



From Fuel Cards to Energy Management

Fleet electrification means
radical change for fleet owners

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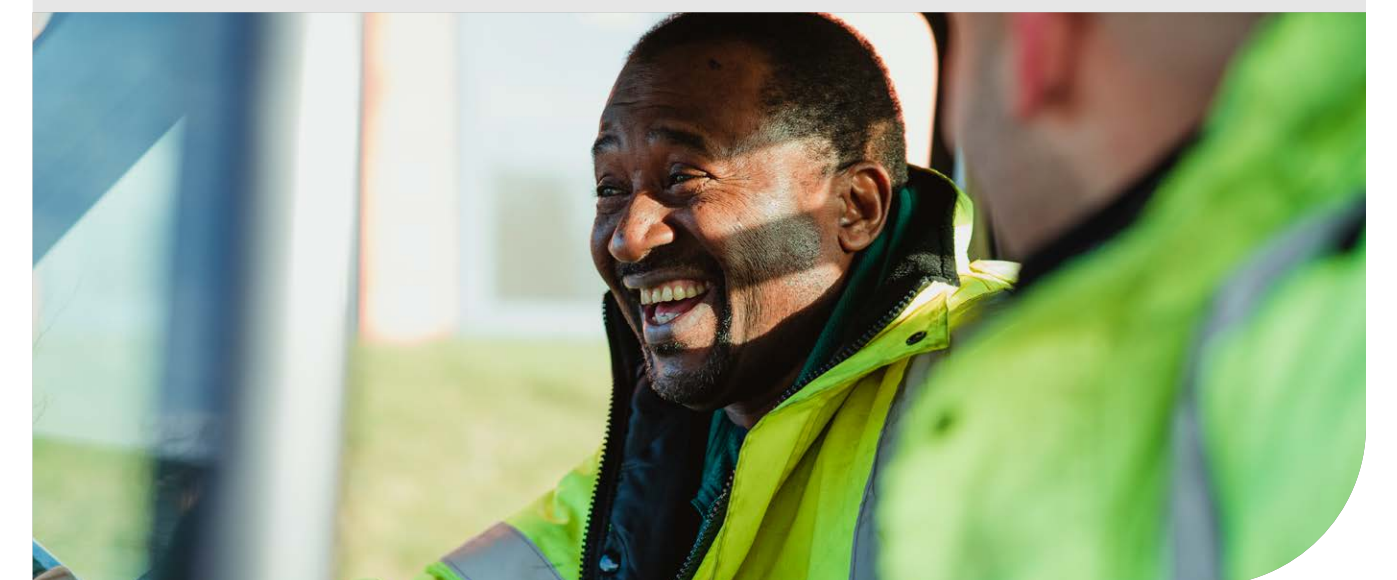
Fleet Operations

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About VEV

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Executive Summary

The role of fleet management is undergoing radical change with the introduction of electric vehicles (EVs).

In addition to the existing complexities of managing commercial fleet operations, Fleet Managers will have to leave behind the familiar fuel card and learn about energy management. They'll still be managing vehicles, drivers and journeys, but now doing so within the parameters of energy supply and charging schedules.

This makes the role of an EV Fleet Manager a new and different job for which they'll require knowledge training. They'll also need to learn to use the tools available to make the job easier, tools that provide the multiple data sources for energy demand, charger availability and vehicle scheduling.

VEV supports fleet owners through this fundamental transformation. Bringing in experts to take a fully integrated approach to the EV transition is an investment that will pay dividends in terms of speed and cost-efficiency.

UK fleet emissions make up 10% of the country's total carbon emissions. Electrifying fleets is a step change towards net zero. If we do it smartly, with efficient allocation of new resources within a finite supply chain, our entire sector will benefit.

Mike Nakrani
CEO



Energy

Energy becomes the main source of complexity for a fleet transition. While selecting the right vehicles is important, driving energy efficiency, controlling charging spikes, sourcing green energy and on-site renewables are the critical success factors. Even managing the energy in your EV is essential to protect the battery, reduce charging cycles and improve TCO (total cost of ownership).

