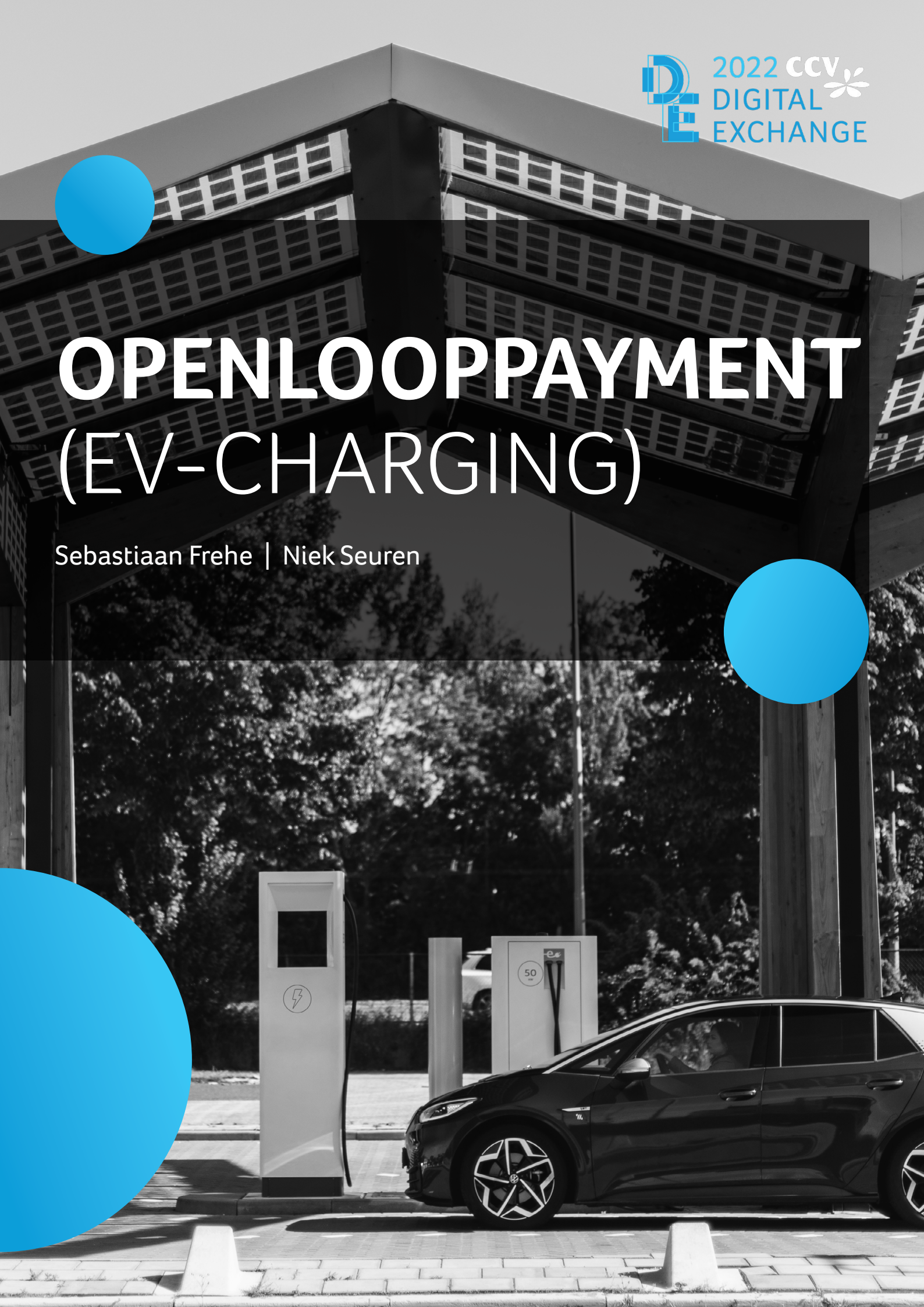


OPENLOOPPAYMENT (EV-CHARGING)

Sebastiaan Frehe | Niek Seuren



Foreword

The electric vehicle industry continues to grow at pace, with an unprecedented demand for charging stations across Europe following as a result.

