chargetrip

An electric future demands smarter navigation

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About Chargetrip

Chargetrip is the World's leading EV Routing platform. We calculate routes for electric vehicles recommending the optimal charge stops along the way.

Our EV Routing Engine is sold as an API based SaaS. Our customers integrate our technology to develop tools that make EV driving and -charging effortless and cost-effective for private drivers and electrified fleets.

We're a team of 22, founded in 2017, headquartered in Amsterdam.

Our ambition is to accelerate the transition to sustainable energy and route 25% of the global EV carpark by 2030.

€ 1.7M Raised

175K monthly drivers

2M+ Routes a year

Clients

PORSCHE

Norsk elbilforening

bemo

EnBW

Backed by

APX
By Axel Springer & Porsche

VINDEGGEN

TOTAL
Total Carbon Neutrality Ventures

ELEMENTAL EXCELERATOR

Awards

European Startup Prize for mobility

FREE ELECTRONS

accenture
Innovation Award 2018

innogy
Startup Award 2018

Electric mobility

A fragmented ecosystem

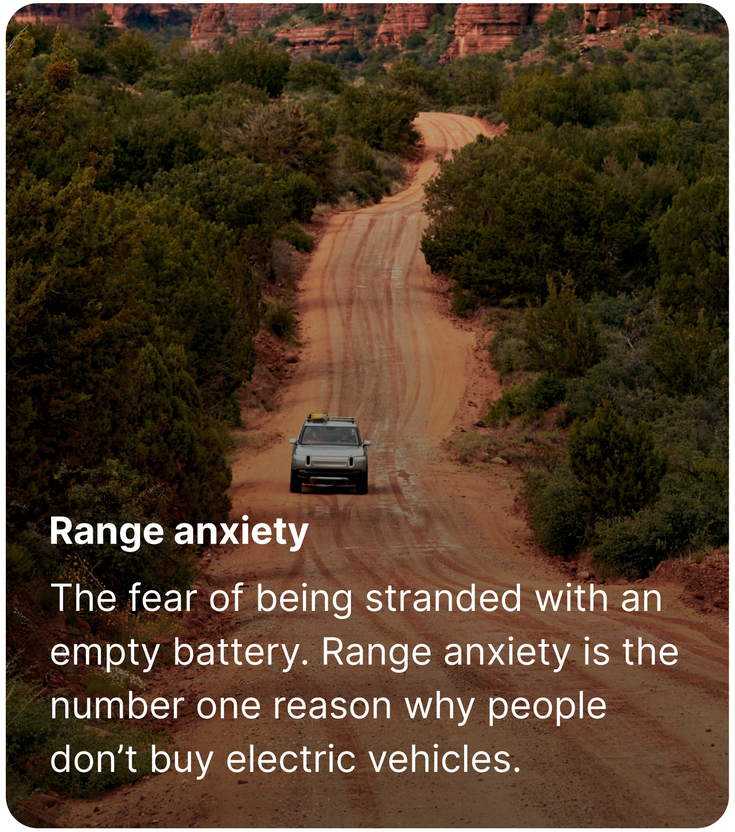
Transitioning to electric mobility isn't easy for individuals or fleets because the electric charge and -drive ecosystem is extremely fragmented.

You simply don’t know if a trip is possible; when do you charge, where do you charge, how do you pay, how long will it take, and how much will it cost? This is due to:

- Differences in plug-type, charge speeds, pricing, and payment systems
- Changing business rules depending on the type of fleet
- Waiting lines at charge stations
- Outside variables like temp, weather, elevation and road surface that impact battery range
- Driving habits, journey context, and personal preferences

