assurance partner for the customer and a proven solution provider for the battery systems industry.

"As battery technology continues to evolve, the need for specialized rework and repair will only grow," says Burke. "QLS is ready to meet that challenge—safely, efficiently and at scale."

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