However, if there's an obstacle to mainstream electric vehicle ownership, it's almost certainly EV charging payment. As it stands, it's a largely closed system, requiring memberships, multiple apps, and charge cards to connect (and pay) at particular charge point operators.

This just won't fly with today's EV driver, who now expects to park, charge, pay, and go without delay or fuss. And to make this happen, paying for EV charging needs to be open, transparent, fast, and easy.

In this whitepaper, **Sebastiaan Frehe** (Commercial Product Manager at CCV) and **Niek Seuren** (Sales Lead Mobility EV Charging & Service Stations at CCV), take you into the world of open-loop payment at EV charging stations. What is the current state of play? What are the benefits of an open loop system? And what will happen in the future?

Do you want to know more?

Contact CCV

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OPEN-LOOP PAYMENT IN EV-CHARGING



Breaking down barriers and creating opportunities

The electric vehicle (EV) market is finally shifting into gear, and the future looks brighter than a full beam headlight.

There are now more electric cars on the road than at any point in history. And this growing industry is driving unprecedented demand for charging stations across Europe — and beyond.

However, to meet this surging desire for simple, accessible charging, charge point operators need to deliver a seamless and consistent customer experience.

EV drivers now expect to park, charge, pay and go without obstacles or delays.

In this short eBook, we explain why open-loop payments have to become the industry standard if electric vehicles are to truly break into the mainstream.

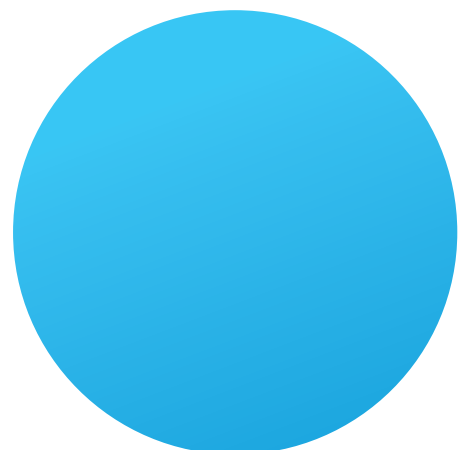
Recent developments in the EV charging industry demand an open, user-friendly payment system

According to the latest **BloombergNEF** study, EV adoption rates are on the rise, driven largely by increased vehicle availability, affordability, and growing consumer interest.

The report projects that plug-in vehicle sales will climb from 6.6 million in 2021 to **20.6 million in 2025**. This vehicle type is predicted to make up around 23% of new passenger car sales worldwide by 2025 — and three-quarters of those will be fully electric.

But there's another factor behind this accelerated transition to electric driving, and it's one that might just change how the whole industry operates: **environmental policy pressure**.

As part of the Green Deal, the EU wants 13 million zero and low-emission vehicles on the road by 2035. And to achieve this, certain obstacles need to be removed. Namely, the fragmentation of payment methods across the industry.



What does the Green Deal want to achieve — and how will this affect EV charging?

The EU is aiming for a 55% net emission reduction by 2030 and the goal of climate neutrality by 2050.

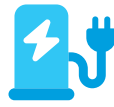
A significant part of this will involve reducing emissions from road transport — something of an emergency according to the European Environment Agency. The EEA found that road transport accounted for 72% of all domestic and international transport Greenhouse Gases in 2019.

So, with more electric vehicles on the road in the next decade, we're going to see a rise in demand for more EV charging stations to keep them going. And this has shone a light on the way drivers will pay for EV charging going forward.

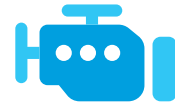
In response to this, the EU wants to:



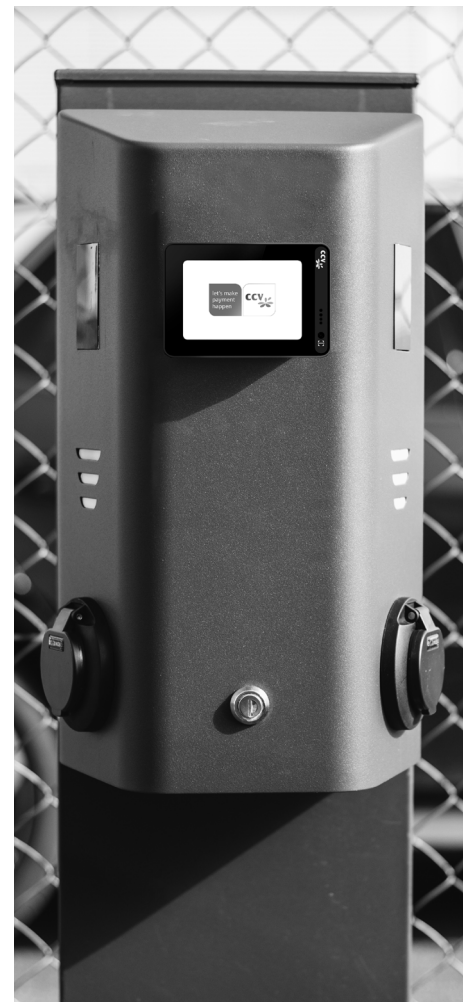
Make driving electric vehicles easier and more accessible to consumers;



Roll-out fit-for-purpose charging infrastructure;



And phase-out internal combustion engine (ICE) cars.





Legislation at a national level is impacting EV charging, too

It's worth noting that, while the EU Green Deal looms large over the direction of the EV industry, several countries are also introducing EV-related legislation.

For instance, in Germany, barrier-free cashless payment will soon be standard at every EV charging station. This is as a result of the new charging station regulation (or *Ladesäulenverordnung*).

Introduced in mid-September 2021 with the approval of the German Bundesrat, the law states that as of 1 July 2023, all newly installed EV charging stations must be equipped with a payment terminal. This means cashless payment with a debit or credit card, as well as Apple Pay and Google Pay, must be possible, no matter where you charge in the country.

OPENING UP A CLOSED SYSTEM

Historically, the EV market grew with the use of closed-loop payment solutions. Each individual EV charging operator developed their own (closed) payment options, limiting their charging stations to only their customers.

However, with the developments described above, we're now seeing a shift to open-loop payments.

Open payment solutions ensure that anyone can pay with their card, smartphone wallet, or web payment solution to charge their electric vehicle. No subscription or signup required.



What are the pros of switching to open loop EV charging payment?

There are several advantages to opening up the EV charging payment system.



For consumers

The entire [payment flow](#) is far more straightforward and transparent. Everyone has a debit or credit card or a smartphone, and there's no need to worry about not having the right EV charging card or membership. Plus, the consumer knows in advance what a charging session will cost.

Furthermore, thanks to software interoperability, drivers can find and use nearby charging stations, regardless of their network provider. This makes the entire EV driving experience less stressful as consumers can plug in and charge at their nearest station, instead of trying to find one available only to them.



For merchants

Anyone can pay at your station, which means more traffic and more revenue. And the payments happen on an infrastructure that's safe, controlled, and reliable, so you'll have complete peace of mind that everything is secure.

"Security is a topic that's not really discussed," says Sebastiaan, "But it's important. The Mifare cards currently used for EV charging payment can be copied in a matter of seconds."

A big advantage of moving towards open-loop payments is that the entire payment industry is regulated. It's a very safe environment that's achieved automatically when you switch to open-loop payments.



What are the cons of open loop payments?

There aren't many downsides to moving from a closed to an open payment system. Unless your business model is to keep your charging stations closed only to members (offering them loyalty bonuses and incentives), switching to an open loop solution can drive more revenue and potentially help you scale your business to other locations.

Yet, there are some detractors who wish to see the status quo remain.

They say that if it's not broken, why fix it? Everyone who drives an EV has a charge card. Don't rock the boat. But recent research into EV payments ([Consumer Research Payment for Electric Vehicles](#), ordered by Mastercard and carried out by an

independent company) suggests otherwise. 65% of consumers want to be able to pay with their debit or credit card instead.

Others, meanwhile, argue the switch to new payment technology will be too expensive. However, according to Sebastiaan, that claim just doesn't stack up.

"If you switch to a new technology, there's some investment required," he says. "Yet there are lobbyists trying to stop the move to open payments by claiming that the terminals needed cost roughly €1,000. Our payment terminal (the IM30) costs almost half that amount, and a single terminal can be used with multiple chargers, saving you even more money."



