

Pan-European report,  
supporting your shift to  
more sustainable transport

# Are you ready for the EV shift?

Report 2023

## Transforming your fleet

# Overcoming the challenges of electrification

Many businesses face significant challenges in their transition to an electric fleet. This report gives an overview of the main challenges and strategies to help overcome them.

To get an in-depth understanding of both the general and customer-specific challenges in the shift to EVs, we have conducted a pan-European survey and interviewed customers across the continent. We've also interviewed other people in the business to get a glimpse of their challenges and solutions. The results are presented in this report. We hope the insights and conclusions will support your shift to more sustainable transport.

According to our survey, 8 companies out of 10 are currently transitioning, or planning to transition to EVs or alternative fuels – with the key drivers being sustainability and requirements from end customers. It is significant to note, however, that only one respondent out of three believes that end customers are willing to pay extra for sustainable transports. Still, the most important challenges in today's EV transition are range anxiety and insufficient charging infrastructure.

Therefore, fleet managers need to adopt a flexible approach to electrification – including smart charging strategies incorporating top-up charging. An EV capable telematics solution is highly valuable when transitioning to an electric fleet, providing businesses with accurate

and up-to-date data on the performance and health of their vehicles. Obviously, many fleet managers are still assessing the situation, and there are many factors to consider. Naturally, they want to ensure the benefits while avoiding the pitfalls. For this reason, we have included a checklist of 10 steps to consider before shifting to EVs. We will also delve into how smart technology can help overcome the challenges and unlock the full value when you go electric.

At AddSecure, our mission is to increase the safety, efficiency, and sustainability of our customers' mobile asset operations. We are committed to supporting our customers in their transition to EVs and alternative fuels.

I hope you find this report useful and valuable in your own shift to more sustainable transport. We thank you for reading this report and welcome any feedback.

According to our survey, 8 companies out of 10 are currently shifting, or planning to shift to EVs or alternative fuels – with the key drivers being sustainability and requirements from end customers.



**Claes Ödman**  
President Smart Transport, AddSecure



# Analytics and insights from the EV survey

## Why a survey about the shift to EVs?

At AddSecure, we want to help our existing and future customers in their shift to sustainable transports. So, we decided to conduct a pan-European survey, asking our customers about their views on the shift to EVs and alternative fuels. The survey included 17 questions and was shared with customers in 10 countries. In total, more than 300 customers participated.

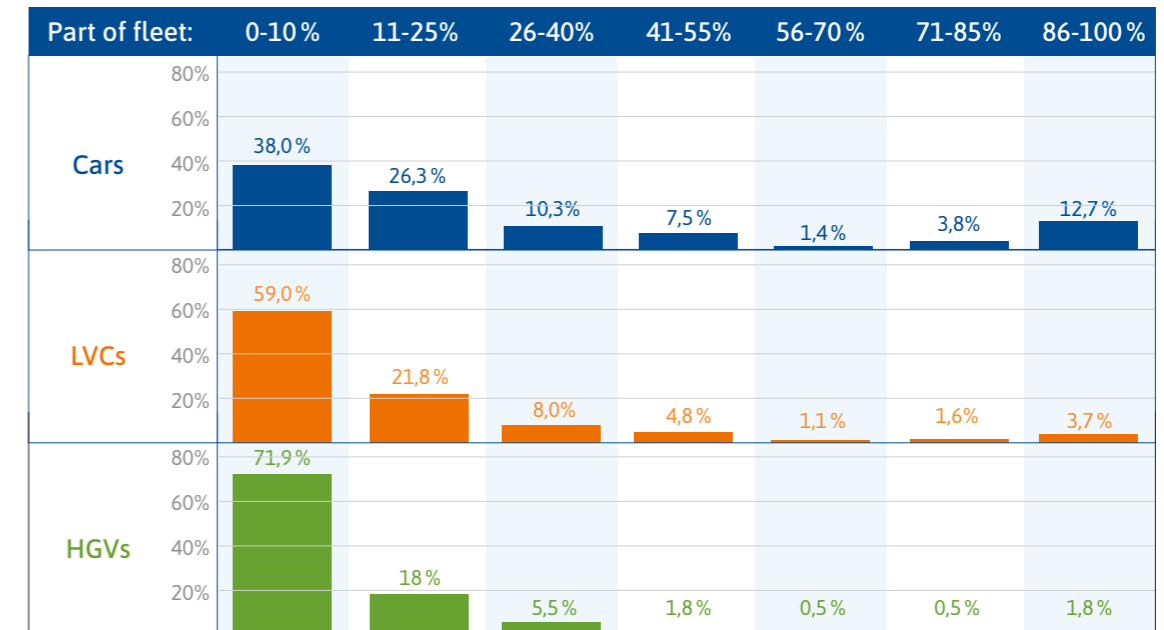
In this report, we publish answers to some of these questions together with our conclusions. Since it is a pan-European survey, we have merged the responses from all countries. For each section we provide our conclusions. Where applicable, we also provide local conclusions.

Maybe you have already shifted part of your fleet to EVs? If so, we hope the report will offer valuable input on tools and solutions that can simplify your daily management of your EVs.

If you are about to embark on your journey to EVs, we hope this report will give you some good benchmarks and help you with the implementation process. For those of you who have not yet started, the report can support you in planning your shift.

As for us at AddSecure, the survey offers valuable information for the planning of our product development.

## 1. How percentage of your fleet do you expect to be electric in 5 years?



### Conclusions

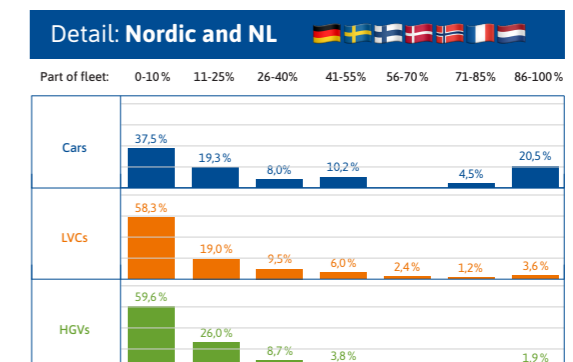
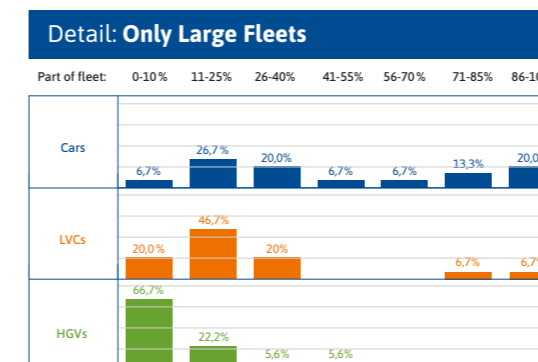
#### The speed of fleet electrification

There is a strong movement towards a shift to EVs. Our survey shows that the EV transition for fleet owners is firstly taking place with cars, then Light Commercial Vehicles (LCVs) and finally with Heavy Commercial Vehicles (HCVs).

