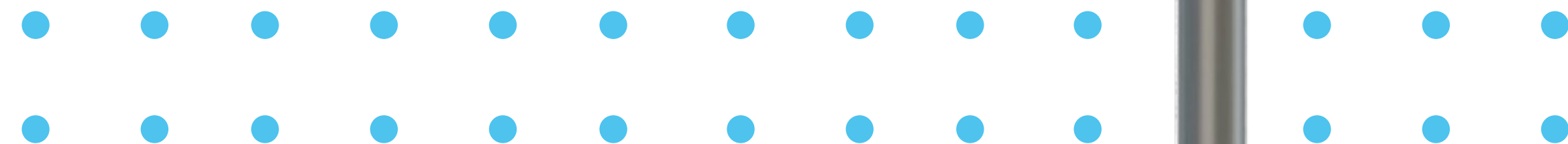
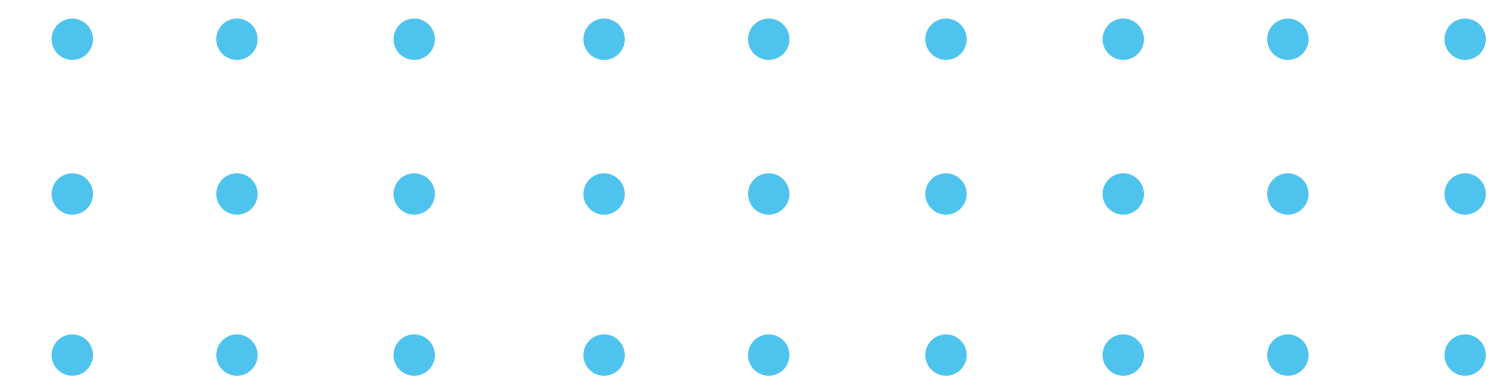


Smart Mobility

19 Trends from 11 Industry Experts



Drive through the Trends



- Trend 1** The EV industry is at a tipping point
- Trend 2** Payment technology is helping EVs go mainstream
- Trend 3** Public transport holds the key to a better future
- Trend 4** Automated vehicles will appear on our roads
- Trend 5** Automation will become mature
- Trend 6** Payment methods are evolving
- Trend 7** Open-loop payment schemes
- Trend 8** Smarter mobility
- Trend 9** Multi-purpose mobility hubs
- Trend 10** EV skepticism is disappearing
- Trend 11** Coronavirus focuses our attention
- Trend 12** Increased intercompany cooperation
- Trend 13** IoT impacts parking payments
- Trend 14** Payments-as-a-Service (PaaS) in parking
- Trend 15** Interest in EVs is widespread
- Trend 16** Demand is increasing
- Trend 17** Connected vehicles and services
- Trend 18** Intentional evolution of service stations
- Trend 19** Open-loop ticketing improving services

Mobility is changing, and fast.

“Rapid urbanisation, climate change, shifts in economic power, demographic changes, and technological advancements.

These are the five megatrends that power the direction of this innovative mobility industry. We hope you’re inspired by the first-hand specialist insight featured in this slideshow.”

John Kolthof

Chief Commercial Officer at CCV



Trend 1

The EV industry is at a tipping point

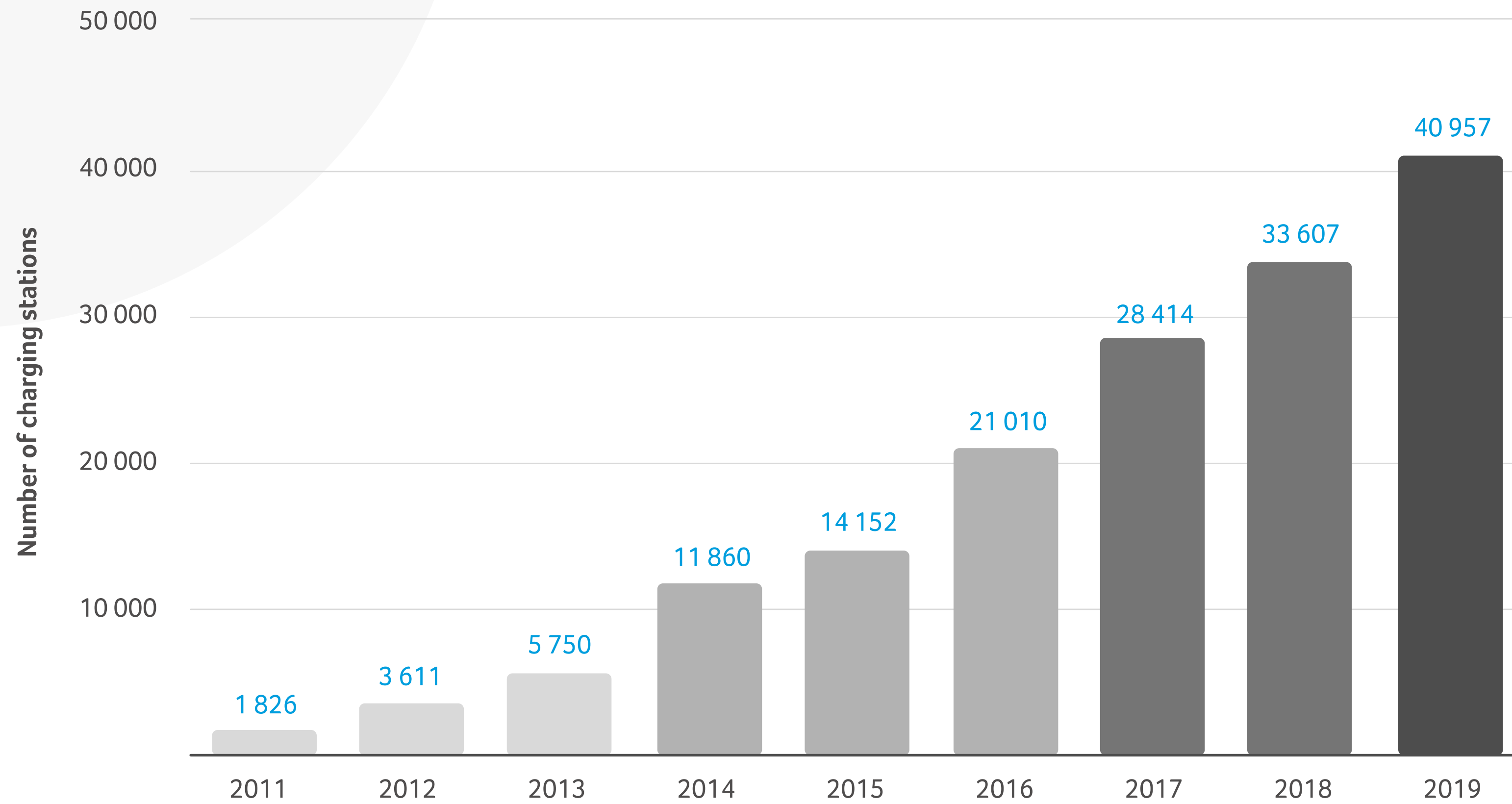
“We see that the global EV market is at the tipping point of steady rapid growth. This is enabled by an EV charging infrastructure, where IT-supported features are setting important trends.”

