Philadelphia Scientific®
industrial battery innovation

CASE STUDY

POWERING EFFICIENCY: HOW PHILADELPHIA SCIENTIFIC TRANSFORMED BATTERY MANAGEMENT FOR A NATIONAL WHOLESALE GROCER

Implementing Philadelphia Scientific's solutions revolutionized battery management for a US national wholesale grocer leading to measurable operational efficiencies, significant cost savings, and improved labor utilization.

SITUATION ANALYSIS

A leading wholesale grocery distribution company based in Northeastern US, faced significant challenges managing its industrial batteries, which powered a large fleet of forklifts and pallet jacks. Battery inefficiencies led to excessive operational costs, shortened battery life, and wasted labor hours. In response, the company partnered with Philadelphia Scientific in 2014 to implement the intelligent Battery Optimization System (iBOS). Initially deployed in data-collection mode, iBOS went live in July 2014, providing actionable insights and tools for battery management. The competitive grocery distribution environment required improved efficiency, making the adoption of such a system critical for maintaining a competitive edge amidst rising labor and energy costs.

CHALLENGES

Before the implementation of iBOS, this wholesale grocery distributor lacked visibility into the utilization of its battery assets. Operators frequently replaced batteries without understanding their condition, resulting in excessive labor hours and reduced battery lifespan. Poor maintenance practices, such as insufficient cool-down times and dry batteries, further exacerbated the problem. A bloated battery fleet contributed to unnecessary capital expenditures, while inefficient workflows diminished overall productivity. These issues strained the company's resources and limited its ability to achieve operational excellence.

SOLUTION

Philadelphia Scientific's iBOS addressed these challenges comprehensively by transforming how this wholesale grocery distributor managed its batteries. The system analyzed battery usage data, identifying underperforming units for scrapping and calculating the optimal fleet size needed to support operations efficiently. It also implemented rotational battery usage, ensuring that the coolest, fully charged batteries were selected first. This approach prevented overheating, extended battery life, and increased the number of battery cycles by 25 percent. The system enforced proper cool-down periods, addressing heat-related battery degradation, and introduced an automated watering process that resolved issues with dry batteries, improving their performance and longevity. Additionally, iBOS identified faulty chargers for repair, further enhancing the effectiveness of the fleet. These interventions reduced waste, optimized maintenance practices, and freed up labor for higher-value activities.

> *"The right data doesn't just support decisions – it transforms them. When insight replaces guesswork, efficiency follows, and the bottom line improves."*
>
> **DANA JONES**
> **CEO, PHILADELPHIA SCIENTIFIC**

KEY RESULTS

Annual battery change costs reduced by over

$194K

Extended battery live achieved an additional annual savings of

$42.6K

Recouped initial investment in iBOS within

3 months

RESULTS

Philadelphia Scientific's solution delivered substantial financial and operational benefits. The wholesale grocery distributor reduced its annual battery change costs by $194,728 and lowered its fleet size from $2.5 million to $1.9 million, resulting in a $600,000 capital savings. By extending battery life, the company achieved an additional $42,600 in annual savings on battery purchases.

These changes significantly streamlined operations, enabling the company to redeploy labor from battery maintenance to other critical tasks. Within three months, they recouped their initial investment in iBOS, setting the stage for ongoing cost savings and efficiency gains.

IMPACT

The implementation of iBOS profoundly impacted this wholesale grocery distributor by saving hundreds of thousands of dollars annually. The company optimized its battery management practices, improved labor efficiency, and reduced waste. These improvements strengthened its operational foundation, positioning the grocery distributor as a leader in sustainable and cost-effective distribution practices.

Through its partnership with Philadelphia Scientific, the company not only achieved immediate results but also established a model for long-term operational excellence.

KEY BENEFITS

Here are five key benefits of the solution implemented by Philadelphia Scientific:

- **Significant Cost Reduction:** **Annual battery change costs were reduced by $194,728, with additional savings from decreased battery purchases and optimized fleet size.**
- **Enhanced Battery Lifespan:** **Improved maintenance practices, such as enforcing proper cool-down periods and addressing overheating, extended battery life by 25%, reducing the frequency of replacements.**
- **Optimized Battery Fleet:** **The battery inventory was reduced from $2.5 million to $1.9 million, saving $600,000 in capital expenses and ensuring the fleet size matched operational needs.**
- **Labor Efficiency:** **Freed up labor hours previously spent on unnecessary battery changes and maintenance, allowing staff to focus on higher-value activities.**
- **Rapid Return on Investment:** **The system paid for itself in just three months, delivering ongoing annual savings of over $237,600.**

> *"Any new battery management investment must be justified with a clear return on investment. As a privately owned company, we don't spend unless it makes sense – whether it's extending battery life or right-sizing our fleet, every decision must be vetted for real impact."*
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> **SENIOR SUPPLY CHAIN LEADER**
> **NORTHEASTERN WHOLESALE GROCERY DISTRIBUTOR**

ABOUT US

For over 40 years, Philadelphia Scientific has leveraged their deep understanding of batteries to design, engineer and manufacture unique solutions that deliver the most efficient charging and preventive maintenance products to keep their customers fleet running at maximum capacity. Their scalable hardware and intelligent software solutions improve workflow, maximize asset value, and drive efficiencies in how our customers manage their battery investment.

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