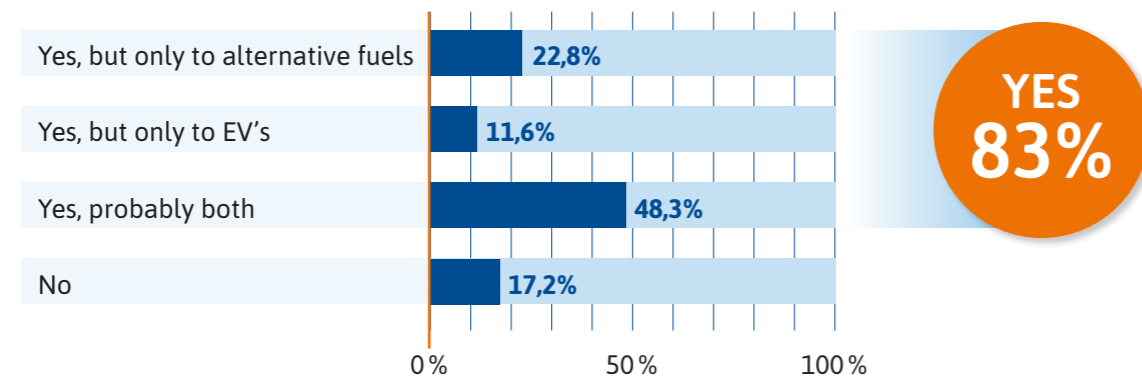
When we asked about the plans for electrification, 60 % of responders state that they have electrified more than 10% of their fleet of cars in 5 years. For LCVs, 40 % of responders mention that more than 10% of the whole fleet will be electrified in 5 years and 30 % of the HCVs.

An interesting observation is that **large fleet owners plan to electrify faster than small operators, especially for cars and LCVs, where the shift takes place more than twice as fast compared to smaller fleets.**

When looking closer at data for individual countries, our analysis shows that **the Nordic countries and the Netherlands are electrifying their HCV fleets faster than the other countries.** Also, sustainability and customer requirements are more important drivers here than in the other countries.



## 2. Do you plan to move to EVs or alternative fuels (e.g. Hydrogen or biofuels like HVO)?



### Conclusions

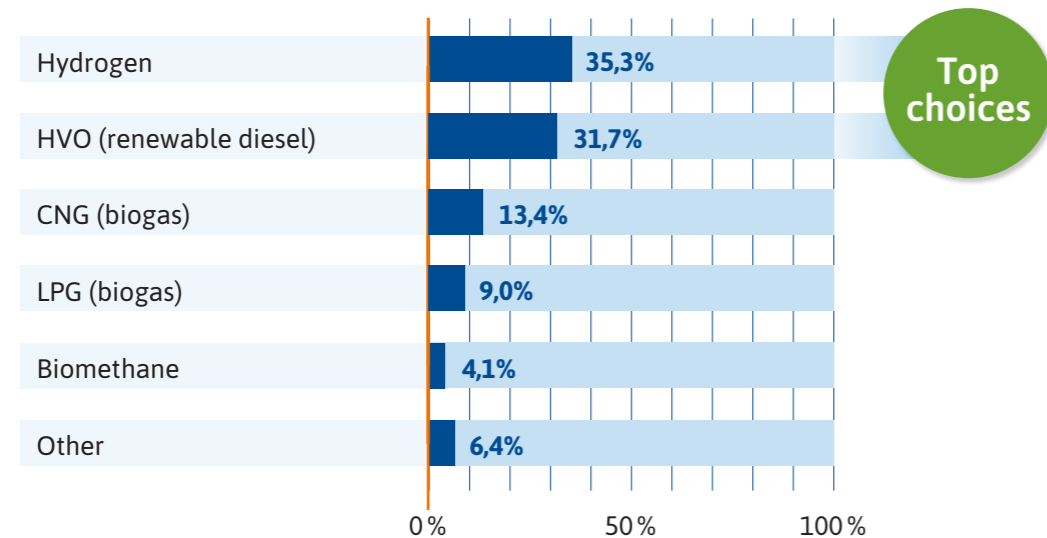
#### Strong trend towards shifting to sustainable transport

There is a rapidly growing trend towards sustainable transport.

As much as 83 % of responders plan to move to either EVs or alternative fuels, or a combination of both over the coming years.

For natural reasons, big fleets with LCVs are more focused on EVs than fleets with HCVs, where alternative fuels are a more popular option in the move towards sustainable transport.

## 3. Which alternative fuels are you also considering?



### Conclusions

#### Popular choices for alternative fuels across Europe

In general, HVO (32%) and Hydrogen (35 %) are seen as the most interesting alternative fuels. However, the interest in alternative fuels differs between countries.

In **Germany**, more than half of the responders (51%) see Hydrogen as the most popular alternative fuel.

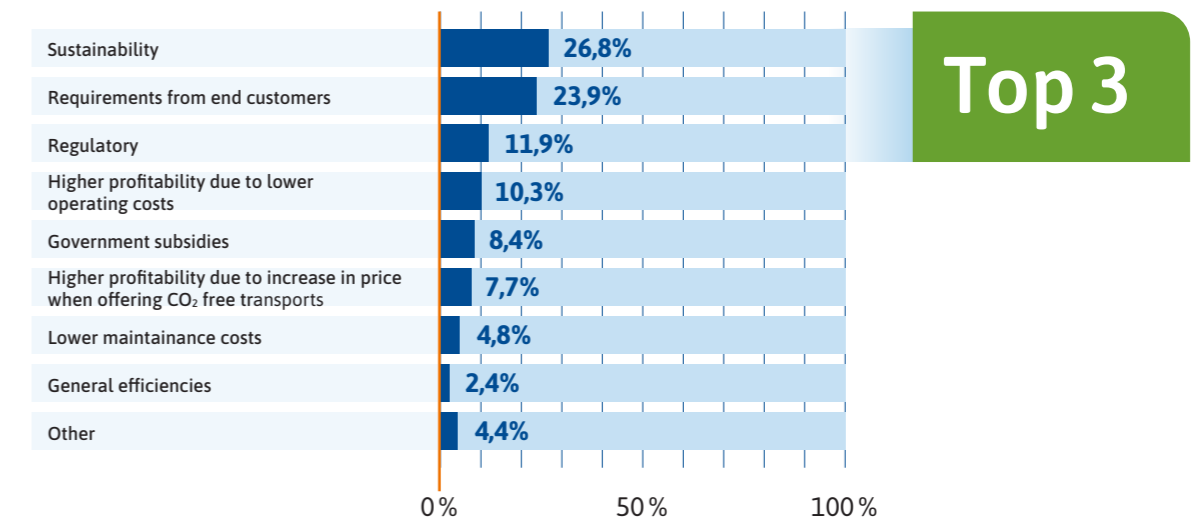
While in **the Nordic countries**, HVO is most popular, with 38% viewing it as their main alternative.

In **France**, the responders value HVO (29%), CNG (20%) and Hydrogen (30%) as important fuels.

In **Netherlands**, HVO and Hydrogen are seen as equally important fuels (40%).