Arjan van der Eijk

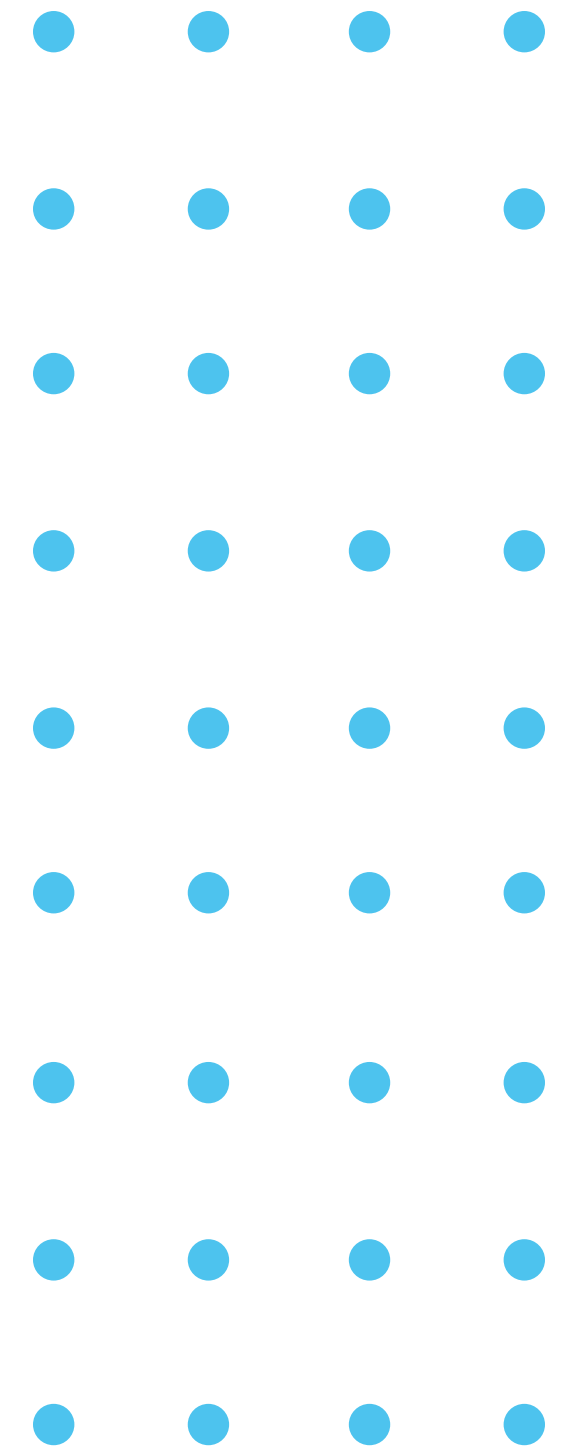
CEO, innogy eMobility Solutions GmbH



Number of charging stations for electric vehicles in the Netherlands from 2011 to 2019



Sources
Statista 2019



Trend 2

Payment technology is helping EVs go mainstream

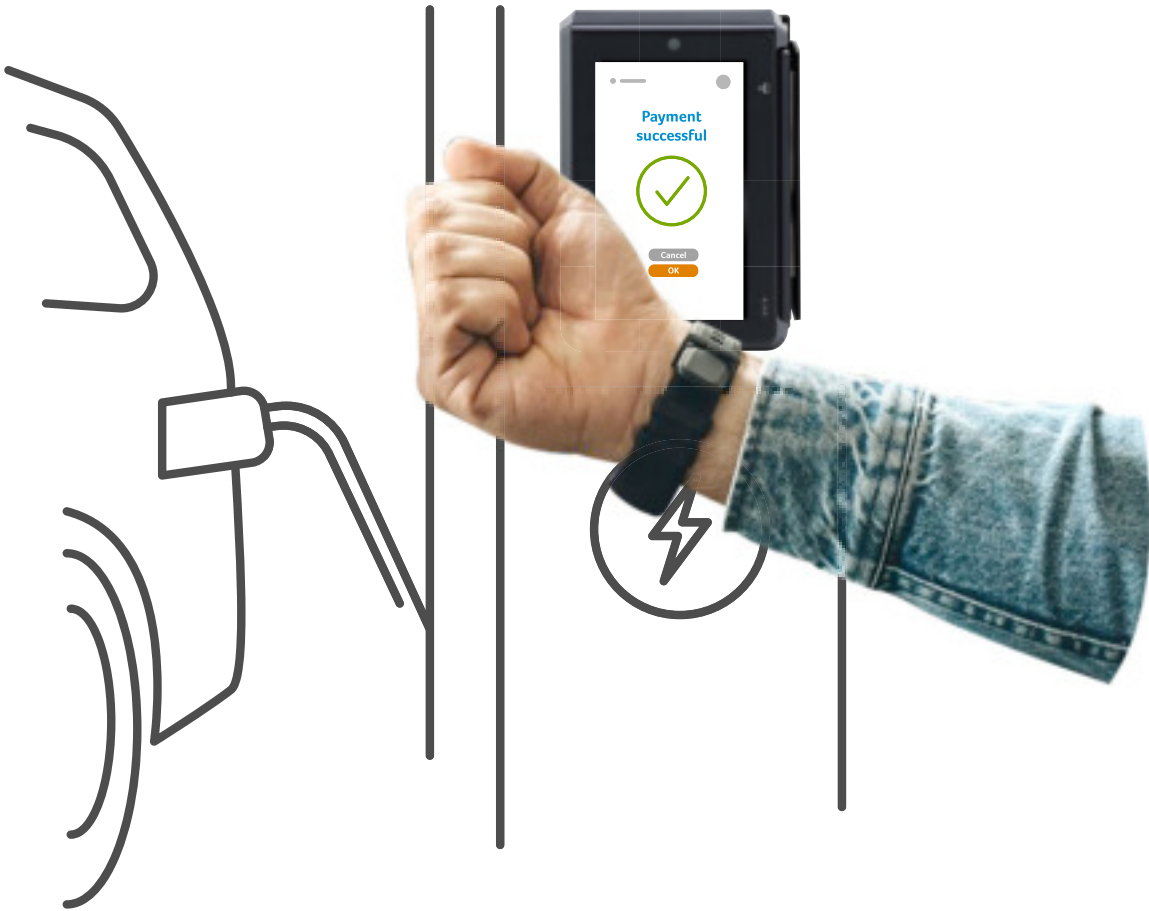
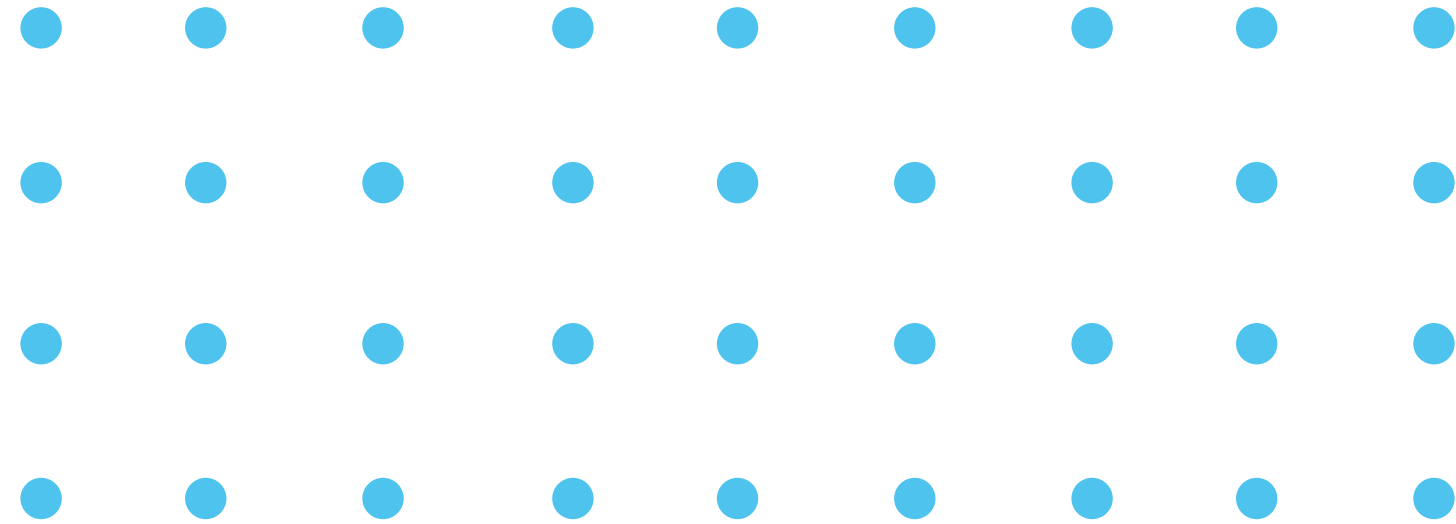
“Along with existing methods to authenticate at charge ports, unattended payment, like contactless NFC, is making EV charging increasingly mainstream.”

Arjan van der Eijk

CEO, innogy eMobility Solutions GmbH



Payment technology is helping EVs go mainstream



Trend 3

Public transport holds the key to a better future

“In the first place, we need to develop the public transport sector so it can be recognised as a great solution to climate change.