One **ultra rapid charger**

requires the same power supply as an entire block of flats

Grid upgrades

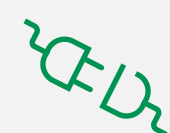
Run a fleet depot as a micro-grid

CO₂ savings

The biggest cost of the EV transition. Most fleets can avoid the need for a grid upgrade with analytics and smart charging (see [Control Platform](#))



Currently 1-3 years lead time



UK grid cannot support the anticipated demand



Complexity around regulation of sharing costs vs paying directly



Complicated landscape with ICPs, DNOs and IDNOs



Unused grid supply is a huge cost/waste - e.g. a 2MVA connection costs tens of £'000s



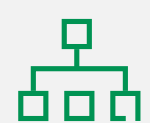
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Grid upgrades



A micro-grid comprises grid connection, solar generation and battery storage that together meet the EV fleet's power requirement

Run a fleet depot as a micro-grid

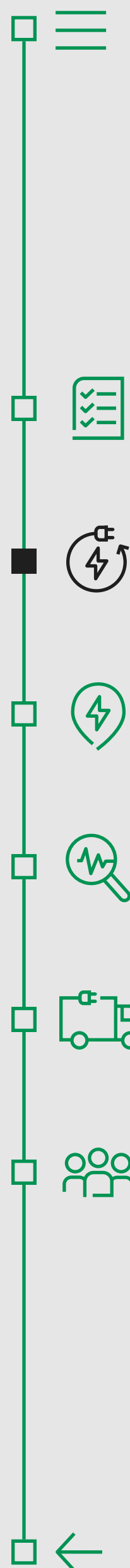


On-site renewables will improve TCO but need to be linked to scaled EV infrastructure

CO₂ savings



Grid limit: take the absolute peak and build in energy contingency at the start - determine how far you can push that contingency as you scale your EV fleet



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Grid upgrades

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CO₂ savings



Monitor and report CO₂ savings to the business



Shows the ROI of fleet electrification



ESG compliance provides access to low-carbon tenders

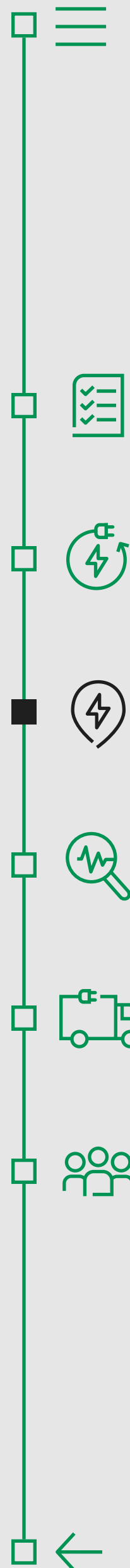


The cleanest energy is that generated at your site because you know the source



VEV









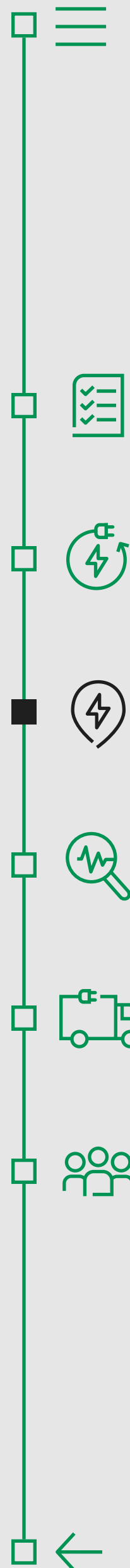
Charging Infrastructure

A data-led approach avoids the risk of over-spend and provides the optimum charging infrastructure for your fleet. It is not a case of one charger for every vehicle – a mistake we regularly see from a lack of data-led planning.

We've seen fleets over-invest by as much as **20%** without adequate planning

Right-Sizing	Charger Types	Uptime of Chargers	
 <p>Start with the telematics data from your current fleet – each fleet has different and specific requirements</p>	 <p>Evaluate the quality of your fleet data. Data quality directly affects the accuracy of analysis and success of your EV transition.</p>	 <p>The analysis will guide your decisions on the size and shape of your charging infrastructure – don't assume it's 1:1 vehicle to charger</p>	 <p>Data insight will determine the optimum charge scheduling to keep your vehicles on the road</p>