## 4. What are the three most important reasons to move to EVs/alternative fuels?

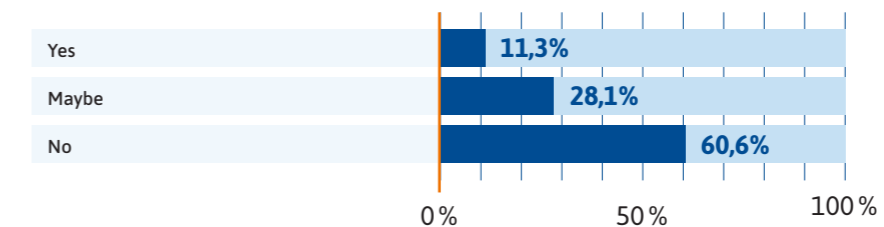


### Conclusions

#### Key drivers are sustainability, customer requirements and regulations

When the responders were asked about the three most important reasons for switching to EVs and alternative fuels, the strongest drivers listed were sustainability, customer requirements and regulations. General efficiencies, reduced maintenance costs or higher profitability were not seen as key drivers for the shift. This was especially apparent in **France**, where requirements from customers (31%) and regulations (23%) were regarded as much more important drivers for a transition to sustainable

## 5. If you electrify your fleet, would you consider offering your drivers at home charging points?



### Conclusions

#### Size matters when exploring benefits of home charging

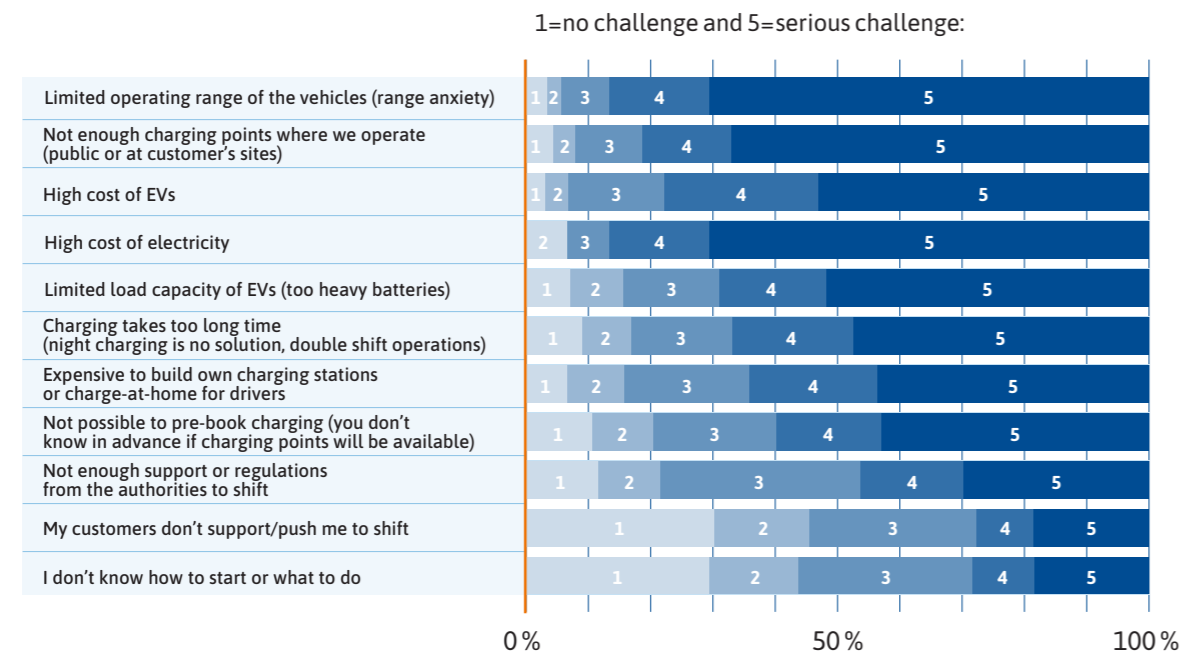
The charging infrastructure is one of the most important elements of the shift to EVs. So, to optimize the use of the EVs, fleet owners must consider different options for charging the vehicles.

For some companies, an offer to charge at home could distribute the load in the network, which is why we included such a question in the survey.

Approximately 40% of the responders would consider letting drivers charge at home overnight. Responders with large fleets are more interested in offering home charging, 50% would consider this option. Especially for cars and LCVs, this may be a smart model to limit the top capacity requirements of the charging infrastructure at the terminal.



## 6. What would be your key challenges in the shift to EVs?



### Conclusions





#### Concerns about limited range and infrastructure

The survey indicates a general willingness to switch to sustainable transport if conditions allow. However, although most respondents are planning their shift to sustainable transport, there are still significant challenges to overcome.

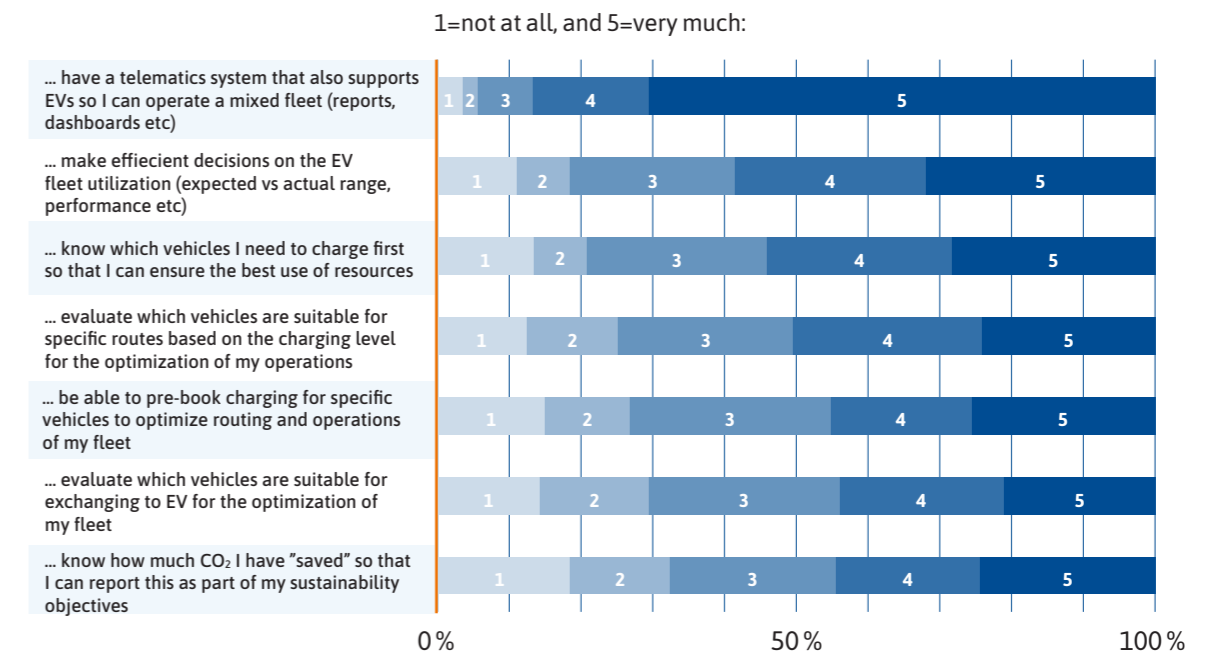
The most reported challenges related to limited range and a lack of charging points. Additionally, respondents identified the high cost of electric vehicles and the limited load capacity due to heavy batteries as additional key challenges.