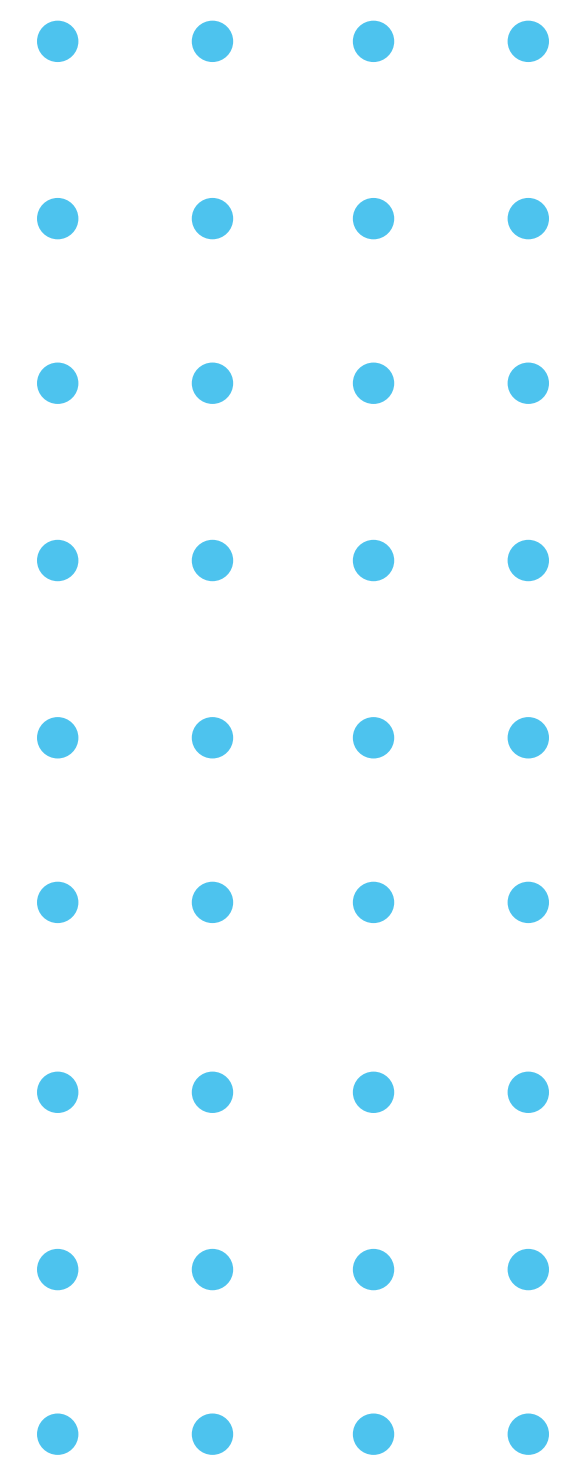
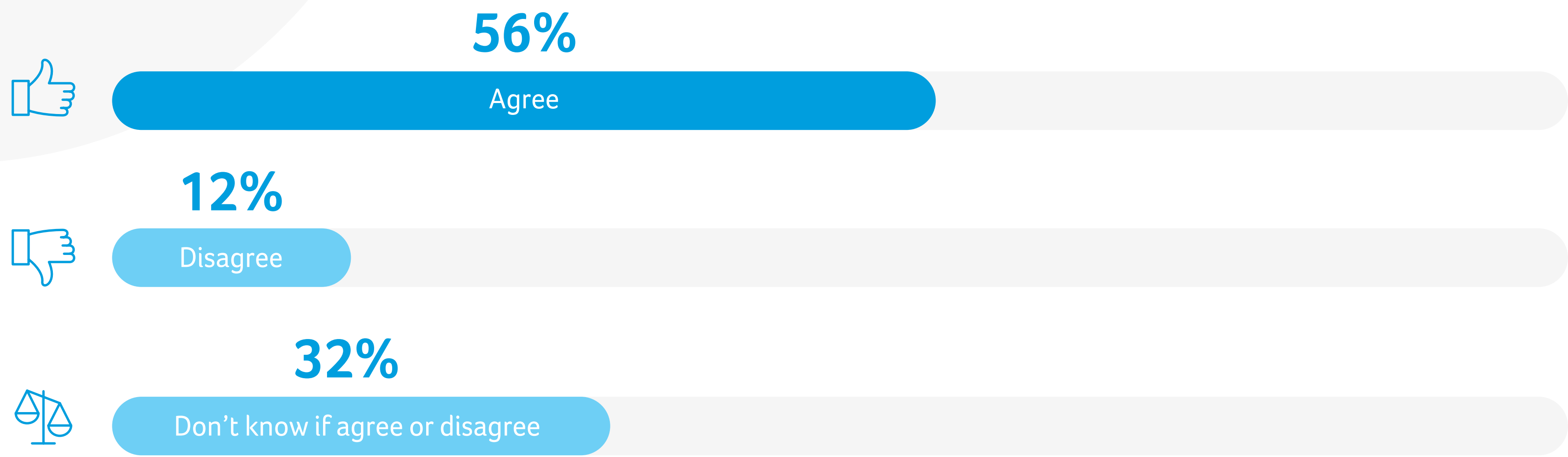
We need to strive for public transport to reduce its carbon footprint and to comfortably move a high volume of passengers, whilst meeting the needs of people with reduced mobility and/or cognitive impairments.”