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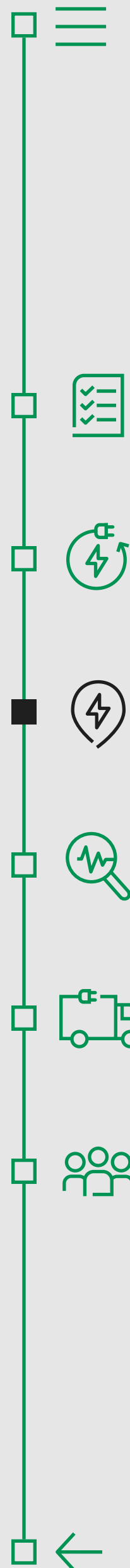
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Right-Sizing	Charger Types	Uptime of Chargers
<ul style="list-style-type: none">Slow 3-6kWFast 7-25kWRapid 50kWUltra-rapid up to 350kW	<p> Options are there to match to any fleet profile</p> <p> For standard daily operating profiles with long charging window, use slow chargers</p>	<p> For unpredictable, short charging windows, you'll need ultra-rapid chargers</p> <p> Fleet complexity makes it more challenging and data-driven decisions paramount</p>





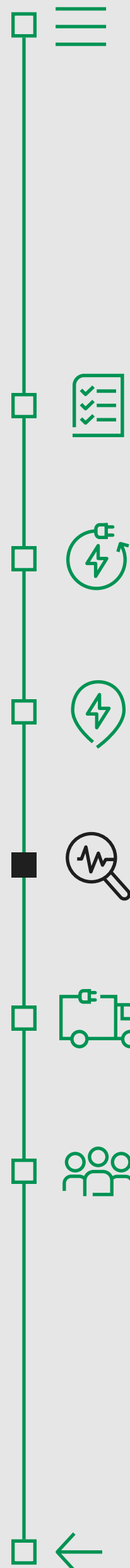
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Right-Sizing	Charger Types	Uptime of Chargers	
 It's critical to monitor your chargers in real-time	 Use real-time alerts to enable remote triage and issue resolution	 Charger downtime risks vehicles being non-operational	 Over 80% of issues can be fixed remotely






