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Recharge

A shared, integrated future for heavy-duty fleet electrification

How uniting public, semi-public and private charging infrastructure in a single shared network can help heavy-duty fleets to accelerate electrification





Only 10%

of transport organisations believe that all the right conditions needed (in the area of infrastructure and resources) are in place to facilitate carbon reduction.²

Foreword

By Conrad Mummert,
Head of SBRS, a member of the Shell Group

As reported by the United Nations Economic Commission for Europe (UNECE), global transport accounts for 23% of the world's annual greenhouse gas (GHG) emissions.¹ Within that, road transport – including heavy-duty vehicles (HDVs) such as buses and trucks – generate 69% of those emissions.¹ Across the industry, there's a growing understanding that this environmental impact needs addressing – and that businesses need to act today. An understanding shown by the fact that carbon emissions reduction has become the key strategic priority for heavy-duty fleet operators.²

There are several reasons for fleet operators to begin their electrification journey as soon as possible. The EV transition will be challenging, requiring different ways of operating – not to mention new investment. So, the sooner businesses start, the quicker they are likely to learn how to implement an electrified heavy-duty fleet at scale and how to run it efficiently.

Yet, while businesses understand the need to transition to low- and net-zero-carbon operations, concerns around the feasibility of delivering the transition remain.² Our internal 2024 'Decarbonisation in Transport' survey of 377 global transport leaders and decision makers found that only 10% of transport organisations believe all of the right conditions needed are in place, in the area of infrastructure and resources, to facilitate carbon reduction.²

Cost also remains a key concern, with four in 10 transport leaders surveyed highlighting that very few of their customers would be willing to pay a premium for lower-emission products and services.² And many still require assurances that transitioning from an internal combustion engine (ICE) to an EV heavy-duty fleet won't impact scheduling, efficiency or delivery timeframes.

According to Shell's decarbonisation in transport survey, 60% of heavy-duty fleet leaders believe that the improvement of

infrastructure is the top action needed to have an impact on carbon emissions reduction efforts by 2030.² This demonstrates that it's crucial to establish an effective, reliable and accessible EV infrastructure to help mitigate any impact on operations and costs.

That's why, at SBRS, a member of the Shell group, we're working closely with fleet operators in Europe to provide wider access to cost-effective charging solutions at the depot and out on the road compared to what they have today. This includes the development of a shared, integrated charging network for HDVs that combines private, public and semi-public charging locations into a single network to help make the transition more commercially viable for businesses, whether it's tapping into new revenue streams, optimising charging to save on energy costs or gaining access to stable and reduced energy pricing (per kWh) across the Shell network. A shared network that can help overcome the barriers to electrification can reduce by reducing the cost of investment and addressing the infrastructure gap. Our aim is to work with the wider industry to turn Europe's charging infrastructure into an integrated ecosystem – one that grows stronger with every new eDepot location and every new fleet that becomes a part of it. In essence, we are working with fleets to create more than just a network. We are creating the foundation for a shared electrified future.

The solutions that underpin this shared network can help fleets to meet their electrification targets without having to disrupt current performance. Yet to capitalise on their potential, fleets must act now. In this report, we set out practical steps that transport leaders can take to help them achieve emissions reductions today while optimising efficiency, performance and value long into tomorrow.

I hope you find it useful.

Conrad Mummert

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Today's eMobility Landscape

Shell's decarbonisation survey found "reducing carbon emissions" to be the number one priority for heavy-duty fleets across Europe², showing that the momentum for heavy-duty fleet electrification is growing. Regulatory pressure and technological developments are combining to drive one of the most significant transformations the transport sector has ever seen.

Fleet operators are coming to recognise electrified operations as their most effective route to decarbonisation. Full electric power is seen by 56% of heavy-duty fleets as the most promising alternative propulsion technology for their industry.² Regulatory targets implicitly favour electric drivetrains, which offer zero tailpipe emissions – making them well placed to meet long-term compliance standards. Yet, heavy-duty fleet electrification is not just a long-term goal – it is a critical shift that operators should start embracing now to stay ahead of tightening regulations and increasing customer demands.