Aida Abdulah

Senior Project Manager, UITP



Our transport system will fundamentally change in the next decade



Sources
FuelsEurope
Consumer Survey

Trend 4

Automated vehicles will appear on our roads

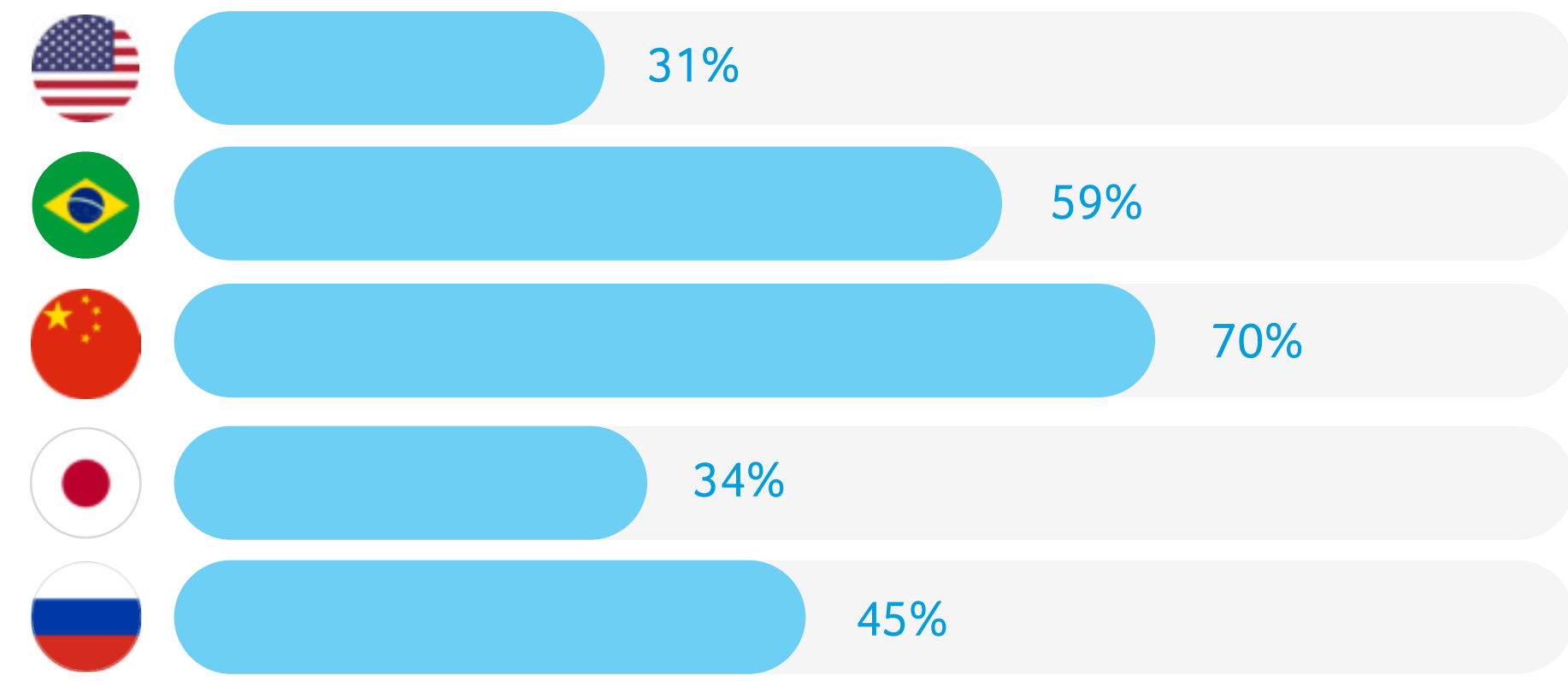
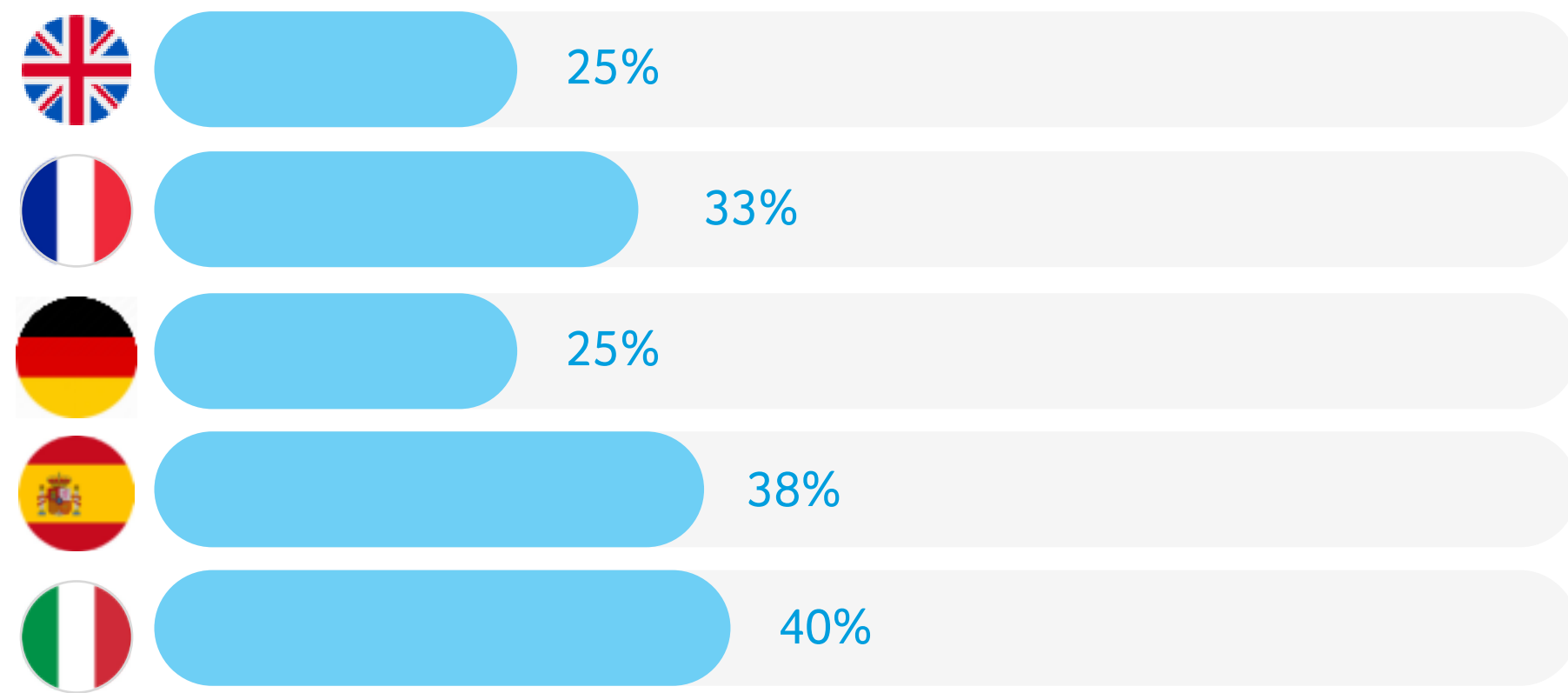
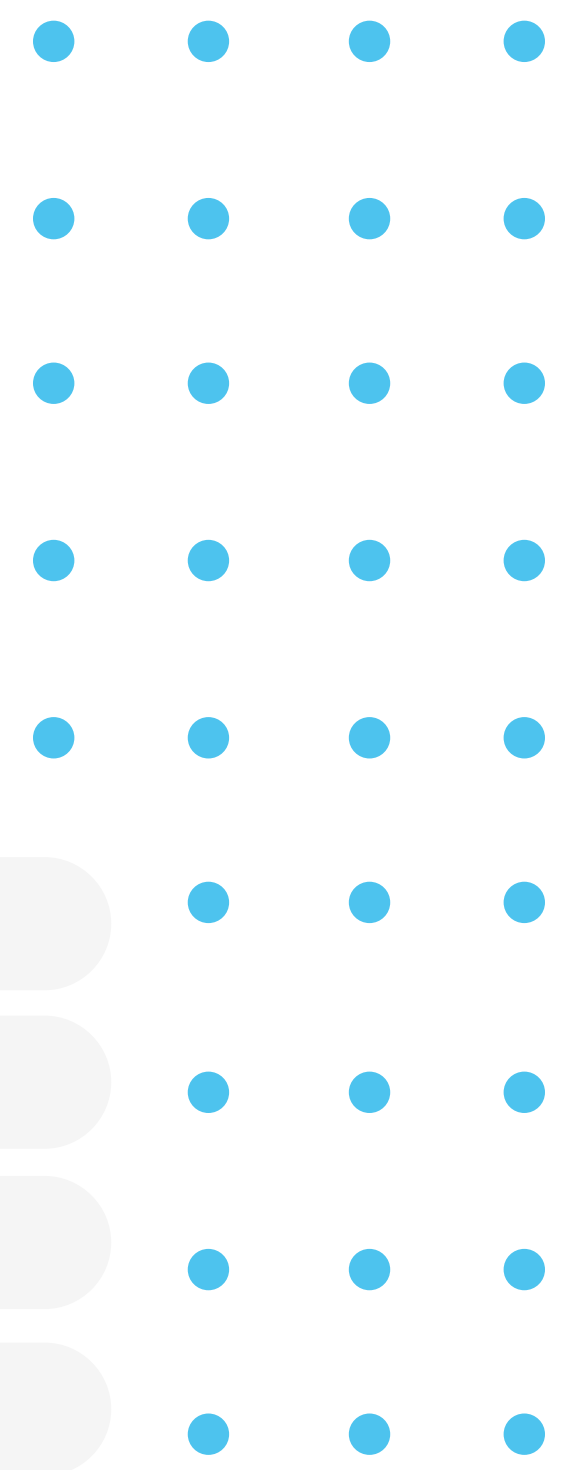
“By the early 2020s, we’ll see things like truck platooning, unmanned delivery services, and autonomous minibuses.”

Olaf Madland

CEO, Applied Autonomy



Level of interest in owning an autonomous car for personal use



Total



Sources

Ipsos Automotive
Navigator survey

Trend 5

Automation will become mature

“By around 2025, we’ll see automated driving on expressways and unmanned automated driving-based mobility services in some areas. At the same time, V2X standards will become more mature.”