Listen Now: CCV Digital Exchange Podcast

Want to learn more about the EV charging industry developments and the pros and cons of open loop payment?

Join Sebastiaan and Niek as they discuss the past, present, and future of EV charging payment in this special episode of our podcast.

[Listen here](#)

What is the best open payment solution for EV charging?

The payment infrastructure for electric vehicles remains highly fragmented.

As a result, customers don't always have the option of paying with preferred payment methods (such as contactless credit cards or mobile devices).

But with the right open-loop technology, charge point operators can start accepting a variety of payment options, giving EV drivers the opportunity to pay how they want in a safe and convenient way.

Introducing CCV IM30: The 3-in-1 Terminal

Equipping charging stations with payment terminals will become mandatory in Germany by 2023, and there's a good chance other countries will follow their example.

Get a headstart on your competition and open up your charging network with our 3-in-1 payment terminal, the CCV IM30.

Your customers will enjoy the full scope of payment options with our new terminal solution. Combining contactless, EMV chip, magstripe and a touchscreen for PIN entry. All in one device, paying for EV charging has never been easier, or more secure.

The terminal runs on a self-contained version of Android, making it intuitive and familiar. And with a range of app integrations, you can customise it to your specific business use case.

[Learn more about the CCV IM30 here](#)

Finally, what does the future hold for EV charging payment?



While opening up EV charging payment is a vital next step for the industry, we believe that the drive for innovation and accessibility won't stop there.

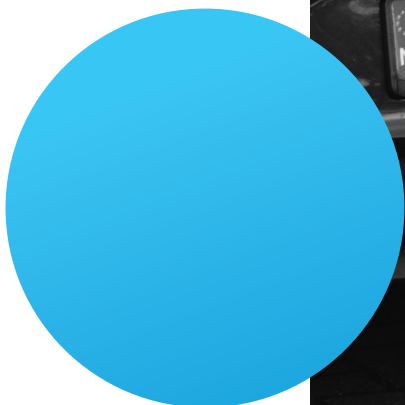
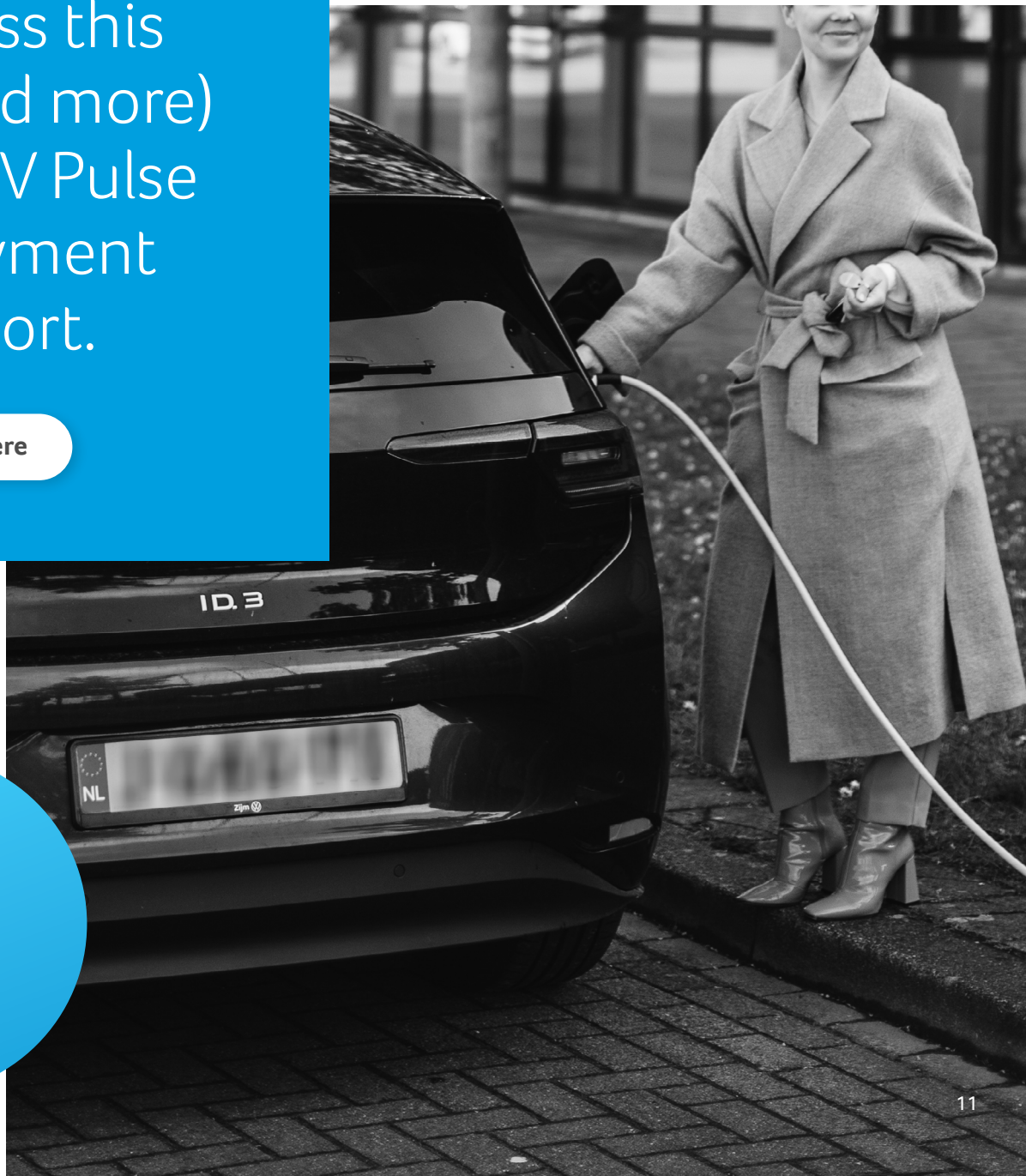
For example, in the not-so-distant future, we'll see connected cars take to the streets, making the entire recharging experience even more seamless. In theory, a connected car could "talk" to an EV charger and handle the payment, with the driver only needing to confirm the amount.