While diesel remains dominant, the transition to electric trucks (or e-trucks) in Europe gathers pace. In H1 2025, e-truck registrations grew by 46% year on year.³ This led to a rising market share of 3.6%, compared to 2.1% in H1 2024.³

The Netherlands led this trend with 187.6% growth in H1 2025, followed by Italy (+184.8%), Sweden (+155.4%) and – outside the EU total – the UK (+81.8%).³

Germany still leads the way in total registrations with 1,881 new e-trucks hitting the roads in H1 2025, helping it to maintain steady growth at the same rate as H1 2024.³



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Roadblocks remain

Yet the path to fleet electrification is highly dependent on the type of vehicle fleet in operation as well as local market conditions, including regulations, incentives and infrastructure. For example, purchase subsidies and incentives for EV and battery manufacturing are playing a key role in driving growth in EV adoption within developing nations.⁴ When it comes to vehicle types, heavy-duty vehicles (HDVs) require more powerful charge points and greater space to operate than LCVs, which are a couple of the reasons why the deployment of these charge points has been slower.

Other barriers to adoption persist. According to Shell's internal survey of transport leaders carried out in 2024, ICE vehicle drivers still cite the high cost of vehicles along with issues like the range of EV models, and availability of public EV charging points as reasons not to shift to EVs.² This is despite the fact that evolving technology is helping to address the issue of range even with HDVs.

For instance, electric trucks are emerging with the ability to travel up to 600km on a single charge.⁵ The growth in adoption of eBuses today also demonstrates the future possibilities for fleet operators with trucks (see: How heavy-duty EVs are getting up to speed). Many drivers are also held back by a lack of information regarding best practices for employees, with only 6% of European fleet employees receiving comprehensive training on how to use an EV charging point.⁶

These challenges are, in turn, holding them back from adopting EVs at scale.

However, from the vehicles to the infrastructure that supports them, there are solutions already available. The key to long-term success therefore lies with identifying and establishing the solutions that best meet the specific needs of each business and their customers.

In a journey that affects everyone, there is no one-size-fits-all way ahead. The next section of this paper explores how fleets can find the right road for them.

The way ahead

These are complex challenges, and it is understandable that fleet operators may be unsure about how best to balance the pressure to decarbonise through electrification with how they manage higher upfront costs and the risk of compromising on the reliability and efficiency of their operations.

How heavy-duty EVs are getting up to speed

There are encouraging signs that the electrification of road transport is accelerating across Europe:



Electric truck registrations for H1 2025 grew by 46% year on year, increasing market share to 3.6% (compared to 2.1% in H1 2024).³



Electric bus registrations rose by 26% in H1 2025, increasing their market share from 16.4% in H1 2024 to 21.6% in H1 2025.³

Electric buses offer an important showcase for fleets that operate ICE trucks of the journey their business can take with electrification. With both vehicle types featuring similar technical requirements and logistical schedules, there is a chance to look at the progress made with electric buses and explore how that can be applied to the world of trucking.





02 Powering the EV transition for fleets

While every fleet's electrification journey is unique, there are some universal steps operators can take to accelerate their progress. This section looks at practical actions for setting out on the road to heavy-duty eMobility success.

These steps centre around three key areas:



Maintaining operational efficiency



Maintaining operational efficiency

Whether operators and owners are just starting out towards decarbonisation or already well on the way, a key concern is minimising any disruptions to operations and customers.

This includes ensuring their EV fleet works as efficiently as their existing ICE one – making the transition to electrification while optimising driver hours and maximising vehicle utilisation. The challenge is to fit EV charging cycles into already tight schedules, using existing periods of unavoidable downtime (such as driver rest periods or loading and unloading times) to their advantage as much as possible.

A good place for fleets to start is by looking at the daily routines of their individual vehicles, whether ICE, hybrid or EV. This includes the routes and available public and private charging facilities to identify where recharging might be required and ensure EVs (and other vehicle types) are always ready to go. This will also give operators the ability and agility to scale their EV fleet according to their business needs.