While the survey suggests that knowledge of "how to get started" is not regarded as a big issue, reliable information and solutions to address practical challenges will be critical to successfully transition to sustainable transports.

#### Local key challenges:

-  **France** – the high costs of EVs and electricity, as well as range anxiety
-  **Germany** – high concerns about charging being time consuming
-  **Netherlands** – less concerns than in other countries, including cost of electricity
-  **Nordics** – cost of building own charging stations viewed as critical challenge

## 7. As a transport manager I want to...



### Conclusions

#### Important to have access to EV data

In general, the most interesting use cases for transport managers include how to make efficient decisions based on range and performance, followed by how to manage a mixed fleet (EVs and combustion engines).

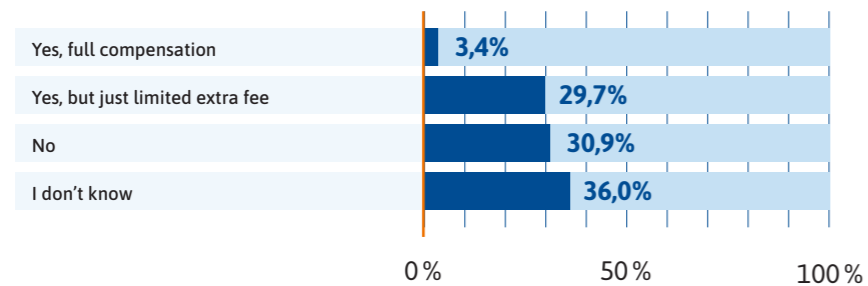
For companies with large fleets, it is also valuable to report how much CO<sub>2</sub> that has been "saved" as part of their sustainability objectives.

When analyzing what differs between countries, we note that responders in **Benelux** are most interested in the ability to pre-book charging slots, whereas range optimization and EV performance are not as important. In **France** and the **Nordic countries**, reports on saved CO<sub>2</sub> are prioritized. In **Germany**, fleet owners want to evaluate what vehicles are suitable for specific routes based on charging level.

It is important to note that as an EV fleet grows, the complexity of keeping track of battery status, charging time and range for the different vehicles soon becomes more difficult to handle. This means that the EV data needs to be available in the business systems (like TMS and FMS) to simplify the fleet management.



## 8. Would your customers be ready to pay a premium price for sustainable transports?



### Conclusions

#### Customers hesitant to carry full financial burden

Our interviews with customers indicate that it is not yet profitable to shift to EVs. A recent report by CLOSER\* in Sweden presents that the TCO (total cost of ownership) for electrified HCVs, compared with similar diesel vehicles, is between -3 % to +26 % for some common use cases.

The only use case, where the EV had a lower TCO than a similar diesel truck, was a scenario where the transport buyer extended the delivery window. That allowed a 2-shift operation with a 150 kWh charger that could be used at breaks, between shifts and at night. This resulted in a mileage of approximately 350 km on weekdays, 250 days a year (i.e. 87 500 km/yr). And the TCO was 3 % lower compared to a similar diesel truck, when counting public funding of approximately 16 K€/yr (for the EV and the charging infrastructure).

**So, the takeaway is that transport companies need to either finance the shift to EVs themselves, use public funding or increase fees.**

Through our survey, approximately one respondent out of three said that their customers would be willing to pay a part of, or the full extra cost for EV transport.

Furthermore, our study also shows that the larger transport companies, the more willing their customers are to pay extra for a shift to EVs (through more expensive transport). This means that owners of small fleets to a larger extent are dependent on subsidies to be able to implement EVs from a financial point of view.

\*) The REEL report Oct 2022; Report based on interviews with logistic actors in Sweden, read more here: [www.closer.lindholmen.se/reel](http://www.closer.lindholmen.se/reel)





## Interview

**Ulrika Allén,**

VP Product &  
Technology,  
Smart Transport,  
AddSecure

# How to navigate the new eco-system for electromobility

Having worked in leading positions in the automotive industry for 20 years, Ulrika Allén has extensive experience within telematics and connected services. **Today, Ulrika is heading the product and technology teams at the business unit Smart Transport at AddSecure, and shares her perspectives on the EV shift in this article.**

### How do you see the shift to EVs is impacting the transport industry?

– The shift to EVs is having a huge impact on the transport industry. The move to clean energy vehicles is driving significant innovation and opportunities for companies to pivot their traditional fossil fuel-reliant operations model. To effectively optimize an EV fleet, companies need to assess their tools, processes, and overall planning. Ultimately, the shift to electrical vehicles promises an exciting and clean future for an industry that for so long has been seen as a large emitter of greenhouse gases.

### What do you think fleet owners should consider in their shift to sustainable transports?

– In general, I think it is important to take a holistic approach when fleets are electrified. This is crucial since the shift will impact many internal and



Through the establishment of homebase charging infrastructure, the transport companies will control their own “gas stations”.

This means that they will have a much higher control of the price of the electric “fuel”.

external areas of the company. This includes considering which vehicles can be replaced with EVs and which routes are suitable for electrified transport. The shift will also have an impact on the end customers, who need to be open to more flexible slots for loading/offloading and renewed contracts with changed conditions. In addition, there are of course different financial aspects to handle, like higher upfront costs and tax incentives.

### How can connected technology help support the shift to sustainable transport?

– Connected technology, such as systems for fleet and transport management, will play a crucial role in the success of the shift to electric vehicles. Such systems can enable fleet managers to track and manage their EV fleet effectively and provide timely and accurate data to optimize the usage of electric vehicles. For efficient management of transport orders, the dispatcher needs an updated view of the state of charge, expected charging times, and remaining range for the vehicles. With this kind of information available, the most optimal vehicles can be selected for the assignments.

I also want to mention the value of fleet management systems to help drive good driving behavior. A key feature of a fleet management system is to help monitor and improve this. Eco-driving functionality will still be of importance for electrical vehicles, to ensure that the EV range is optimized. Unplanned stops at public charging points are both costly and inconvenient.

### What is AddSecure doing to support its customers in the transformation of their fleets?

– AddSecure is actively working to support its customers in their shift to electric vehicles. Initially we are making relevant data from the vehicles available in our user portal to simplify the operation of mixed-fuel fleets. The next aim is to enhance our solutions with third-party services for route and range optimization, transport management and reports presenting which vehicles are suitable to replace with EVs.

### Are there any other factors that are important for a profitable operation of EV fleets?

– In the transition to EVs, transport companies will be part of a new ecosystem for electromobility that is different to the old landscape. In addition to vehicle manufacturers and technology partners like AddSecure, network and electricity providers, government authorities and charging infrastructure providers are important to operate an electrified fleet in a profitable way. Just think about it, by establishing a homebase charging infrastructure, the transport companies will control their own “gas stations”. This means that they will have a much higher control of the price of the electric “fuel”. I think transport companies who understand how to best navigate this new ecosystem will gain competitive advantages, achieve faster ROI, and thereby also win more business.





# Customer experiences and the way ahead

On the following pages three companies share their valuable insights and experiences from their early adoption of heavy EVs and hydrogen trucks. In addition, AddSecure will be providing tips and recommendations for a successful shift to EV.



