



PULSE
360°

Total Visibility. Maximised Battery Life

Case Study | Pulse360° Service

How Pulse360° took on-site battery fleet from hidden abuse to near-perfect uptime



ABOUT THE PROJECT

The Client Profile

The client of this case study is a premier UK ambient logistics and supply chain specialist. As a leading third-party logistics (3PL) provider, the company manages high-volume warehousing and distribution networks for major international food and household brands.

The Challenge

Continuous 24/7/365 high-volume warehousing demanding maximum throughput and zero downtime. The facility relies heavily on a massive, constantly deployed forklift and Material Handling Equipment (MHE) fleet. With round-the-clock shift patterns, battery reliability and operational efficiency are paramount to prevent supply chain bottlenecks.

THE ON-SITE SOLUTION

Macro Fleet Management meets Micro Asset Visibility

To eliminate operational blind spots, the client invested in the Pulse360° Data Analytics Service. The engine behind this optimisation is Pulse360°'s capability to transform raw on-site data into actionable management insights, utilising a two-tier hardware setup to feed its analytic platform:



BOS
INTELLIGENT BATTERY ORGANIZING SYSTEM

Streamlines fleet operations by intelligently managing the battery-changing process, ensuring even asset rotation, enabling faster battery changes and optimising fleet capacity requirements across peak times.



eGO!
BATTERY PERFORMANCE MONITOR

Mounted directly to each individual asset, the eGO! tracks battery performance, capturing critical maintenance indicators like days of low electrolyte, over-temperature and overdischarge events.



DRIVING ROI THROUGH PROACTIVE INSIGHTS

The true power of the service lies in how Pulse360° aggregates this field data. Instead of reacting to premature battery failures, client's management team receives clear, predictive analytic. Pulse360° instantly flags which assets are being neglected or abused, allowing teams to intervene before permanent cell damage occurs. By turning chaotic battery usage into a transparent, structured data stream, Pulse360° successfully eradicated costly operational habits, maximised lead-acid asset lifespans, and secured flawless fleet uptime for the site.

66%
IMPROVEMENT
of Fleet Compliance¹

16%
INCREASE
in Fleet Performance²

94%
DROP
in Days of Low Electrolyte³

100%
ELIMINATION
of Battery Abuse⁴

1. Non-compliant same battery reconnects slashed from 8% down to 2.7%.

2. Maximum of fleet availability rose from 86% to 100%.

3. From a peak of 90 days of low electrolyte down to just 5.

4. From a peak of 30 abuse cycles down to absolute 0.

Data captured as of April 2026.

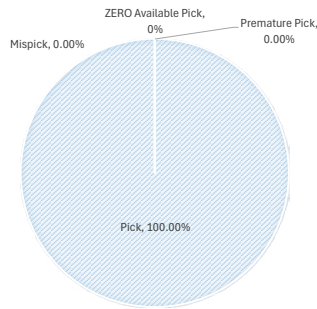


KEY ACHIEVEMENTS



Fleet Compliance

REACH Battery Pool



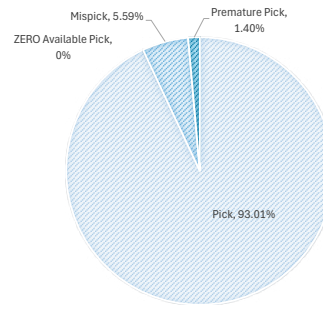
Month 1

Non-compliant same battery reconnects recorded at 8%.

The Trend

Steadily declined as the iBOS systematically managed proper fleet rotation and battery maintenance rules.

VNA Battery Pool

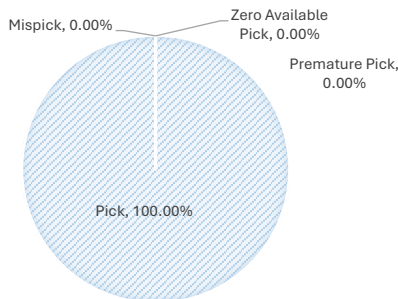


Month 1

Non-compliant same battery reconnects recorded at 3.1%.