For many fleets, private charging infrastructure plays a crucial role in driving cost efficiencies. This is often backed up by a public charging

network that offers an essential solution out on the road – offering opportunities for drivers to stop and recharge (their vehicles and themselves). With private, fit-for-purpose charging infrastructure complemented by a robust and reliable public charging network, these businesses have greater control over the charging process.

Finding the solutions that can meet a fleet's current and future business needs is vital. Right now, 53% of businesses with HDVs say they lack access to public charging infrastructure² while 51% feel increasing the number of public EV charge points would have a significant impact on their emissions-reduction efforts.²

Operators and owners need to identify and scale the right infrastructure, including charging locations, connector types and energy supply. This involves exploring the required power options for charge points based on the specifications of each vehicle and the schedules they are operating on. Within this, fleet operators should explore the support they need to maintain efficient operations as they electrify their fleet and implement the right solutions for their specific needs. And it is not just about the needs of their own fleet. Operators can also look at

In this context,
Reliable charging infrastructure
is key to operating at peak efficiency and avoiding unplanned downtime.



who else might benefit from the use of any infrastructure they implement – including third-party suppliers or other fleets whose routes pass nearby.

A solution to this current lack of infrastructure is to boost access to cost-effective charging solutions for fleets of different sizes and capacities through an integrated network of private, semi-public and public charging locations. This includes working with fleets to tailor EV charging infrastructure to their own day-to-day operations, routes and vehicle types – as well as those of their partners – while assisting them in building a robust eMobility plan.





eMobility in action: Operational efficiency

Electric buses have been contributing to reduced emissions in major cities for years⁷, helping reduce traffic and enhance air quality. But they come with the unique challenge of needing overhauled charging capabilities.⁸

In Brussels, SBRS GmbH (a member of the Shell Group) developed an eDepot solution that included the installation of charge points with varying wattage along the 64 bus route and even incorporated a fast-charging point at an existing central passenger stop. All of which was customised to better suit the roof placement of the connection ports on electric buses while fitting the charge point into a small pedestrian zone without the need to take up tarmac space. Another key element was how to power the charge point at

the passenger stop, finding space for the equipment to provide an energy supply in the heart of a busy world capital. This was solved by placing the equipment underground in a unique set-up, making it invisible to bus users. It is a great example of how a bespoke solution can help mobility systems with tailored solutions, including truck fleets, solve hurdles to electrification. And this highlights the similarities in the fundamental technical

challenges and the expertise needed for both bus and truck electrification. Another example is the **Shell Megawatt Charger**, which can recharge electric trucks, electric buses and ferries with 1MWh batteries in just two hours.*⁹ It is designed to showcase how road transport and marine businesses can access efficient, compatible and flexible charging solutions that support their electrification efforts.⁹



* When charged via the Megawatt Charging System (MCS) connector, charging speeds can vary depending on factors like battery condition, ambient temperature, concurrent energy use and energy losses. Maximum continuous rating of the MCS connector is 3,000 Amps.⁹

The Shell Megawatt Charger can recharge electric trucks, electric buses and ferries with 1MWh batteries in **just two hours**^{*⁹}



A practical guide to maintaining operational efficiency with EVs

Maintaining operational efficiency is a key concern for heavy-duty fleets as they transition to EVs, but what does this look like in practice?

