Hitachi ZeroCarbon

Introducing ZeroCarbon BatteryManager

Maximize your fleet’s most valuable asset

HITACHI

Your opportunity

Your fleet electrification journey does not end when you've replaced your existing diesel vehicles. **That is just the start.**

Decarbonization is an opportunity to reimagine the value of your fleet and its key assets. Each vehicle will generate rich data that allows you to manage your operations effectively.

The battery is the most valuable part of your electric vehicle. When managed carefully, it can elevate your fleet operations and outlast the lifespan of petrol or diesel equivalent vehicles.

Monitoring and optimizing your EV battery's health and usage can:

- Extend its shelf life and reduce chances of degradation
- Support route planning and delivery
- Drive operational efficiencies
- Maximize its residual value and second-life opportunities
- Help identify, diagnose, and mitigate risks to prevent failure

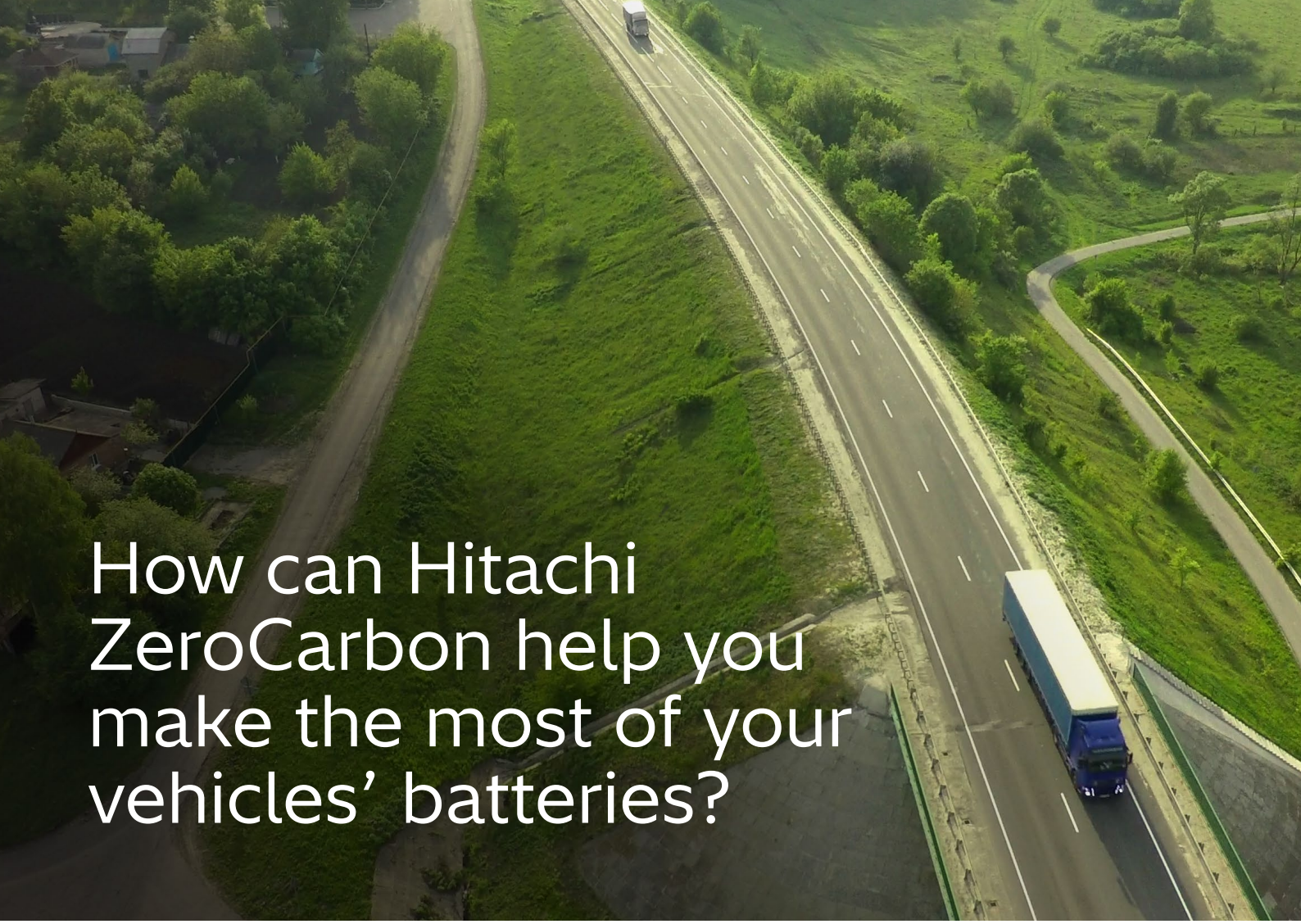
How long can they last?