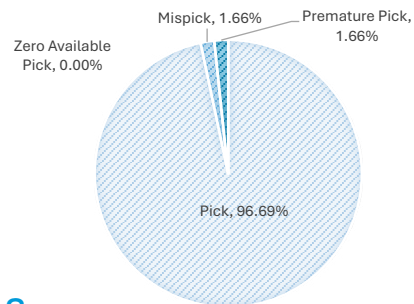
The Trend

Steadily declined as the iBOS systematically managed proper fleet rotation and battery maintenance rules.



Month 6

Same battery reconnects slashed down to a mere 2.7%, a massive 66% improvement in operator compliance.



Month 6

Same battery reconnects slashed down to an absolute 0%, a massive 100% improvement in operator compliance.

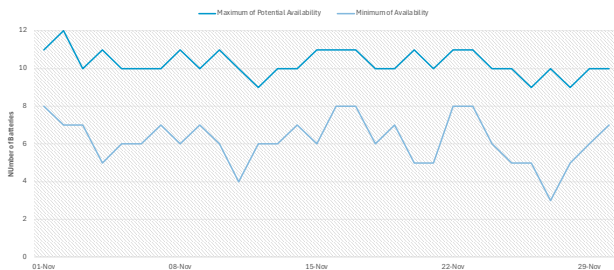


KEY ACHIEVEMENTS



Fleet Performance

REACH Battery Pool



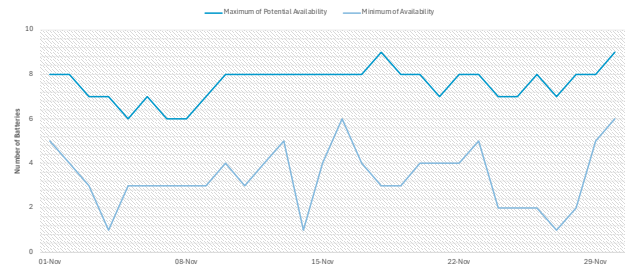
Month 1

Operational fleet availability was restricted to a maximum of 86%

The Trend

Rose consistently month-over-month as battery watering, charging, and rest cycles were optimised.

VNA Battery Pool

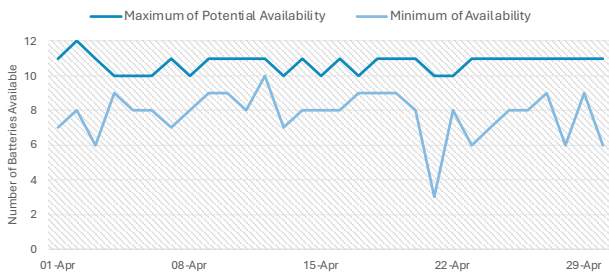


Month 1

Operational fleet availability was restricted to a maximum of 81%

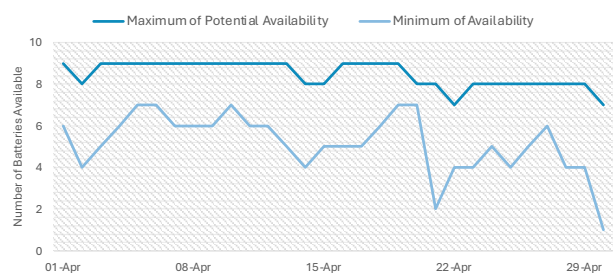
The Trend

Rose consistently month-over-month as battery watering, charging, and rest cycles were optimised.



Month 6

Unlocked a nearly 100% asset readiness rate, maximising daily warehouse throughput.



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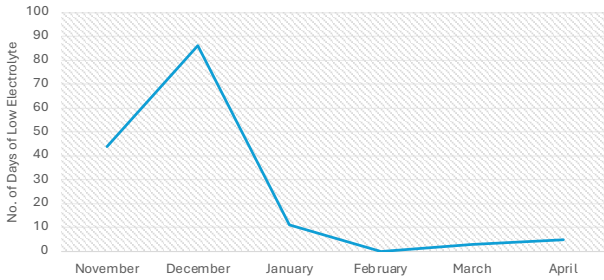


KEY ACHIEVEMENTS (CONT'D)



Days of Low Electrolyte

REACH Battery Pool



Month 1

A record of 44 days of low electrolyte level.

