

Let's make battery recalls a thing of the past

Voltaiq identifies the variations that cause batteries to fail and combust – saving you millions in recall costs and brand damage.

It may be difficult to remember, but every telephone was once tethered to a wall. Removing the cord and embedding processing power changed society. And now the same dynamic is playing out across all of our devices. Intelligent, electrified products – most of all, cars – will increase our freedom, help heal the planet, and enable new business models and industries. If we can keep the batteries from blowing up.

Instances of exploding batteries are constantly in the news, and one adverse event can have enormous ripple effects. Sony recalled 9.6 million laptop batteries at a cost of \$429 million. Hyundai and LG Energy are spending an estimated \$900 million to recall Kona EVs – that's \$11,000 per vehicle.

THE HIGH COST OF BATTERY FAILURE

Recalls are more than just logistical hassles. Samsung's recall of its Galaxy Note 7 significantly impacted profits and brand sentiment. See the cost of a major recall to Samsung below:



NUMBER OF UNITS RETURNED

3 million



TOTAL COST

5.3 billion



DECLINE IN OPERATING PROFIT

-96%



INCREASE IN NEGATIVE BRAND SENTIMENT

186%

Such recalls can also do long-term brand damage. Think about when Samsung's Galaxy Note 7 phones were banned from airplanes. "The company is still living with that," says Voltaiq CEO Tal Sholklapper. "In the EV space, recalls are stunting growth. When early adopters are told not to park a car in the garage because it might explode, that creates fear, uncertainty, and doubt for anyone thinking about going electric."

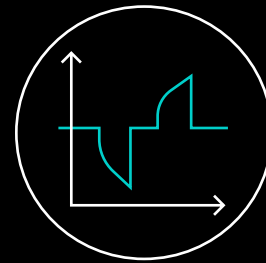
Why does this keep happening? Simply put, because no one has been able to untangle the enormous complexity of battery systems. Everyone knows that the smallest misalignment or abuse can cause materials to combust. The trick comes in anticipating or mitigating such errors.

That's where Voltaiq comes in. Our EBI platform is like a battery CT scan or MRI. It reveals the underlying chemistry during normal operation and instantly detects cell degradation, conducts root-cause analysis, and performs competitor benchmarking.

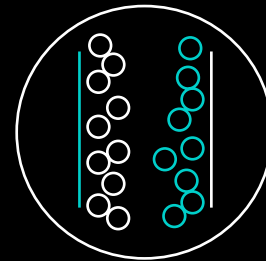
"When you look at materials innovation, production expansion, and supply chain developments, there are bound to be problems, and none of the old tools apply," says Sholklapper. "Every EV is a billion-dollar bet on the battery. If you can identify a faulty batch, that can translate to hitting a product launch or avoiding a costly recall after you've gone to market. It will easily save a company millions." ●

HOW EBI DECREASES BATTERY FAILURE

EBI's instant analysis draws insights about a battery to help predict and prevent failure. Here's a simplified view of how it works.



The EBI system automatically collects time-series charge and discharge data.



EBI's instant analysis draws insights about the battery's inner electrochemistry and physical health.



EBI matches battery behavior against known profiles that can lead to failure and recommends corrective action.