Olaf Madland

CEO, Applied Autonomy



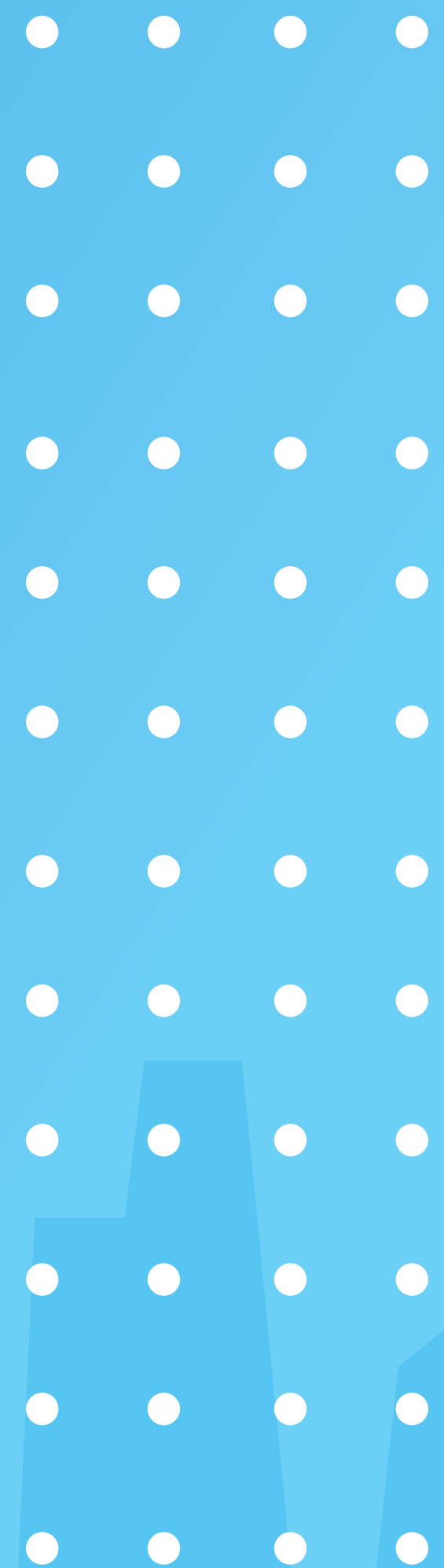
Trend 6

Payment methods are evolving

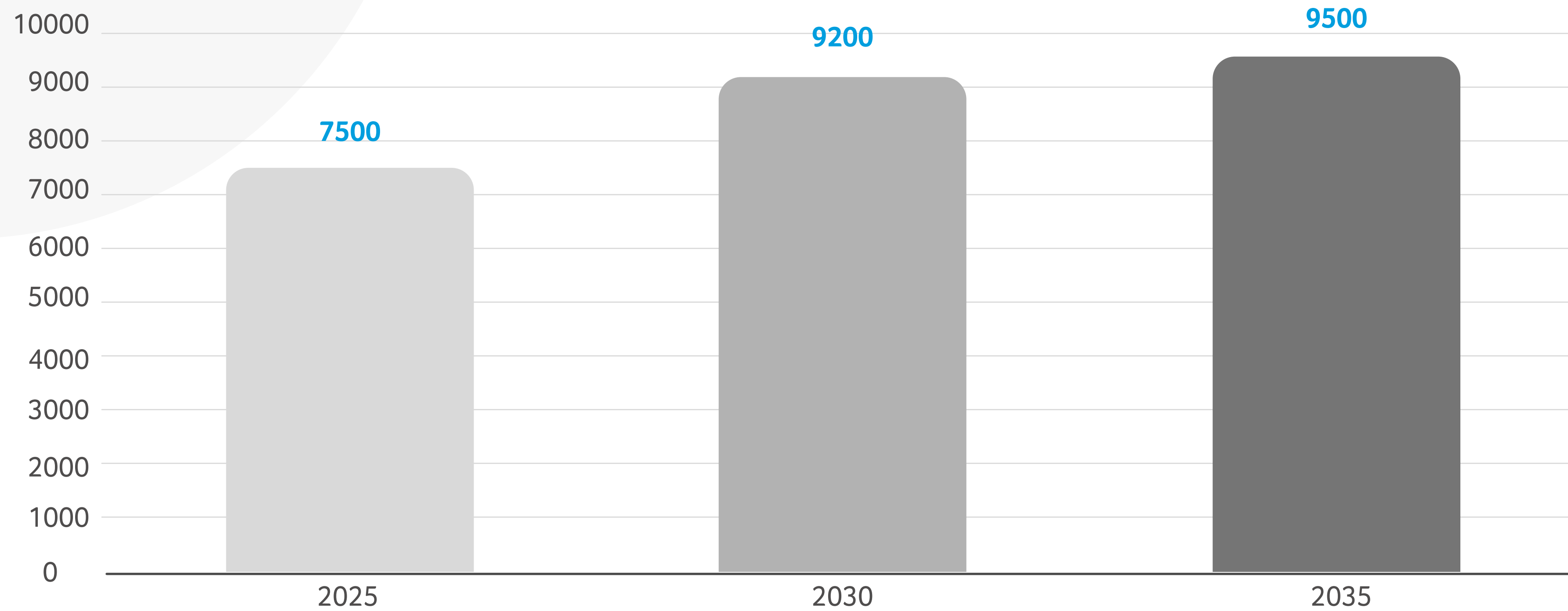
“In mobility payments, we’re seeing movement from card-present to app-based and eCommerce payments. This is part of the shift to Mobility-as-a-Service (MaaS).”

Simon Wood

Senior International Partner Manager, CCV

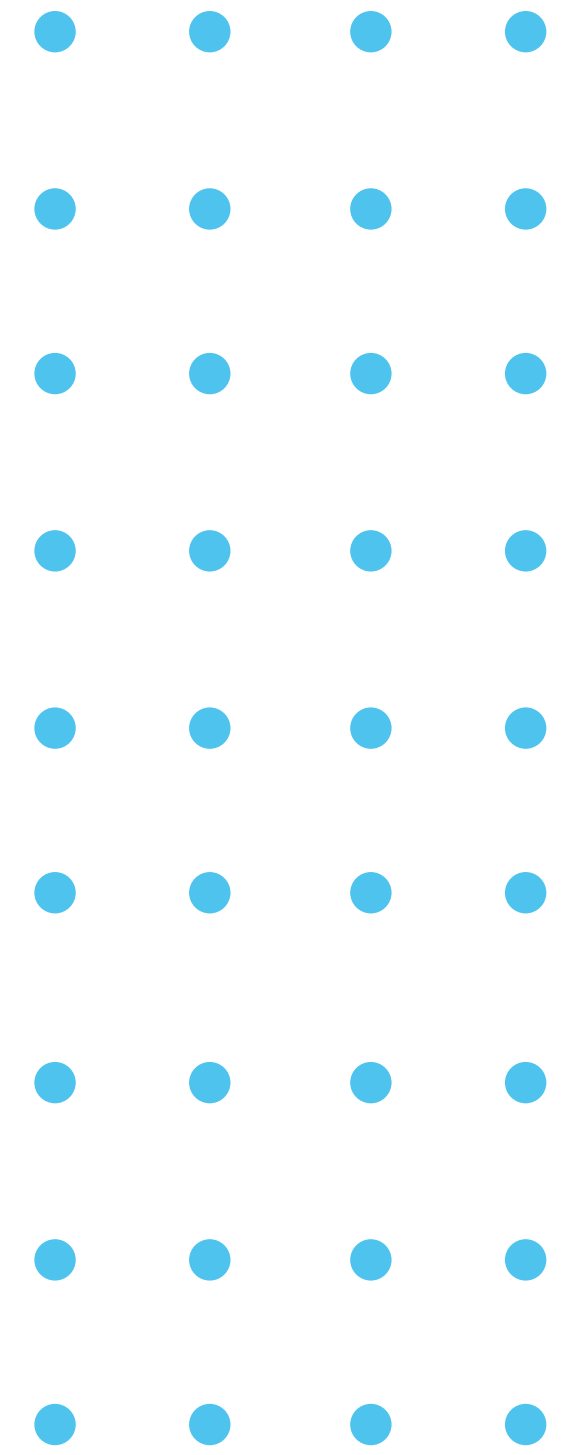


Estimated mobility-as-a-service (MaaS) market capitalization worldwide from 2025 to 2035 (in billion U.S. dollars)



Sources

Statista:
Mobility-as-a-Service Fleets



Trend 7

Open-loop payment schemes

“Operators are moving away from “closed loop” payment schemes (e.g. OV card in the Netherlands) to a new model where the traveller’s payment card is the identifier.”

Simon Wood

Senior International Partner Manager, CCV

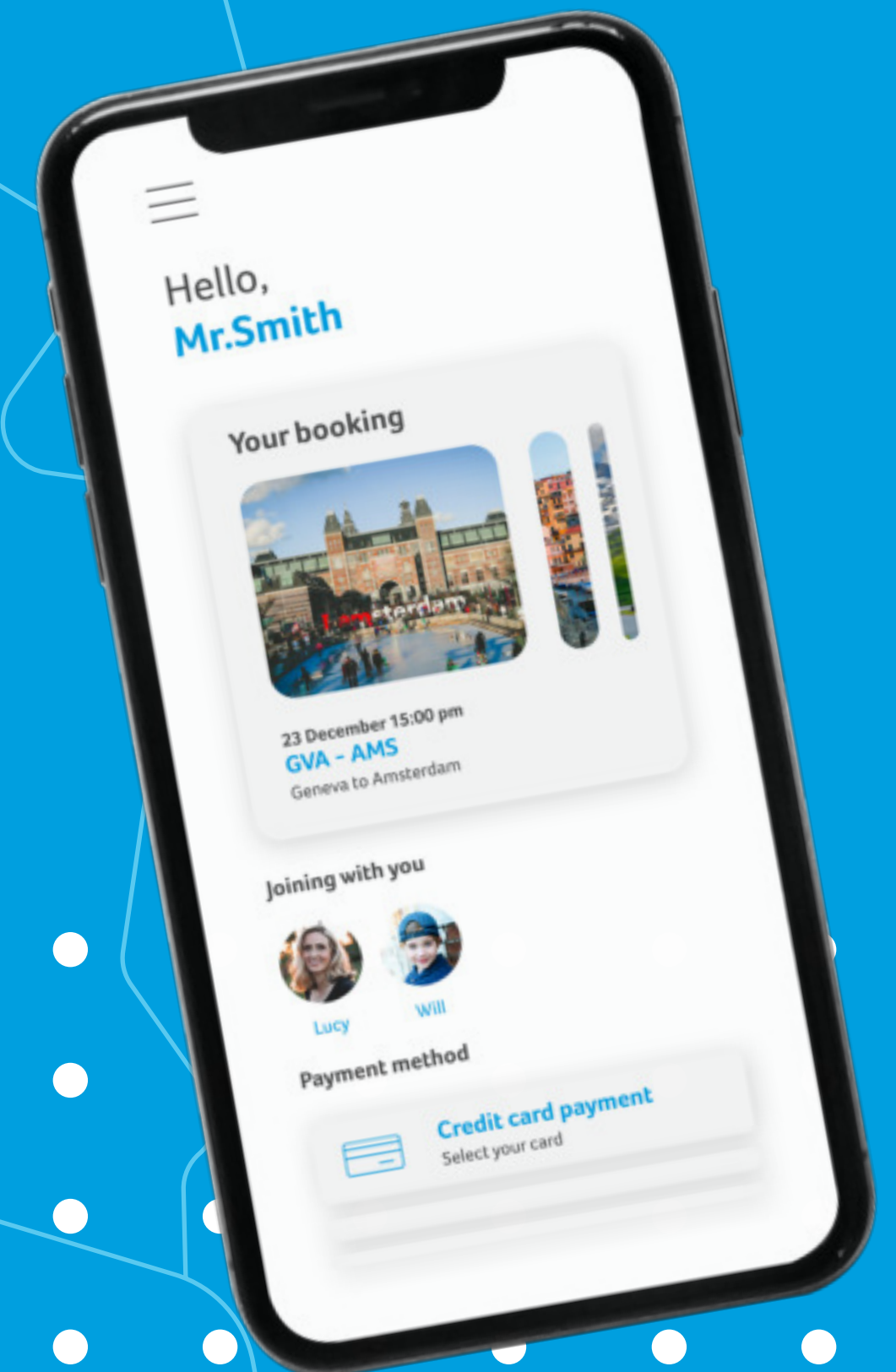
Trend 8

Smarter mobility

“We’re shifting to a smarter form of mobility, integrating IT with transportation more readily. There is an effort to increase flexibility and ease of use, catering for changing needs.”