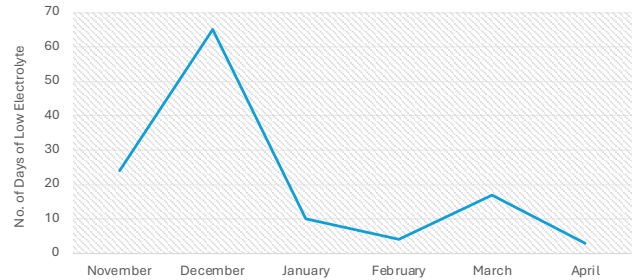
Month 2 - The Peak

Advanced analytics exposed a hidden legacy peak of nearly 90 days, allowing management to pinpoint and stop ongoing battery abuse.

Month 6

Significantly dropped to just 5 days, representing a near-total elimination of asset watering neglect.

VNA Battery Pool



Month 1

A record of 37 days of low electrolyte level.

Month 2 - The Peak

Advanced analytics exposed a hidden legacy peak of nearly 70 days, allowing management to pinpoint and stop ongoing battery abuse.

Month 6

Significantly dropped to just 3 days, representing a near-total elimination of asset watering neglect.

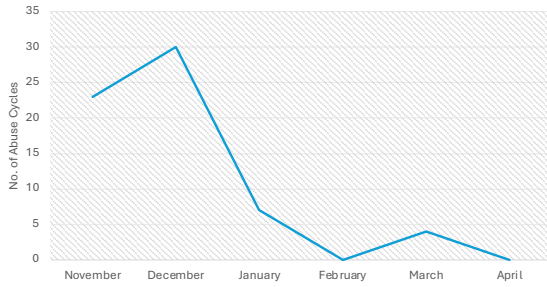


KEY ACHIEVEMENTS (CONT'D)



Battery Abuse Cycles

REACH Battery Pool



Month 1

23 damaging battery abuse cycles logged as operations began.

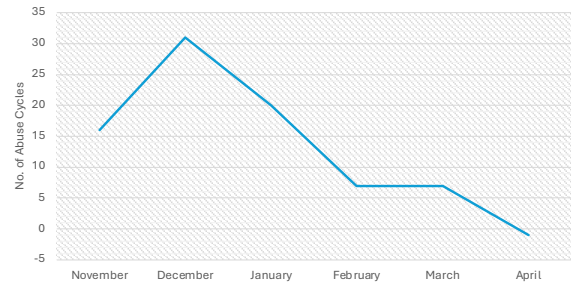
Month 2 - The Peak

Hit a critical peak of nearly 30 cycles as advanced analytic exposed poor maintenance practices.

Month 6

Plummeted to absolute 0, achieving a perfect 100% elimination of asset abuse.

VNA Battery Pool



Month 1

23 damaging battery abuse cycles logged as operations began.

Month 2 - The Peak

Hit a critical peak of more than 30 cycles as advanced analytic exposed poor maintenance practices.

Month 6

Reduced to zero (sustained), effectively eliminating abuse cycles.



EXECUTIVE SUMMARY

By converting recorded on-site battery room activity and battery health information into actionable, proactive insights, onsite operation team have moved from reactive failure response to targeted intervention. This shift in approach has proven successful in reducing unnecessary operational expense and improving efficiency throughout.

Data captured as of April 2026 shows measurable operational improvements:

- Non-compliant same-battery reconnects reduced from 8% to 2.7% (66% improvement)
- Maximum fleet availability increased from 86% to 100% (16% increase)
- Days of low electrolyte reduced from a peak near 90 to 5 (94% drop)
- Damaging abuse cycles reduced from a peak near 30 to 0 (100% elimination)

With damaging abuse cycles eliminated and watering neglect dramatically reduced, the Pulse360° service has created a measured approach to avoiding premature battery replacement. Even modest reductions in premature replacements translate into tens to hundreds of thousands of pounds in annual capex value.

For this client, preventing the premature replacement of 10% of the fleet then this would create an annual capex saving of ~£30,000*¹

The Pulse360° service is also actively balancing any of the STR batteries currently on site against fleet capacity, monitoring operational need and providing insight into safe off-hiring when possible. This would reduce the monthly opex.

The overall success of the service onsite has led to roll-out across multiple sites. This will allow benchmarking on an organisational level, helping to drive improvements across all sites within the network.

**1 (based on an average battery cost of £4,000)*





For further information,
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