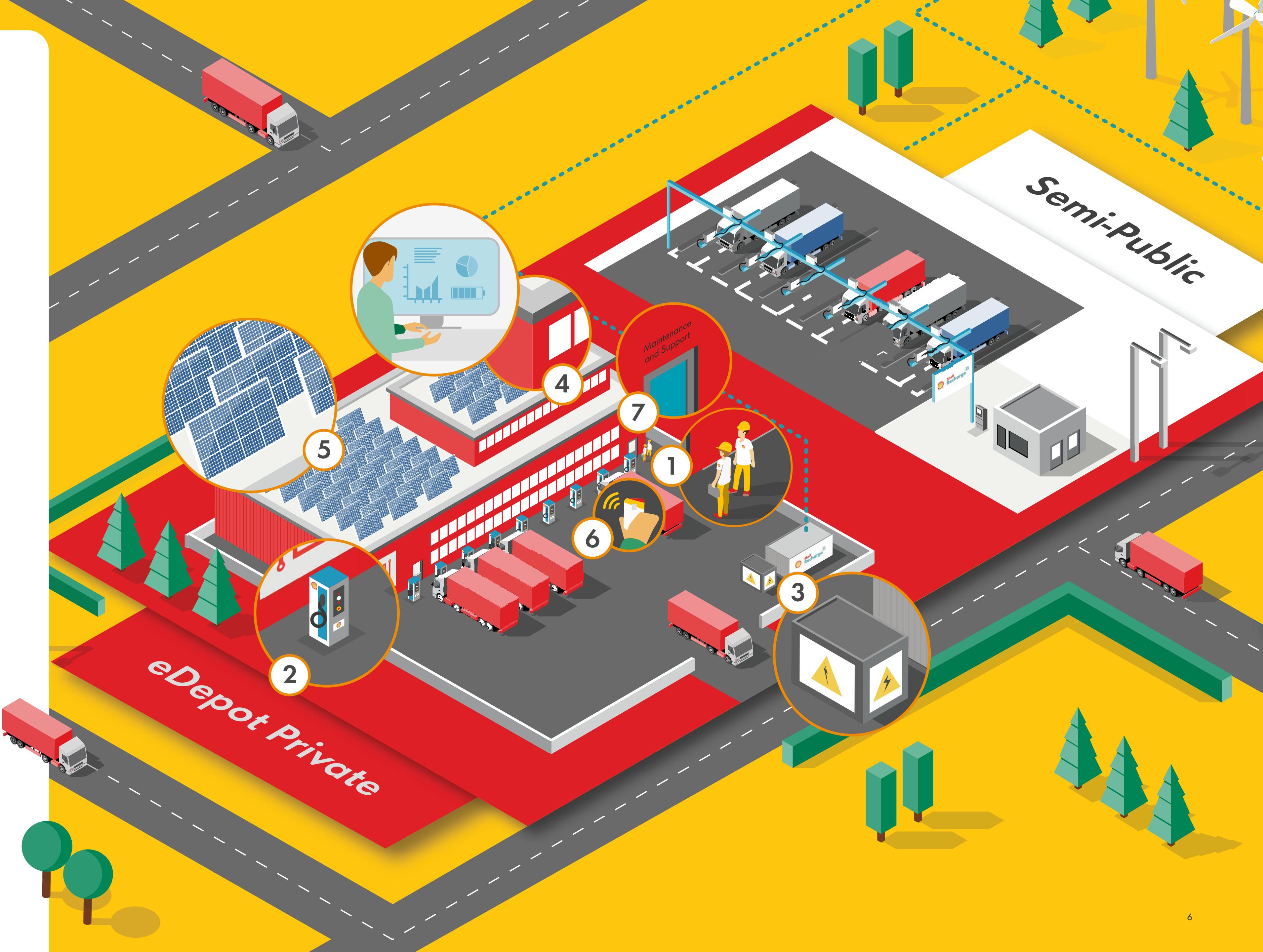
Take the example of a logistics business operating HDVs that operate short haul during the day and return to the depot at night. To keep an EV fleet of this kind running reliably and delivering for customers, the fleet and/or depot manager needs to know they can rely on their private charging infrastructure (especially during overnight energy peaks when most vehicles are likely to charge) as well as the public charging network available to them on their routes.