Giuliano Mingardo

Senior Researcher, Erasmus Center UPT



Trend 9

Multi-purpose mobility hubs

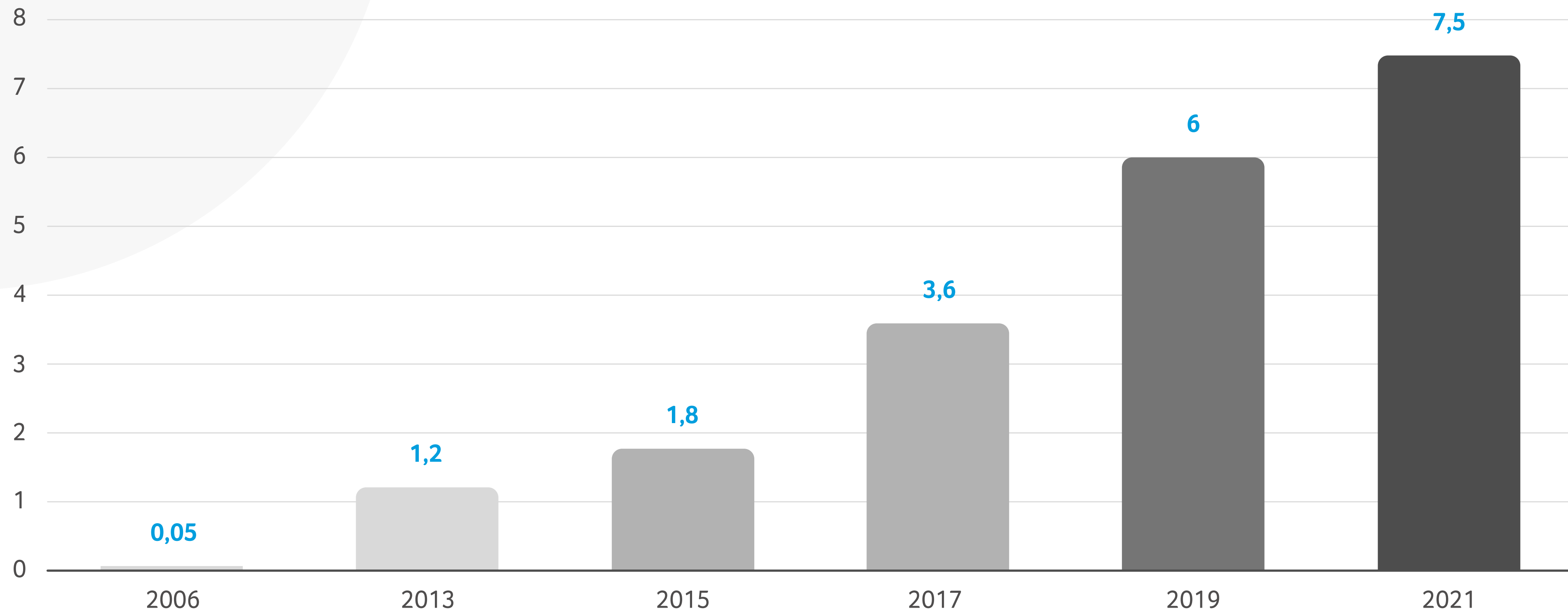
“Mobility hubs won’t just facilitate car parking, but also other transport modes. These locations will also enable deliveries, power swaps, bicycle sharing, storage, and everything in between.”

Giuliano Mingardo

Senior Researcher, Erasmus Center UPT



Global bike sharing market size between 2006 and 2021 (in billion euros)



Sources

Statista
Mobility-as-a-Service Fleets

Trend 10

EV skepticism is disappearing

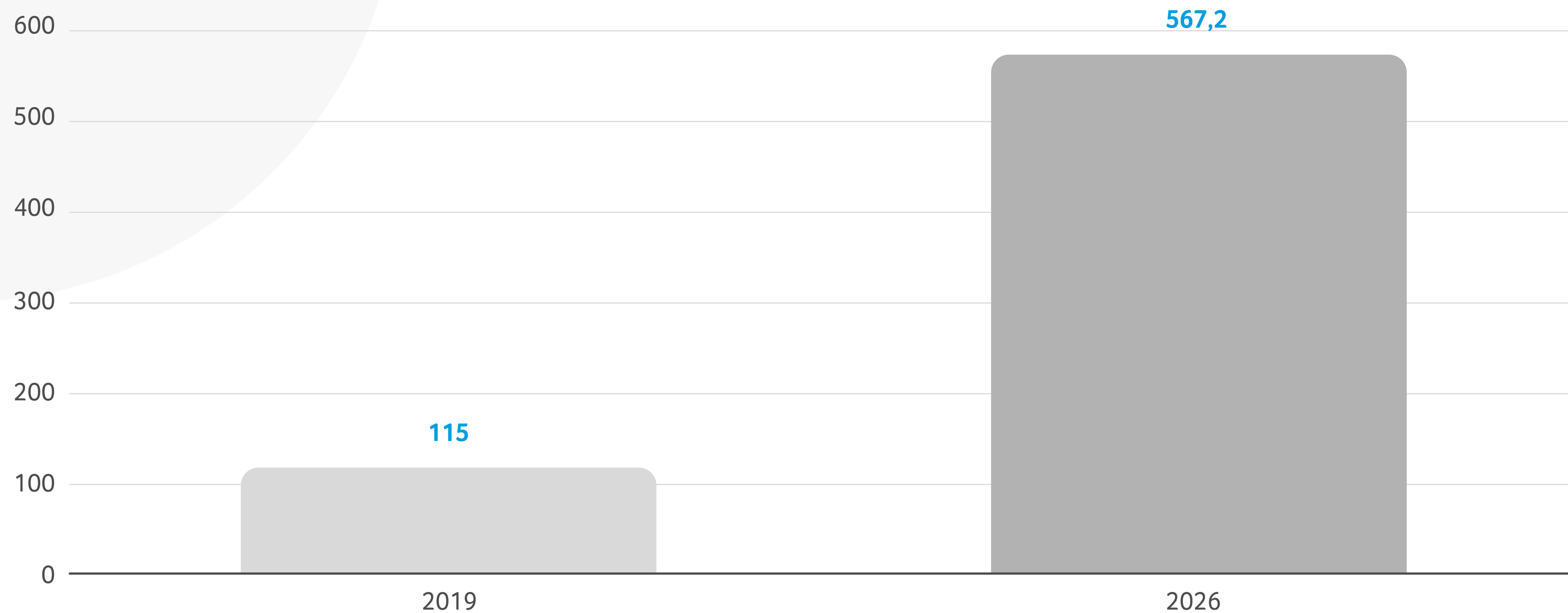
“When I started, a lot of people were skeptical and critical about EVs. Now, those same people are starting to consider driving one!”

Maria Joukovitch

International Partner Manager, CCV

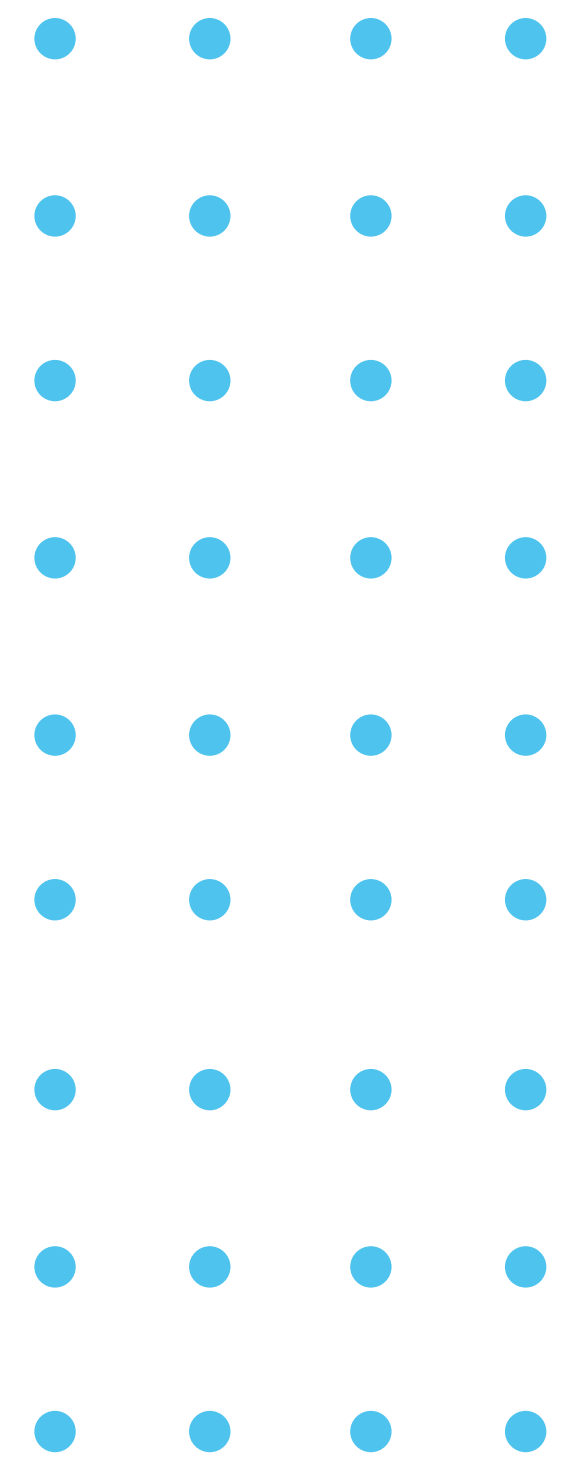


Size of the global market for electric vehicles in 2019 and 2026 (in billion U.S. dollars)



Sources

Electric Vehicles Worldwide



Trend 11

Coronavirus focuses our attention

“The COVID-19 crisis will draw attention to public health and the impact of pollution, and this will continue to power growth in sustainable mobility.”