Imagine parking at any charging station, plugging in, charging your vehicle, and paying from the driver's seat via your car. It's not as far-fetched as it sounds.

Ready to make open-loop payments a reality for your charging stations? Talk to one of our experts to get started.

We discuss this trend (and more) in our CCV Pulse 2022 payment trend report.

[Grab your copy here](#)



Want to stay up-to-date with the latest developments in payment?

If you want to stay informed about all the latest developments in payment, check out the CCV Digital Exchange. This is our knowledge platform containing everything related to payments. Here you'll find interesting webinars, podcasts, and whitepapers. It's all right here at your fingertips—and completely free to access.

[View more](#)



Sources

Here, you can find the links and sources we used to write this whitepaper:

- » BloombergNEF study [Electric Vehicle Outlook 2022](#)
- » Mastercard [Consumer Research Payment for Electric Vehicles](#)
- » Green Deal [A European Green Deal](#)
- » EEA [Greenhouse gas emissions from transport in Europe](#)

Let's make payment happen!

CCV is een familiebedrijf met een hart voor ondernemerschap en innovatie. Wij begrijpen jouw ambitie en zijn in de perfecte positie om jou te helpen slagen. We ondersteunen meer dan 600.000 klanten in Europa met onze betrouwbare, toekomstbestendige end-to-end betaaloplossingen. Met meer dan 60 jaar ervaring in de betaalsector en actieve aanwezigheid in meer dan 15 landen, is ons succes gebaseerd op toewijding aan onze klanten: hoe klein of groot ook.

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Our offices in Europe

Belgium

Kortrijk, Ypres, Hasselt

Germany

Au in der Hallertau,
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The Netherlands

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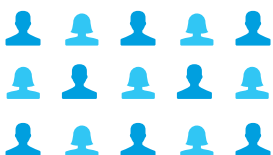


Facts & figures



750 000
payment terminals in use

We've got
150 000+ clients
across Europe



Annual turnover
€170 000 000



With **18 000**
active webshops



1 000 000
token transactions



We handle approx **1 billion**
in-store payment transactions
per year



We handle approx **350 000**
online payment transactions
per month



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