Achieving this means building around the specific needs of that fleet to create a bespoke eDepot designed to improve the efficiency of its EV operations. As part of this, **operators should explore how they can provide:**

1. Site assessment and bespoke solution design
2. High-quality direct current (DC) charge point hardware
3. Power supply systems
4. Software integration for fleet optimisation and energy management
5. Energy supply (100% certified renewable energy)¹⁰
6. Integrated payment systems
7. Support and maintenance services

On top of this, operators should look to integrate these eDepot solutions with an extensive and reliable network of on-the-go public charge points. A network that provides drivers with the same high-quality charging experience wherever they pull in to rest and recharge – all while making it easy to pay for charging (and for operators to manage those payments).

With these solutions in place, fleet operators can optimise routes, schedule charging for the most efficient times, times and manage their EV operations effectively taking real world challenges into account mind.



Managing costs

The investments in EVs and charging infrastructure are expected to incur some upfront costs. However, these can be seen as an investment in futureproofing a business – in terms of their efforts to lower emissions and reduce the TCO of running an electrified fleet. There are also various ways to help mitigate this initial expenditure, including leveraging the financial support and tax incentives offered by policymakers and regulators in different markets.

Likewise, effectively managing the electricity demands across a fleet's operations and facilities can help reduce costs – and there is a growing array of tools available that offer a swift overview of usage and tips to optimise it. This includes solutions like Charge Point Management Systems (CPMS) and energy management with advanced functionality designed to help fleet and/or depot managers find the right balance between charging speed and cost – all while remaining within the limits of their grid capacity.

Optimising the use of a fleet's charging infrastructure can also help to utilise assets fully and support fleets reducing the TCO of their battery electric vehicles (BEV) trucks by up to 25%.¹³ Smart charging plays a role in this, helping operators to reduce costs and optimise efficiency. They can also explore ways to **support third-party contractors** with access to the **charging infrastructure at eDepot locations** and potentially open sites up to the public when the fleet is not using them – creating opportunities for monetisation that can deliver a faster return on investment in eDepot solutions.



A shared, integrated future for heavy-duty fleet electrification

A practical guide to managing the costs of an EV fleet

The upfront costs of investing in the vehicles, infrastructure and operational changes needed to build an EV fleet are, understandably, a significant barrier to many fleet operators. Look at the example of a company operating a long-haul delivery fleet. The operator needs to make sure the e-trucks it relies on are charged and ready to go for the next day's customer appointments. They also need to show that they are optimising the return on the initial investment in their EV fleet.

This means exploring ways to support their decarbonisation efforts more cost effectively, including:

1. Fleet TCO tools:

Carrying out an overarching TCO analysis of operations to see which routes can be transitioned to EVs most cost effectively – then developing a plan that can cater to the financial requirements of the business

2. Energy as a service and contract:

Leveraging ways to mitigate the upfront cost of electrification by turning their capital expenditure into an operational one (while delivering the same solutions)