## Customer case 1



## Swedish logistic company Dagab is exploring electrified trucks with battery powered cooling units

Dagab is a logistics company owned by Axfood, the second largest player on the Swedish food retail market with a market share of approximately 25%. Dagab have been testing hybrid vehicles from Scania in its fleet since 2017.

In recent years, Dagab has initiated several EV projects in Sweden, one of several reasons to interview Krister Kjellström, Global Fleet & Vehicle Manager at Dagab Inköp & Logistik AB.



**Krister Kjellström**  
Global Fleet & Vehicle  
Manager at Dagab Inköp  
& Logistik AB

### Why did you start electrifying your fleet?

– Dagab has high sustainability targets and the goal is to become CO<sub>2</sub>-neutral by 2030. The company wants to demonstrate that it is possible to electrify. The general view is that investments in the environment do not always need to be profitable short term. If we don't do it, then who will? And Dagab thinks it is important to show the subcontractors that it is possible (50% of the fleet is operated by subcontractors). It's better to motivate them than to push them!

### What types of projects have you done within fleet electrification?

– We have completed a couple of projects in Jordbro (Stockholm) and in Backa (Gothenburg). These projects have been backed up by CLOSER – Lindholmen, with financial support from Vinnova and some other parties (<https://closer.lindholmen.se/projekt/reel>).

### Please, describe your EV project in Jordbro

– In 2021, Dagab put two new trucks into operation, a plug-in hybrid (PHEV) and an all-electric truck (BEV, rigid, 6x2 \* 4, 28 tons, 300 kWh). The trucks deliver chilled and frozen food; thus, the total energy demand of the vehicles consists of propulsion of the truck and operation of cooling units.

### How was the charging infrastructure in Jordbro set up?

– Dagab wanted to test charging during loading, so a 175-kW high power charger was installed between two loading gates at our warehouse in Jordbro, where both trucks return several times a day for reloading (the trucks have a charging capacity of 130 kW). In addition, two night chargers of 22 kW each were installed at our parking lot, where the vehicles are parked between 22:00 and 05:30. The investments in charging infrastructure were supported by the Swedish Environmental Protection Agency, who paid 40% of the costs. By charging during reloading for





about 30–45 minutes, operational losses were minimized while total daily mileage increased. It also enabled two-shift operation of 2–3 rounds per shift, with a total daily mileage of around 350 km per vehicle.

**Are there any downsides to charging at the gates?**

– The implementation turned out rather expensive as the insurance company of the warehouse facility demanded additional measures with regards to fire safety.

**What is the consumption for your different trucks?**

– The BEV's consumption is about 1.25 kWh/km, with a range of about 180 km on a single charge. For the PHEV, the combustion engine's fuel consumption was reduced by about 30% thanks to complementing HVO and RME with electric power during the distribution rounds in the city, and by utilizing braking energy to charge the batteries during operation. Apart from charging the trucks, the operation has been carried out in the same way as a conventional vehicle.

**Please, describe your EV project in Backa**

– Dagab implemented a fully electrified rigid truck together with Scania. The trailer has a cooling unit that is being powered by the trailer's batteries to avoid reducing the range. And the cooling unit for the truck is powered by the truck batteries (ePTO). The drivetrain is very powerful and adapted for high capacity/weight (64 tons). The range is limited but sufficient, as the vehicle runs a daily 2–3 shift operation, distributing goods from Dagab's warehouse in Gothenburg to grocery stores in the nearby area. The daily driving distance is max 200-250 km. Charging is carried out during reloading, which takes 1–2 hours, and between shifts. The charging infrastructure of 350 KW is divided into four outlets and installed at the warehouse gates.

**What are your future plans for EV?**

– It's been several years since we ordered our last diesel vehicle, and the investment plan for

2023 contains a mix of BEVs and biogas trucks. Development is fast, the new vehicles have a capacity of 540–650 kWh. So charging during reloading may not be as important in the future (this type of infrastructure is expensive), shifting focus to night charging.

**Do you also see electrification of long-haul transport?**

– Yes, I believe long-haul transport will be electrified soon, leading to a greater need for public charging. Also, the ability to book the charging through a transport management system, that also aligns with the drivers' resting times. Unfortunately, public charging is often expensive, so we try to limit it when possible. However, we are happy to let our sub-contractors charge at our premises.

**How do drivers view EVs?**

– Most of the drivers are positive! Those who have tried it don't want to go back to trucks with combustion engines. It's quiet and nice, and you hear things you wouldn't hear normally! Torque and power are usually more than enough. The drivers do not need any special training, only a slightly different driving style and learning how to charge of course.

**How do the transport managers view EVs?**

– Most of them have been positive. Only a few managers were slightly worried – mainly about planning the evening shift, as no one wants to risk assigning routes to an EV that lacks range. But we will solve that through some more training.

**What would be useful features to simplify the work for the transport managers?**

– Today, we have access to the charging status and expected range for our few EVs, which makes it easy to plan manually. But in a couple of years, when we will have 40-50 EVs. The charging status and range estimation must be available in the TMS automatically – for immediate route planning and assigning orders to the right vehicle. Otherwise, it will be very difficult to keep track of how the orders should be assigned.

It's been several years since we ordered our last diesel vehicle and Dagab has 5 BEVs and 15 biogas trucks in the investment plan for 2023.





Get going



# Let a solution for fleet and transport management help you shift to EVs

Systems for fleet and transport management (FMS/TMS) offer valuable insights when considering a shift to EVs. They offer insights into the existing fleet and transport operations, considering fuel consumption, driving behavior, past trips, mileage, stops, order data and other crucial information. Analyzing this information builds a clearer understanding of whether an EV is a good replacement or whether another type of vehicle would be a better choice.

For fleets that already have EVs, FMS/TMS can offer useful information, such as the vehicles charging level and the location of charging points. Advanced solutions can present detailed real-time information about charging stations, occupied/free status, opening hours and booking of charging slots. Fleet managers can also take the current battery level and the remaining driving distance of an EV into account when planning a sequence of orders or choosing a vehicle for a job. They can access reports to track when, where and for how long their EVs were plugged in for charging, giving insight into why their EVs are at their current charge level.

Since driving behavior has a great impact on the range, one of the most important features of a telematics solution is insights into how the drivers' behavior on the road is affecting range and charging. For example, harsh braking, speeding, or fast acceleration will dramatically impact the range. With this data at hand, you can see where your drivers are wasting energy and take steps to improve their driving behavior to ensure the range is kept at optimal levels.

Furthermore, an FMS can optimize the charging scheduling. By knowing how much charge a vehicle has, and how far it needs to

travel to the next job, they can decide whether it is worth charging it at peak time or at a later stage to avoid high charging costs. A fleet management solution can also show how cost effective the addition of EVs has been to the fleet, by comparing consumption and costs of the EVs with the other vehicles in the same report.

In the table below are some of the most common challenges fleet owners encounter when electrifying their fleets, as well as how these challenges can be handled with a FMS/TMS.