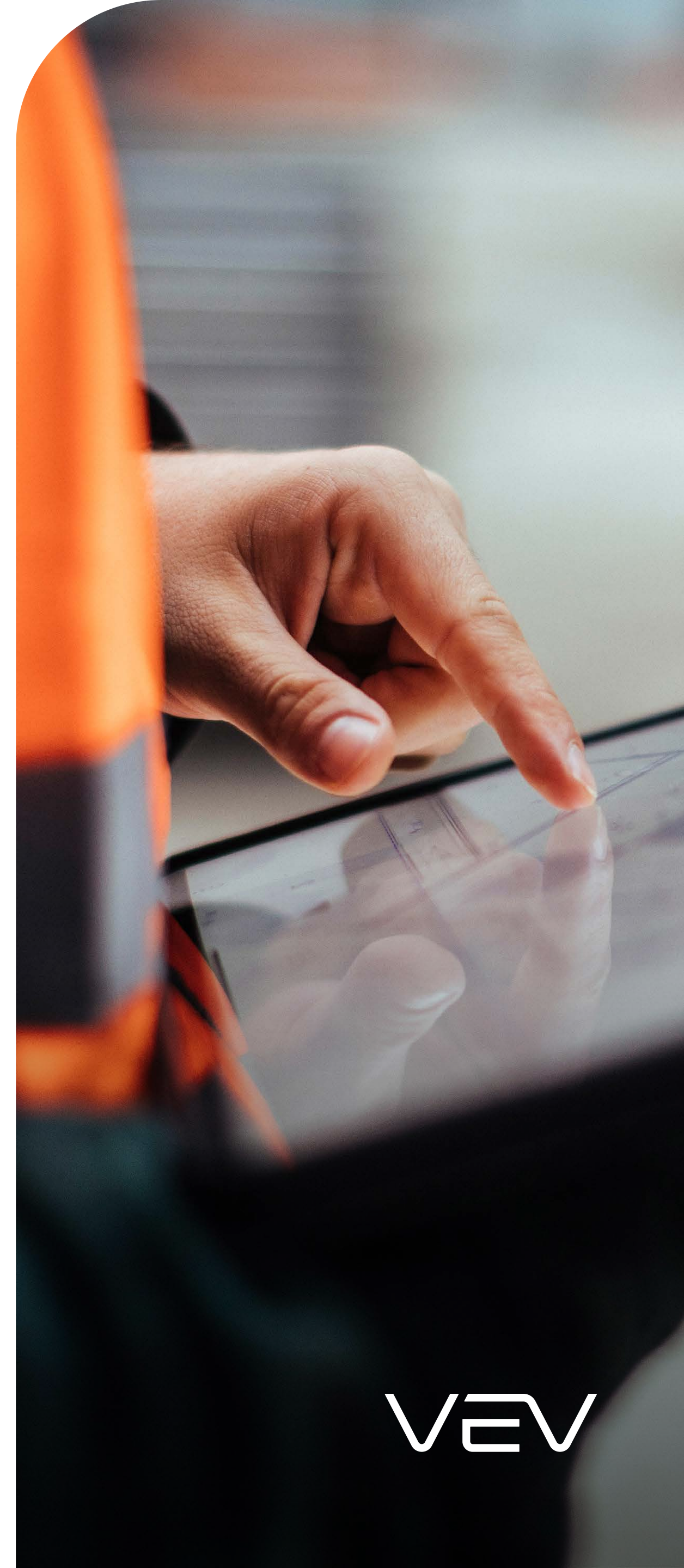


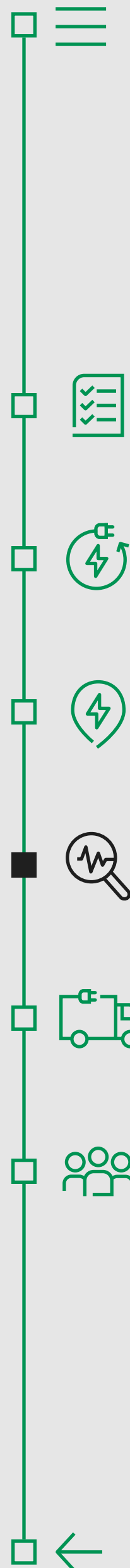
Control Platform

To run a resilient EV fleet, Fleet Managers must have a robust control centre that combines and interprets multiple data sources in real-time.

The platform should **integrate** with other essential business functions

Dashboards	Smart charging	Issue resolution
 <p>It's a new way of working with management dashboards, viewing data from multiple sources</p>	 <p>The Fleet Manager will use the insights to optimise the use of vehicles, chargers, energy and drivers</p>	 <p>The data insights enable effective decision making in real-time to keep the fleet on the road</p>