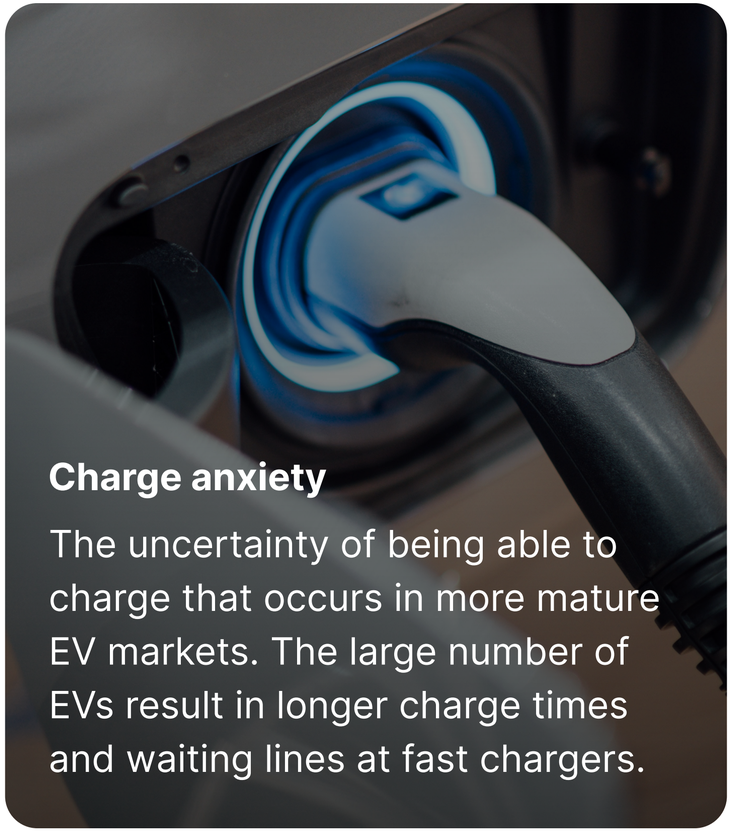
Adoption Barriers

This fragmented e-mobility ecosystem makes driving EVs commercially with high intensity, over long distances, or across country borders unpredictable, resulting in three adoption barriers to electrifying mobility:



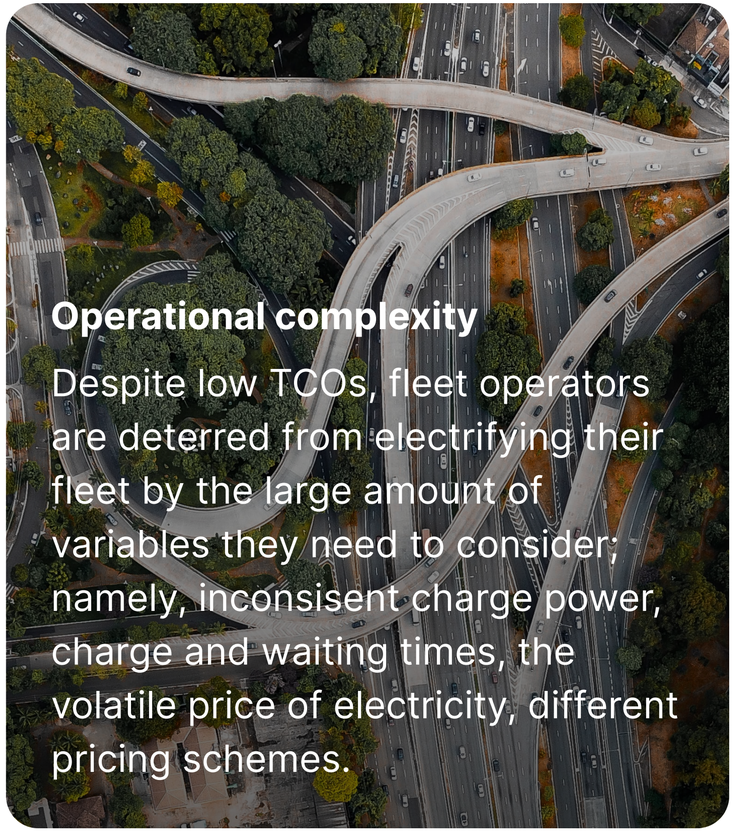
Range anxiety

The fear of being stranded with an empty battery. Range anxiety is the number one reason why people don’t buy electric vehicles.



Charge anxiety

The uncertainty of being able to charge that occurs in more mature EV markets. The large number of EVs result in longer charge times and waiting lines at fast chargers.



Operational complexity

Despite low TCOs, fleet operators are deterred from electrifying their fleet by the large amount of variables they need to consider; namely, inconsisent charge power, charge and waiting times, the volatile price of electricity, different pricing schemes.