EV shift challenge	... and how a FMS can help
<b>What vehicles to electrify and in what order</b>	Based on fleet analysis (trips, consumption, distances, loads etc.), it is possible to identify which vehicles/routes are most suited for EVs and in what order
<b>How to efficiently operate a mixed fleet of EVs and other types of vehicles</b>	Monitor and operate your mixed fleet through a telematics system that works irrespectively of fuel type (EV vs diesel etc.) with reports for fuel level, distance, start/stop, eco-driving, dash-boards...)
<b>Select the right vehicles for each trip</b>	Route optimization tools to evaluate which vehicles are suitable for specific routes based on charging level (optimizing overall operations)
<b>Limited operating range of the vehicles (range anxiety)</b>	FMS/TMS systems showing EV data such as real-time view of battery status, predictive route distance calculations and tools for optimizing EV driver behavior, can help to reduce range anxiety.
<b>Limited load capacity of EVs (too heavy batteries)</b>	Fleet optimization reports to make efficient decisions on the EV fleet utilization (expected vs actual range, performance etc.)
<b>High cost of EVs</b>	EV adoption feasibility (analytical tools/reports presenting what part of the fleet is most suitable for EVs) with profitability/ROI analysis (estimated decrease in fuel and maintenance costs)
<b>Unpredictability when it comes to when and how to charge EVs (public or at customer's sites)</b>	Enable pre-book charging at public sites to optimize routing. Share EV data from FMS/TMS with customers/partners to create a business case for charging points at loading/unloading areas etc.
<b>Not enough charging capacity at peak times, or charging takes too long</b>	Tools for fleet optimization to know which vehicles need to be charged first and how much to ensure the best use of resources
<b>Expensive to build own charging stations</b>	Offer home charging (overnight charging) with a claims solution for charge incentivization/reimbursement through the FMS
<b>High cost of electricity</b>	Optimized charging based on current battery status and distance to next delivery, to minimize charging at peak time
<b>My customers are not willing to pay extra for sustainable transports</b>	Offer CO <sub>2</sub> benefit reporting. (Ability to show customers saved CO <sub>2</sub> per delivery, as part of meeting their sustainability objectives)

## Checklist for the shift to EVs



# What is required for a successful shift to EVs?

It is a matter of when – not if – your fleet of commercial vehicles will need to be shifted to EVs or alternative fuels. For most companies, the transition is a fairly big and long-term project. For a successful shift, you need to ensure that you meet business needs, optimize cost savings, and minimize disruption.

### 1 Review your business strategy

Start by reviewing your business strategy and see how it aligns with EVs. What are your key objectives? What are the market segments you want to serve? Where do you want to see future growth? Who are your target customers and are they willing to pay a premium for CO<sub>2</sub>-free transports? Will they accept more flexible slot times for loading or unloading? How important is sustainability, CO<sub>2</sub> reduction and social responsibility for you and your customers? Based on answers to this kind of strategic questions, you can decide if, and when, a shift to EVs is the right move for your company.

### 2 Establish a business case for EVs

To prove the long-term value of EVs, you need to develop a business case. When developing the plan for your transition, you need to consider how and where your fleet

will be used, what routes will be covered, what goods to transport and what types of vehicles you need. Naturally the infrastructure set-up costs need to be considered (fast chargers and so on) and then accurately measure your ROI. Start by calculating the estimated Total Cost of Ownership (TCO) for EVs and compare it with the TCO of your current fleet. Other things to include in your business case are financial incentives from the government, your impact on the environment, the PR and reputational benefits and meeting customer expectations.

### 3 Create a plan to electrify your fleet

With a solid business case at hand, create a plan to electrify your fleet. What is your mileage profile? Look at payload and passenger requirements and compare this to EV range predictions. Review your current mix of customers, routes and vehicles and plan for the shift. If you have access to a fleet

management system (FMS), you can use it to see which vehicles could be replaced. With a transport management system (TMS), you can further analyze the current transport operations (orders, routes, etc.) to get even better insights. If you have more than one site, which is the most practical option to implement an EV trial?

### 4 Involve your customers and partners

Once you have decided to shift to EVs and made a plan, start involving your customers and partners. They need to be involved since the shift will affect them too. Examples are longer contracts, common charging points, more flexible loading/unloading slots.

### 5 Design your charging infrastructure

Using your mileage profile, you will gain a greater understanding of where the vehicles are travelling, and the typical distances covered – as well as where all vehicles are located when not in use. This information creates a “heat map” of potential charging demand, whether at your terminal, at home or by using public charging services. Would it be possible to have charging points where you load/unload at customer premises? Are there public charging stations available where you operate? The “heat map” highlights gaps in availability, or areas of particularly high demand, so that you can consider your charging point requirements, including capacity and reliability. Since there are considerable costs associated with setting up the charging infrastructure, a smart set up can be a deal breaker. Do you want to offer home charging? Don’t forget to involve other key stakeholders in the “eco-system”, like charging station manufacturers, network operators, utility companies and your landlord/real estate owner who could help you organize the infrastructure in an efficient way or offer interesting business models.

### 6 Consider how charging should be paid/reimbursed

Charging costs are more complex than a petrol pump, with a wealth of different tariffs

depending on where drivers plug in. How will you manage payments for each potential type of charging (home, work, customer site, public)? If drivers pay some costs, how will they be reimbursed? Decide how you want to consolidate costs to obtain a clear picture of spendings on charging for each vehicle, driver and department.

### 7 Plan how to train your drivers

EVs offer a completely different driving experience and there is naturally much more focus on the driving range. For this reason, it is important to encourage and train the drivers for an optimal driving behavior, adopted to EVs.

Throttle-use, braking techniques, and use of technology and optional extras all have impact on the EV’s driving range. It will be important to train drivers to avoid harsh braking, over speeding and fast acceleration, and motivate them to focus on a driving style that ensures longer range.

### 8 Make sure to use the right tools

Since there are higher requirements on range optimization for EVs than for other vehicles, make sure you have solutions for route optimization that can also be used for your EVs. Fleet management solutions can help not only the transition to EVs, but also the ongoing management, by providing you with a real-time view of your fleet, its battery status etc.

### 9 Get going!

It’s time to acquire the EVs, train the staff (both the teams in the office, the workshop and the drivers) and implement the charging infrastructure.

### 10 Monitoring, measuring and sharing

Sharing your success stories with the wider business community is a way to guarantee further investment and adoption of EVs. Reporting on driver feedback, range analysis, vehicle handling and carbon footprint achievements is a sure way to win support and ensure a swift transition.



## Customer case 2



## Dutch transport company Nagel – Sustainability is a top priority

The Dutch transport company Nagel BV specializes in the physical handling and distribution of air freight shipments and the transport of goods under controlled temperatures.

They pride themselves on fast, reliable and flexible transport, as well as the greatest possible attention to safety and security. With their target of lowered CO2 emissions, the company continues to invest in training their co-workers. One example is eco-driving, which reduces fuel consumption. The company also invests in low-carbon transport.



**Erik Nagel**  
Managing Director of  
Transportbedrijf Nagel BV

We were interested to learn more about their approach to sustainable transports, and interviewed Erik Nagel, Managing Director of Transportbedrijf Nagel BV

### What is your view on sustainable transport?

We think it is important to invest in the latest technology, such as the highest achievable emission standard, but also in alternative powertrains such as electric trucks. We have committed ourselves to limiting CO<sub>2</sub> emissions and that can only be done by investing in equipment and in people. We have set ourselves the goal of having at least half of our fleet electrically powered by 2030”.