Maria Joukovitch

International Partner Manager, CCV



Trend 12

Increased intercompany cooperation

“A new, more regular, way of public and private companies working together is starting to emerge. In Rotterdam, a whole new mobility industry is arising.

On a day-to-day basis, we find ways to improve the cooperation between multiple mobility-related companies. The same can be seen on a global scale.”

Richard van der Wulp

Urban Traffic Planner & Project Manager
Municipality of Rotterdam



Trend 13

IoT impacts parking payments

“If all vehicles are connected to a cloud-based digital account, and identified by a number plate or facial recognition, the payment process will change drastically.”

Dimitri Wouters

International Sales Manager, CCV



Trend 14

Payments-as-a-Service (PaaS) in Parking

“PaaS will gain popularity in parking – using cloud-based infrastructure to provide a single point of contact between the parking operator and the payment networks.”

Dimitri Wouters

International Sales Manager, CCV



Trend 15

Interest in EVs is widespread

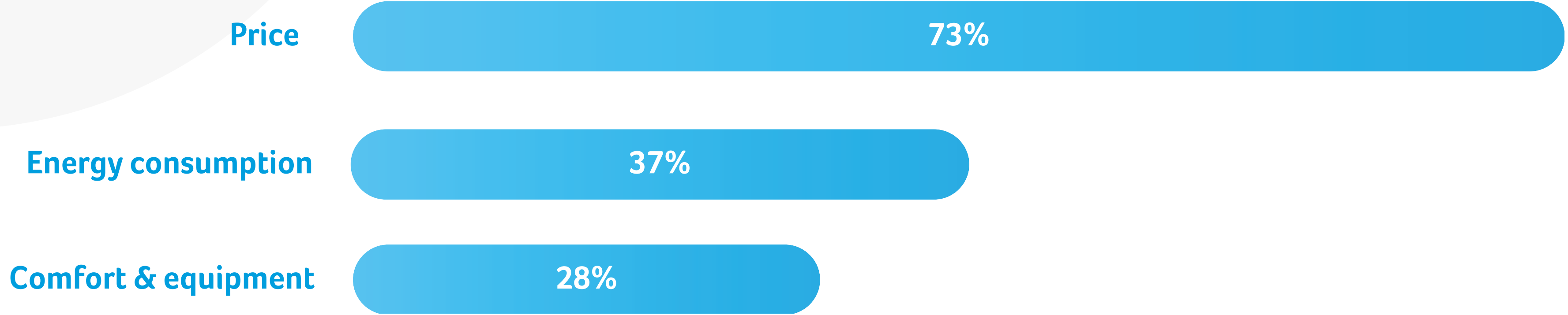
“New EVs are attractive in terms of price, and they have a better range. The interest in sustainable cars is increasing in families, individuals, and businesses.”

Maartje Sonnenberg

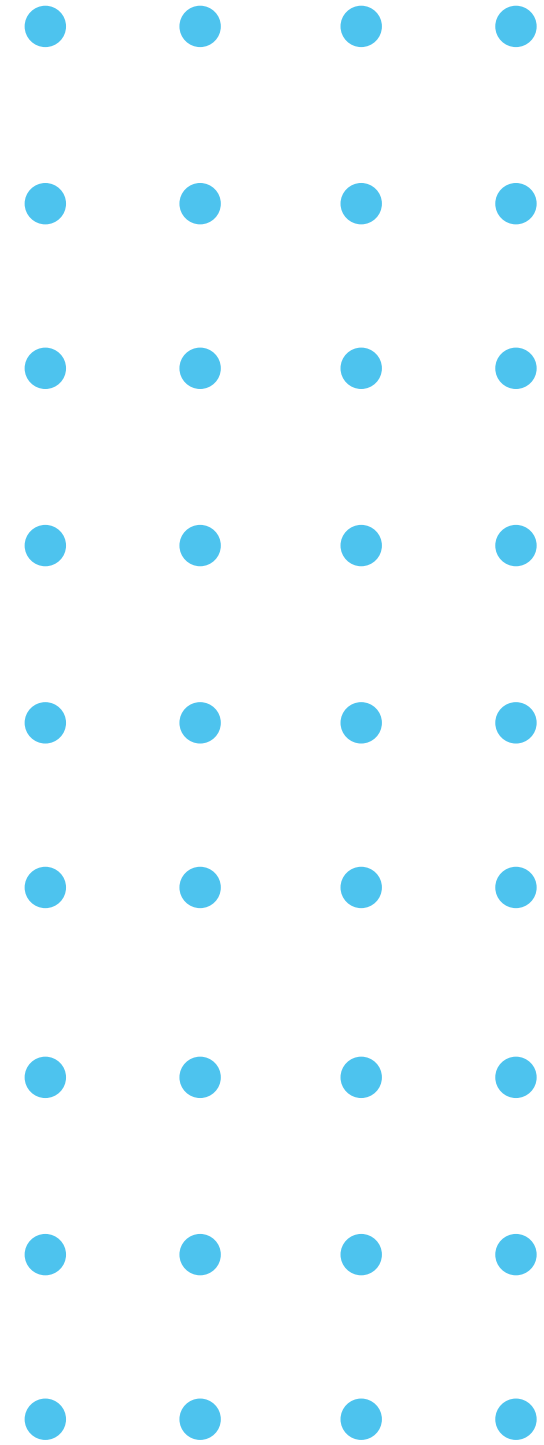
Head of Customer Experience & Product Owner,
Fastned



What is the most important criteria for you in buying a new car?



Sources
Electric Vehicles Worldwide



Trend 16

Demand is increasing

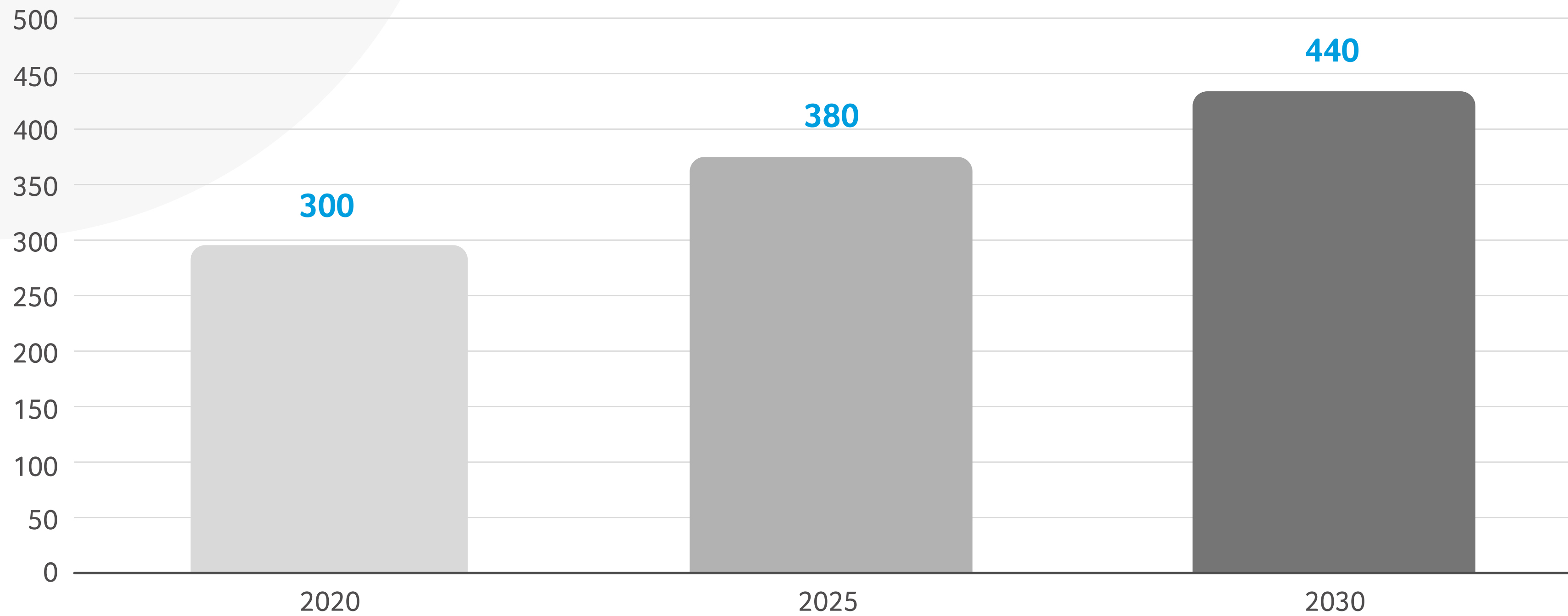
“Charging is getting faster and batteries are getting bigger. This means that the loading sessions are increasing and the cost of is getting closer to a tank session.”