Most EV batteries are designed to last between 10 to 20 years, and manufacturers typically offer warranties covering 8 years or 100,000 miles.

Battery longevity depends on several factors, including:

- Usage habits
- Charging patterns
- Climate conditions

However, many **EV batteries retain 70–80% of their original capacity** even after 150,000–200,000 miles, making them highly durable and capable of retaining strong residual value.



How can Hitachi ZeroCarbon help you make the most of your vehicles' batteries?

ZeroCarbon BatteryManager provides you with the data, insights and recommendations to optimize the management of your batteries, reducing your operational risk and unlock significant cost benefits.

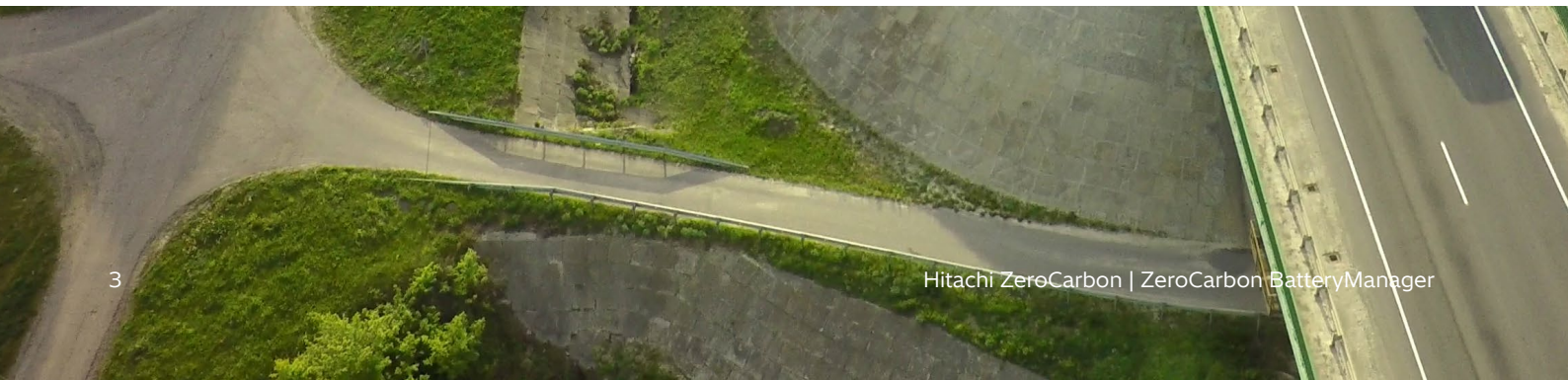
Maximize your battery's residual value: Generate new revenue streams by certifying the condition of batteries at the end of their first life, so they can be sold or reused.

Extend your battery's life: Reduce the number of replacements required, deferring CapEx, and depreciate the asset over a longer-term to support your cashflow.

Higher safety, less downtime: Reduce your operational downtime and risk of catastrophic failure with insights into battery condition and proactive alerts.

Independent data validation: Gain detailed usage insights to support warranty claims and reduce out-of-warranty replacement expenses.

Simple commissioning: ZeroCarbon BatteryManager is chemistry agnostic, cloud-based and compatible with existing vehicle telematics.



How does it work?

MONITORING:

1. AI-powered battery agnostics

Our electrochemistry-based algorithms use telematics to accurately assess battery condition, independent of the battery management system (BMS). AI-driven predictions forecast usable lifetime and suggest potential optimization strategies and recommendations.

Key benefit: Forecast and manage battery health and status with confidence

2. Easy, scalable IT system integration

Highly scalable and API-integrated cloud infrastructure designed for reliable and safe management of large electric vehicle fleets.

Key benefit: IT that gets your business, and protects your data

OPTIMIZATION:

3. Detailed insights into fleet performance

Understand how current usage patterns are affecting battery stress and long-term asset health. Take positive action to reduce degradation and extend its shelf-life.

Key benefit: Proactively maintain the battery asset and understand how usage can impact state of health

4. OEM agnostic with accuracy across different battery chemistries

Compatible with all major battery chemistries, including NMC and LFP, ZeroCarbon BatteryManager offers you versatility across your fleet, integrating with your chosen vehicle or battery manufacturer.

Key benefit: Single end-to-end solution that delivers detailed analytics to any vehicle or battery type

Just as there is no one-size-fits-all approach to the EV transition, and successfully managing your battery assets, Hitachi ZeroCarbon provides tailored consultancy, implementation and ongoing strategic support for ZeroCarbon BatteryManager.

Ready to find out what difference this could make for your operations?

Get in touch with us now