3. Cost efficiency expertise:

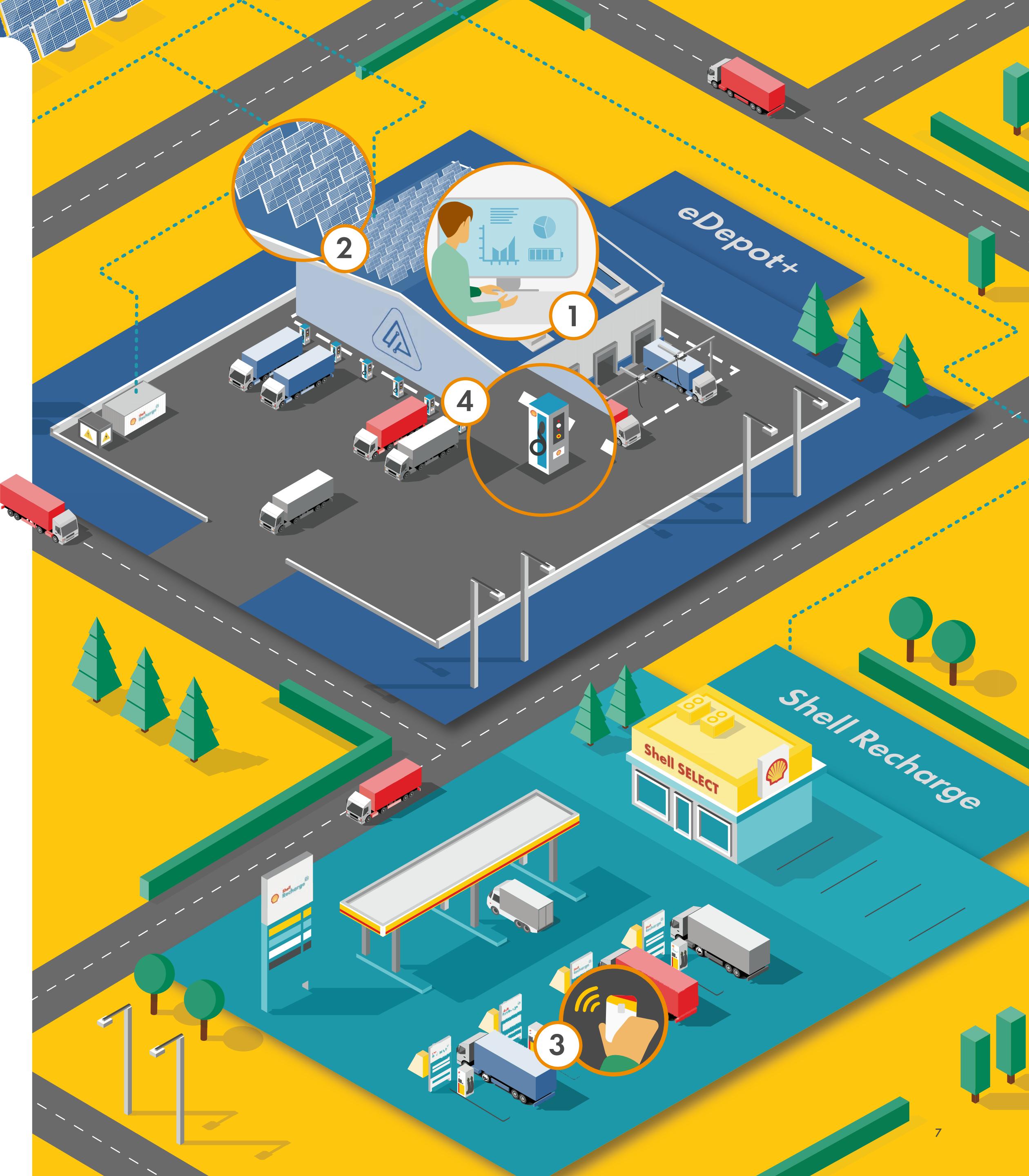
Identifying the best times to charge to enhance operational and financial efficiency

4. High-quality hardware:

Procuring high-quality, fit-for-purpose hardware (especially charge points that feature liquid-cooled cable technology) to maximise vehicle uptime

As they develop a plan for their charging infrastructure, the fleet and/or depot manager can look to explore ways to increase the utilisation of their locations by making it accessible to third-party contractors or the public depending on which is most appropriate to their operational needs.

By integrating their eDepot locations with public facilities and making them part of a shared ecosystem, businesses can potentially share in the revenue generated by public charging transactions. This approach may help reduce the total cost of ownership (TCO) of their operations by up to 25% and contribute to the recovery of their investment.¹¹





Working with the right supplier

Transitioning to an electrified fleet is not an overnight process – nor is it one that fleet operators should seek to undertake alone. Instead, it is vital to work alongside a trusted supplier with the experience and knowledge to deliver heavy-duty eMobility solutions that meet the specific needs of a business and its fleet.

For operators, this means working with a supplier that can help EVs reach TCO parity with – or even make gains against – their ICE counterparts. This would include identifying which routes can be transitioned to EVs cost effectively. It should also feature elements such as infrastructure solution design, the selection of fit-for-purpose charge point hardware, software integration for fleet optimisation and energy management, and ongoing support for optimisation and maintenance.