Maartje Sonnenberg

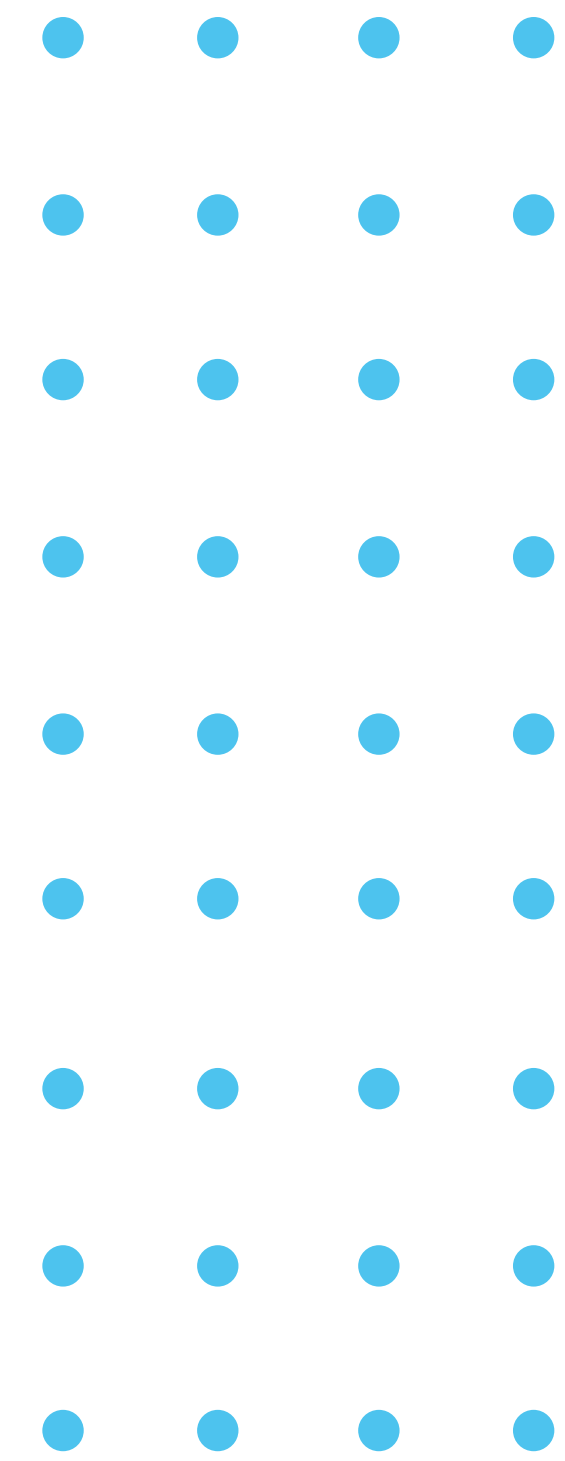
Head of Customer Experience & Product Owner,
Fastned



Projected average range of electric vehicles between 2020 and 2030 (in kilometers)



Sources
Electric Vehicles Worldwide



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Trend 17

Connected vehicles and services

“With the IoT, drivers can make purchases automatically on-the-go. They’ll order a coffee and pick it up from the next drive-thru, or set a repeat order and GPS will track their location.”

Pieter-Paul Hagemans

International Sales Manager, CCV



Trend 18

Intentional evolution of service stations

“Service station stakeholders will focus on an intentional transition to become mobility hubs, with a strategic purpose to create comprehensive units where people can travel seamlessly.”

Peter-Paul Hagemans

International Sales Manager, CCV



Trend 19

Open-loop ticketing improving services

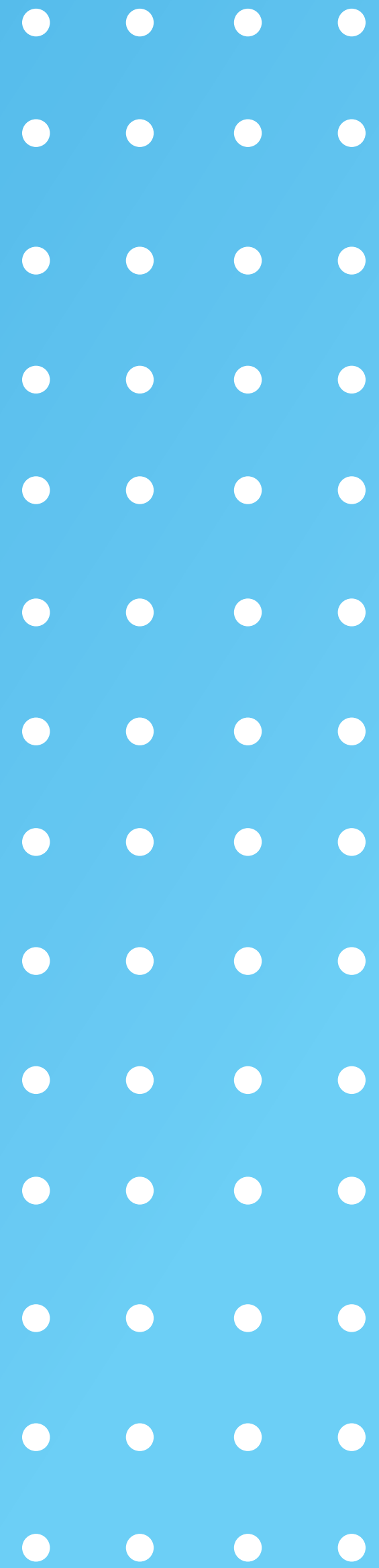
“With open-loop payments, the ticketing solution becomes account-based. This can be anonymous or personalised, but means potential for greater customer engagement and an improved experience.

This sits alongside the benefit of the public transport provider having better trip data to adapt existing services – and then to provide these services more efficiently.”

James Timperley

Consultant, Transport & Payments

Timperley Partners



Let's make payment happen

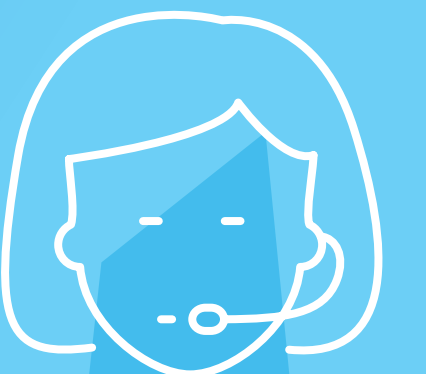
“Our team is excited to play a key role in mobility innovation by building standardised, scalable, and future-proof self-service payment solutions. Mobility is changing, and we're here to help.”

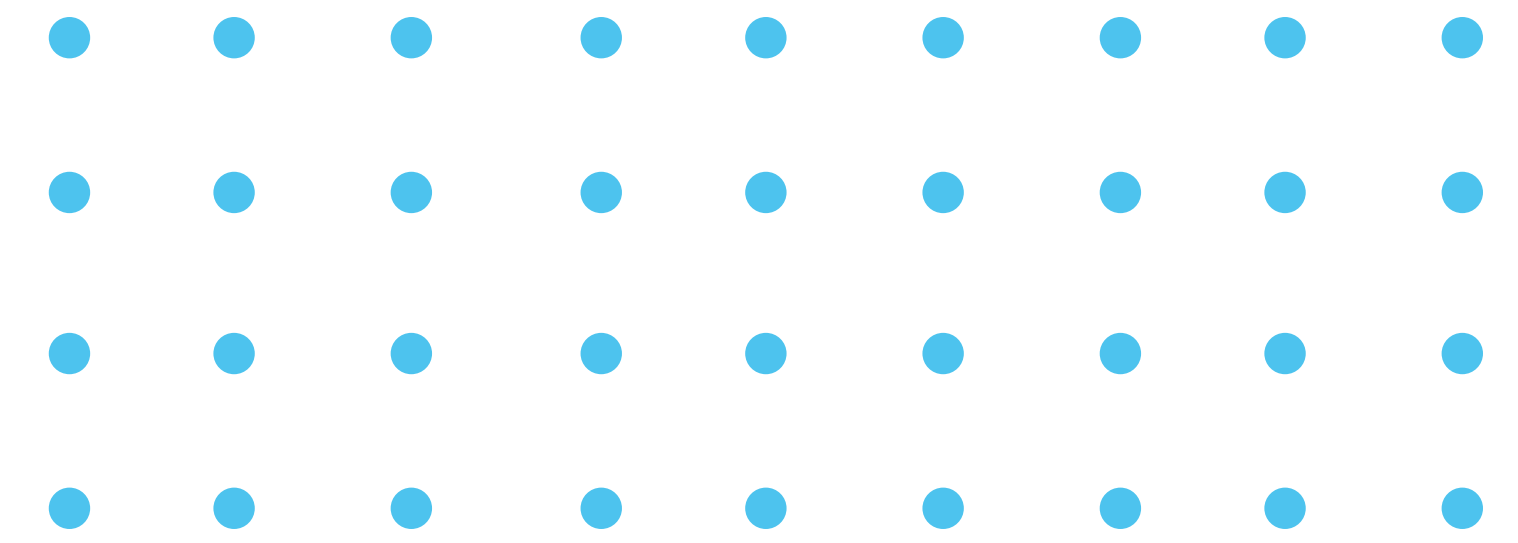
John Kolthof

Managing Director, CCV

Want to know more about self-service payment solutions?

[Learn more](#)





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