### How far have you come with your electrification mission?

– We have 4% of our fleet electrified, which means 3 trucks by April 2023.

### What does the plan look like in the coming years?

– By 2030, we want to have 50% of our fleet (80 vehicles) electrified.

### What is the long term goal?

– Of course, if possible, 100% of the fleet either electrified or using fuel cells, depending on the range. It is now 300 km but we need at least 550–600 km.

### How have you handled the charging infrastructure?

– Before we install the charging units at our premises, we need a heavy power grid connection. We have requested it from our power supplier and within 6 months the connection will be there. From then on, we will be able to charge more vehicles overnight.

### How important is this to you?

– Sustainability is one of our top priorities. We believe that as a transport company, you have a responsibility to operate as “cleanly” as possible. That is one of the reasons why we always strive for the highest possible load factor to reduce the CO<sub>2</sub> footprint.

### What is your customers’ view on this?

– Our customers are critical to the price level, but more and more customers are being forced by their global customers, especially in the air freight sector where we are active.

### Is it a requirement on their part?

– Not yet, but it is becoming more common in their tenders.

### Are the customers involved in the project?

– Partly. With one of our customers we have started by visiting a truck manufacturer and together we are looking for a solution.



**What are your biggest challenges with electrification?**

– Getting the grid prepared for the right energy supply and availability of power, sufficient range and availability of vehicles.

**What does the overall cost look like? Is ROI worthwhile long term?**

– Not now. Only when the customer wants to pay for it. But eventually, we expect a worthwhile ROI, especially now when 33% of the costs of a vehicle are subsidized.

**How do drivers perceive electrification?**

– More comfortable; no vibrations, no noise.

**How does the transport team perceive electrification?**

– More complicated due to charging times and the availability of the vehicle (range). Hard to plan with these extra factors.

**Any types of system functions that have been particularly important to you? For example, state of charge or range calculation.**

– In the office, we cannot yet trust the range of the vehicles, so we can't predict and rely on it. State of charge and reliable range estimations would be useful for the transport planning.

**How about charging times?**

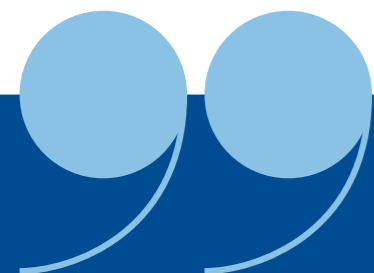
– We charge the trucks overnight but, in the future, we'll need charging locations on the road which aren't there yet. So only routes that start and stop location at our own premises for now.

**What other alternative fuels do you use?**

– Only diesel.

**What other consequences has electrification had?**

– We try to be distinctive and a front runner in the media. Also, regarding our own vision.



Sustainability is one of our top priorities. We believe that as a transport company, you have a responsibility to operate as “cleanly” as possible. That is one of the reasons why we always strive for the highest possible load factor to reduce the CO2 footprint.

*Erik Nagel, Transportbedrijf Nagel BV*





## Customer case 3



## The discovery of a greener alternative in Switzerland

# Alternative fuels and hydrogen trucks at Migros

Hydrogen-powered trucks are now being tested in a pilot project in Switzerland - where road tax is being waived for zero-carbon vehicles. One of the companies in the program is Migros – one of Switzerland’s largest retailers. The group uses different types of transport, both road and rail, and places great emphasis on sustainability.

We had the opportunity to interview Mr. Daniel Balmer, Head of Transport Logistics at Migros Ostschweiz, about the project and the sustainability work of Migros (Migros Eastern Switzerland).



**Daniel Balmer**  
Head of Transport  
Logistics at Migros

### How do you work with sustainable transportation?

– We have a strategy to achieve various sustainability targets over time. We have set specific targets for 2030/40/45 for the entire Group. To achieve these targets, we are pursuing a strategy of “reduce the maximum, offset the rest.” One of the milestones is to reduce greenhouse gas emissions by almost 30% by 2030. I am responsible for transport, i.e., heavy-duty transport at Migros Ostschweiz, and we really want to achieve a lot in this area, and any means will do!

### What types of alternative fuels are you looking into?

– We want to move away from fossil fuels and are therefore focusing on biodiesel, biogas, hydrogen and other sustainable, i.e., fossil-free, fuels. Electricity could be an important part of the solution, as it can not only power trucks but also generate hydrogen. It can also be used to transport goods by rail.

We deliberately want to be open to technology in order to investigate both the advantages and disadvantages. If diesel, then no fossil diesel. If gas, then no natural gas, but biogas (regional biogas, safe from CH). If electricity, then only sustainable electricity.

### Besides alternative fuels, what else are you doing to improve sustainability?

– Through digitalization, we are trying to optimize our processes as much as possible. This includes avoiding unnecessary transports and, where possible, shifting them to rail.

For the remaining road transport, we aim for fully utilized transport volumes (compacted containers and full pallets, always driving with trailers and no empty return trips), and optimal route planning (usually the shortest route). We also train the drivers with the most modern tools (e.g. simulator) and encourage them to drive as optimal/ecological as possible.

### What is your plan for hydrogen trucks and alternative fuels?

– Our plan is to have approximately 50% of our fleet (miles driven) running on alternative fuels

by the end of 2025. We currently have several test vehicles in operation and are testing them to understand the technologies and discuss with vendors.

We are testing 2 hydrogen vehicles and 3 BIOGAS trucks (out of a fleet of 70) to see what technology we should invest in. We have ordered 20 biogas vehicles for 2023.... Now we are really getting started!

### How do you think the different technologies fit your business?

– When it comes to transport, you can distinguish between two needs: specific, predictable routes and short-term orders with non-recurring routes. With both, you have to secure the entire chain before investing in a technology. With diesel, no one worries about where and how to refuel, there are never any supply problems. With the new technologies, whether it’s biogas, LNG, hydrogen, or something similar, you have to build the whole chain. Nobody will produce hydrogen if there are no customers, and we won’t buy a hydrogen truck if we don’t know where to refuel it.

The second problem is deployment, which in turn determines the technology. There is no such thing as bad or good technology, it can only be deployed incorrectly, and that applies to vehicle technology as well. If I know that I barely have time to charge the vehicle within 24 hours, then the electric truck is not a good solution. If you have enough charging stations, but you don’t have to take breaks, and you’re driving electric, that’s not good either. And if I would have to build a charging infrastructure everywhere in my economic area for long journeys, it would take an enormous amount of money.

We want to find the best-fit technology for each application. That’s why there is no right or wrong, you have to use the right technology for the right purpose. Hydrogen is an excellent technology, but with supply restrictions for truck models, supply shortages for H2 itself, and a market that is in extreme upheaval. For this reason, we have decided to invest more in biogas, as it is currently working well.



**Are there types of alternative fuels that you avoid?**

– We never buy food-based alternative fuels. Food should not be converted into fuel! I also see some problems with lithium batteries. We don't like lithium batteries where the raw materials are mined in a bad way. I don't want to have monster batteries and then claim that we are green.