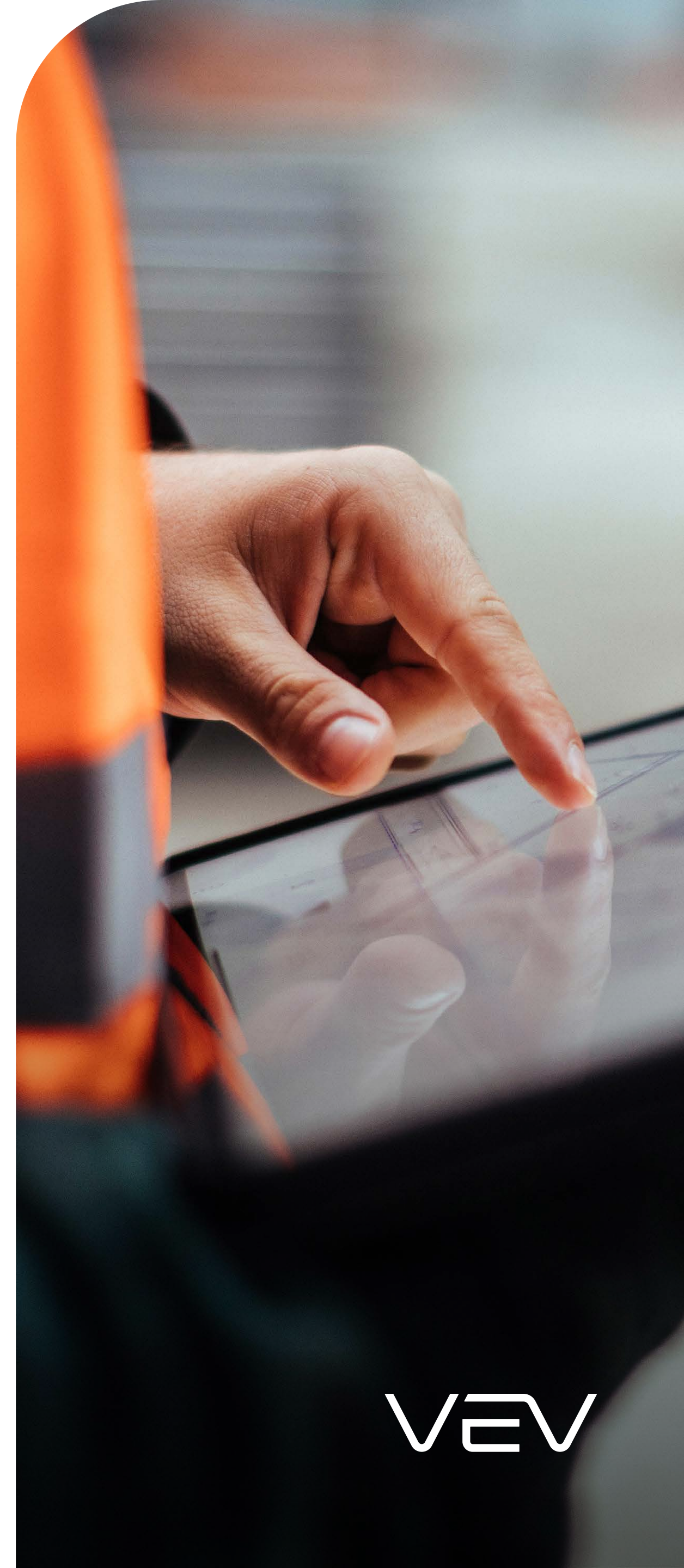


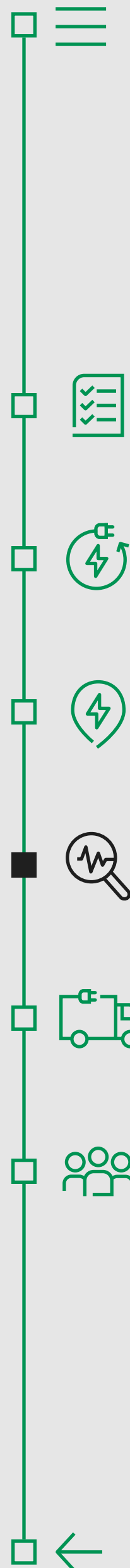
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 <p>The optimal charging pattern depends on multiple factors including your own operations and external factors</p>	 <p>Operational factors: grid limit, number of chargers, vehicle priorities and departure times</p>	 <p>External factors: weather, traffic, terrain, driving style</p>	 <p>Smart charging incorporates these factors to manage the energy flow to your vehicles and ensure enough charge to complete critical fleet operations</p>