From here, operators are advised to engage with suppliers able to provide fit-for-purpose

hardware. And, once this foundation is laid, operators should look to their suppliers for support in mapping out not only the best times for their vehicles to charge, but also how to recover their investment faster by optimising the overall utilisation of their new eDepot locations. This includes exploring how to provide access to approved third parties for greater efficiency or how to monetise locations by integrating them with public facilities.

In short, fleets need more than a solutions provider; they require a partner that embarks on their electrification journey with them.

And this is what we offer at SBRS. Driven by innovation, we deliver end-to-end EV charging solutions for electric trucks, bus and boat fleets. As part of the Shell Group, we use our deep industry knowledge to help heavy-duty road transport operators improve their efficiency and performance as they transition to lower-emission operations. We are creating

an integrated charging network designed for heavy-duty fleets. Built on the principle of collaboration, it unites public, semi-public and private charging infrastructure into one shared network. This helps operators access cost-effective charging solutions and maintain the efficiency of their fleet operations as they make the transition to EVs.

Through scale, experience and expertise, we can answer the key questions, provide ongoing support and help heavy-duty fleet operators optimise their operational success into the future.

If you would like to learn more about how SBRS can help you accelerate your fleet electrification journey, visit:

<https://www.sbrs.com/>

ACCELERATE TO
ZERO

SBRS integrates its eDepot solutions for heavy-duty fleets with a growing on-the-go charging network, including four dedicated heavy-duty Shell charging stations and

over 25 hybrid Shell charging locations

across Europe.¹²

The shared network also provides access to hundreds of public heavy-duty charging sites across Europe, operated by Shell's roaming partners.



A shared, integrated future for heavy-duty fleet electrification



"We worked with Shell Business Recharge Solutions to equip fourteen of our terminals with a fully customised eDepot solution. Supporting the charging infrastructure, we built an energy management to fully implement our total operations at our container terminals which includes next to the EV chargers for trucks, solar power, crane power, reefer stations, maintenance and building energy. This ensures that our energy distribution stays efficient, and the costs for electricity supply predictable."

Kristin Kahl,
Management Sustainable Solutions, Contargo GmbH & Co. KG

CONTARGO®
trimodal network



"Our eDepot project arose from the need of one of our customers, who, as part of its CSR approach, challenged us to replace the use of fossil fuels with electric power for its regional delivery rounds. We therefore invested in electric trucks and, to offer our customers maximum responsiveness, we were able to set up this recharging station directly at our Lagny-le-Sec site, thanks to the support of Shell Business Recharge Solutions."

Gérard Gautier,
Branch Manager - Lagny-le-Sec, Le Roy Logistique

LE ROY
logistique



We're delighted to be working with Shell electrifying our fleet. Together, we carefully aligned the required EV charging infrastructure at our depot with the unique operational requirements of our fleet of eTrucks. As a result, we realised that Shell's Semi Public format was ideal, enabling us to not only effectively power up our own fleet, but to also generate an additional revenue stream to optimise our return on investment. What's more, Remittrans is proud that our new charging infrastructure will also help other heavy-duty fleets electrify more effectively, and that we play an important role in building a shared EV charging network in Europe."

Frank Coppens,
Logistics Manager, Remittrans

Remittrans



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- ⁸ SMMT. "[It's electrifying: Bus depots and EV charging infrastructure](#)," 2024.
- ⁹ Shell. "[Shell Megawatt Charger](#)," 2024.
- ¹⁰ Our renewable electricity is certified by Renewable Energy Guarantees of Origin (REGOs).
- ¹¹ The Total Cost of Ownership (TCO) reduction figures presented herein are estimates derived using Shell's TCO calculation model. The actual savings are highly dependent on the customer use case, other customer inputs such as energy prices, cost of infrastructure, and geography.
- ¹² The four stations are: Truck Stop Eindhoven - Netherlands; AchtShell Green Planet - Netherlands; Shell Hamburg, Georgswerder Bogen - Germany; and Markham Moor, UK.

Please read our full [Cautionary Note and Legal Disclaimer](#)