**How important is sustainability to your customers?**

– In the past, our customers were rather split: Some wanted cheap products and didn't care that much about sustainability or where the products came from, while others were interested in more expensive and sustainable products.

But today, people have become more "hybrid." The typical Migros customer really

cares where the product comes from, and how it is made. Products from the region are very well received. If people know where the product comes from, it becomes more important how it is delivered. But then the question is whether there is an alternative, a less expensive product....

**What do you think are the key challenges in the shift to more sustainable transportation?**

– The most exciting thing is that the perceived biggest challenge, hydrogen vehicles, is not a big problem. The big challenge is the supply and price of hydrogen! For us, the challenge is also to conduct our transport with as few vehicle types and compromises as possible. What technology allows us to run our business with a minimum compromises?

Infrastructure is also a challenge. In the past, you had your own diesel filling station. Today,

you need a new infrastructure, and it's not the same standard everywhere. Germany, for example, is very well supplied with hydrogen. That's not the case in Italy, which on the other hand has an excellent LNG infrastructure there.

The third challenge concerns vehicles. Currently, there are only a few prototype hydrogen trucks and only one in serious production. Today, we also have hydrogen fuels produced with domestic electricity. So, we no longer depend on other countries and less dependent on international politics (self-sufficient supply, or in other words "produced in the region, used in the region". The price is unfortunately not pleasing.

**How do drivers perceive the switch to electric vehicles?**

– There are 3 categories of drivers:

- Those who see no alternatives to diesel and want a specific brand.
- Those who have a little respect for other types of vehicles but then are completely surprised by what these vehicles can do
- Pioneers who want to test new vehicles directly as soon as they hear about them

We give new vehicles to the pioneers as they become ambassadors. In principle, people are very open and positive about the subject. Only a few stick with diesel. We hope there are larger numbers available by 2026. It has never been more difficult for a fleet operator to decide which technology to use. What is right today may not be right in three years, so financing is also a risk. There is a 7-year warranty - a challenge our industry has never faced before. I think heavy trucks will be electric in the long run, some using BEV and others using FCEV technology. Important: the electricity must be "green".

**What is the cost of conversion, is there a positive return on investment long term?**

– That is very difficult to calculate at the moment. We are only at the beginning and only companies that can take the risk are

able to deploy this type of vehicle today. I wouldn't recommend it to anyone whose livelihood is at stake. We are prepared to make a certain investment here. You have to push this investment, but financially it's all on a subsidy basis. If you buy a hydrogen truck in Switzerland, you don't have to pay HVF. In Germany, the government pays the difference between the diesel and hydrogen versions.

**What do you think of subsidies and CO<sub>2</sub> taxation?**

– To us, it is more important to create good framework conditions for hydrogen production than to receive subsidies. We also need a tax on CO<sub>2</sub> emissions, especially to make fossil fuels more expensive. We need the money to build roads, etc.

**Are there other consequences of electrification?**

– Media interest is enormous, and the PR department of the manufacturers has used this as an opportunity, so the local press has picked up the story. These issues are very much in focus, but they will decrease. If we want to stay relevant, we have to put the flag on the moon. Afterwards, hopefully, many will follow.

**If you had to pick one key issue in the shift to sustainable transportation, what would it be?**

– I would like to see openness to new technologies. Technologies are evolving quickly, so we need to have open minds. I hope that many technologies will be around for a long time because that means there will be research, development and improvements. We have to challenge each other, there is always more to do. This is the driving force to achieve excellence, and to be successful we have to keep working at it.

Truly achieving a global energy transition will require all technologies, not one after the other, but in parallel. That way, we will get access to new, and above all, better solutions. Thank you for the interview, I am happy if I could put a little flag on the moon and wish for many, many imitators.





## About us

### Prepare and implement the shift to EVs with AddSecure

AddSecure offers industry leading solutions for fleet and transport management. Our mission is to increase the safety, efficiency, and sustainability of our customers' mobile assets.

#### Preparing for the shift to electric vehicles with AddSecure

Our transport and logistics' solutions are designed to help you take control of your fleet and effectively manage your transport operations. From advanced asset-tracking technology to fuel management solutions, our comprehensive suite of solutions will help you improve productivity, reduce costs, and increase customer satisfaction. With a wealth of experience and a commitment to quality, we deliver solutions that can meet the needs of any organization.

Let us help you prepare and shift to EVs. Since digitalization and electrification are two of the most important activities right now to reduce greenhouse gases, we are committed to help and speed up these transformations. We acknowledge the complexity that the shift to EVs brings to you, and we see that our modern connected technology can make the difference for a successful transformation.

Contact your local AddSecure team today and we will help you plan and implement your shift to more sustainable transport using our data-driven solutions.

#### About AddSecure

We are a leading European provider of secure IoT connectivity solutions with a focus on secure critical communications and secure data. We see it as our mission to help make the world safer, smarter and more sustainable. By securing IoT connectivity solutions, we help our customers save lives, protect property, secure vital societal functions, and drive business.

As a company we have both an opportunity and a great responsibility to contribute to society's sustainable transformation. Our secure IoT connectivity solutions respond to many of the sustainability challenges the world faces, allowing for energy and emission savings, among other things.

In addition, by securing IoT connectivity solutions, we help our customers save lives, protect property, secure vital societal functions, and drive business. Today more than 50,000 customers and partners within the security and safety industry, rescue services, building security and automation, digital care, construction, transport and logistics, utilities, smart cities, and more, safeguard their life and business critical operations with IoT connectivity solutions from AddSecure.

## Checklist, short version

### What is required for a successful shift to EVs?

- 1 **Review your business strategy**  
Review your business strategy and see how it aligns with introducing EVs. The answers will help you decide if and when a shift to EVs is the right move for your company.
- 2 **Establish a business case for the shift**  
Develop a business case to prove the long-term value of an EV shift. Calculate the estimated Total Cost of Ownership (TCO) for EVs and compare it to that of your current fleet.
- 3 **Create a plan for your shift to EVs**  
With a solid business case at hand, create a plan for the shift to EVs. What is your mileage profile? Look at payload and passenger requirements and compare this to EV range, etc.
- 4 **Involve your customers and partners**  
Once you have decided to shift to EVs and made a plan, start involving your customers and partners. They need to be involved since the shift will also affect their business.
- 5 **Design your charging infrastructure**  
Use your mileage profile for a greater understanding of where vehicles are travelling, and distances covered. Consider charging point requirements, including capacity & reliability.
- 6 **Consider how charging should be paid/reimbursed**  
Charging costs are more complex than a petrol pump, with different tariffs depending on where drivers plug in. How will you manage payment for each potential type of charging?
- 7 **Plan how to train your drivers**  
Encourage and train drivers for an optimal driving behavior adapted to EVs. Focus on a driving style that ensures a long range.
- 8 **Make sure to use the right tools**  
Since there are greater requirements on range optimization for EVs than other vehicles, make sure you have solutions for route optimization that can also be used for your EVs.
- 9 **Get going!**  
It's time to purchase your EVs, train the staff (both the teams in the office, the workshop and the drivers) and implement the charging infrastructure.
- 10 **Monitoring, measuring, and sharing**  
Share success stories with the wider business community to guarantee further investment and adoption of EVs. Win support and ensure a swift transition.