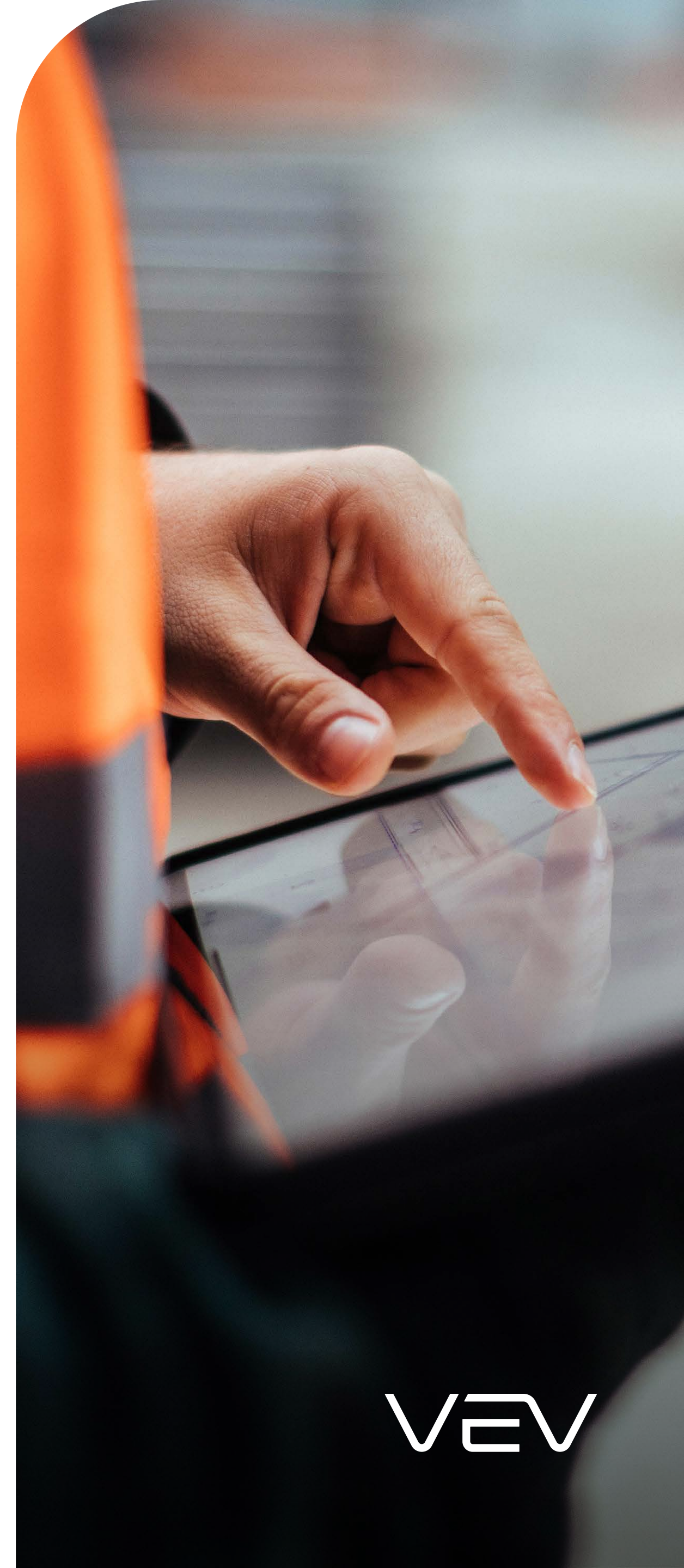


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 <p>EV chargers are smart IoT devices that share data with the control platform</p>	 <p>The platform must interpret those device events and issue alerts for information or action</p>	 <p>This enables the Fleet Manager to triage and organise issue resolution remotely to maintain fleet resilience</p>





EV Fleet Operations

The new and more complex nature of fleet management requires new and different skillsets across your teams. It's a fundamental change of working practices and also offers the opportunity to review and optimise your fleet operations.

Upskilling

Your transition to EV will include upskilling fleet managers on energy management. You'll also train your drivers on electric vehicles. After EV training, drivers can achieve up to 20% more range from EVs, which will have a major impact on operational efficiency and energy costs.

New Tools

Tools and software-based solutions are available to streamline the new task of EV fleet management, from monitoring different charger speeds to the best-fit charge scheduling, to energy sources and consumption.

Rethink Fleet Operations

Going through the process of building EV charging schedules into your regular operational patterns, will mean you ask yourself questions about how your fleet operations currently work. This can unearth opportunities to reduce complexity, wastage and costs and improve fleet reliability as a result of the transition.





About VEV

VEV helps organisations deliver on their carbon reduction ambitions with an end-to-end fleet electrification solution that integrates across vehicles, charging infrastructure and power.

VEV is owned by Vitol, a world leader in energy, which to date has committed circa \$2 billion to sustainable energy initiatives worldwide.

VEV navigates the complexities of EV transformation to design and implement cost-effective EV fleets optimised for specific fleet requirements. We support EV fleet operations to guarantee resilience and keep mission-critical fleets running at scale.

Bespoke, scalable business solutions are designed around the client's own fleet data analysed by a powerful assessment tool and our experts in energy and sustainable e-mobility. VEV sets businesses up for success in an electrified future.

More information at [VEV.com](https://www.vev.com)

Contact us ask@vev.com

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