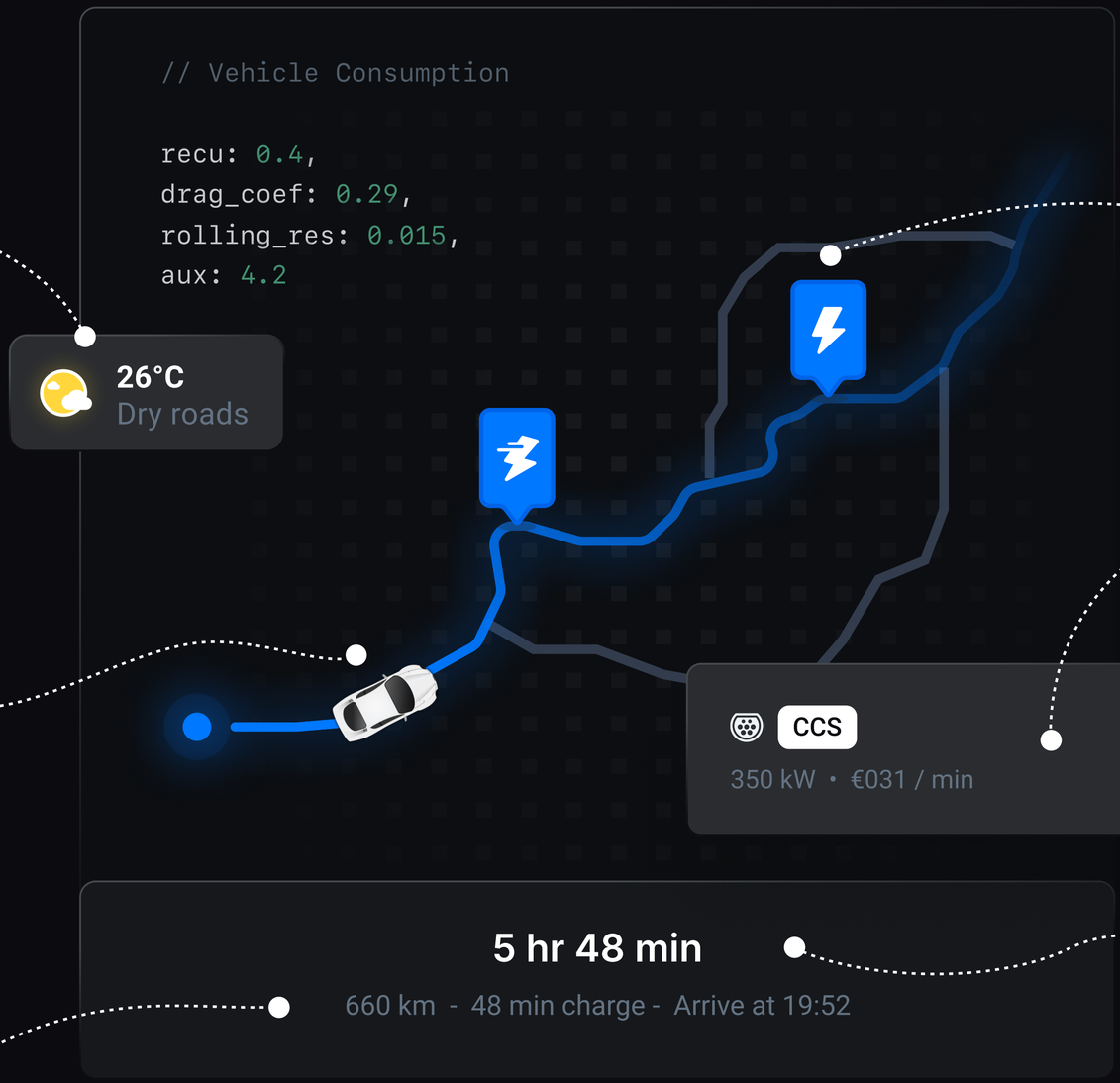
Chargetrip developed an EV Routing Engine that makes EV driving and charging predictable.

Using context driven dynamic variables to compute a route from A to B including the optimal charge stations along the way.

✓ All EV models ✓ private drivers and fleets
✓ optimize for total travel time ✓ optimize for journey costs
✓ integrates with business logic ✓ prefer certain CPO’s.

The Chargetrip platform is cloud based and accessed through an intuitive developer friendly graphQL API. There is no bulky legacy software, integration is effortless and route computations are blazing fast. No matter if the software runs in-car, in a telematics stack or in-app.

Predictable EV Route Plan



Real-time impact variables

Where to charge and for how long

Based on your car's consumption

Dynamic station availability

Integrated in existing apps

Optimized travel time and costs

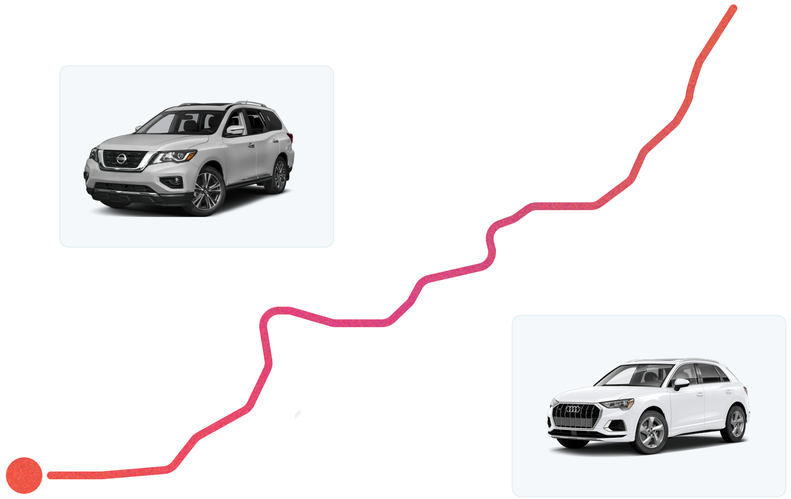
So how do you fix this?

Make charging and driving predictable

Routing needs a paradigm shift that fixes the fragmentation and overcomes adoption barriers

Traditional ICE Routing

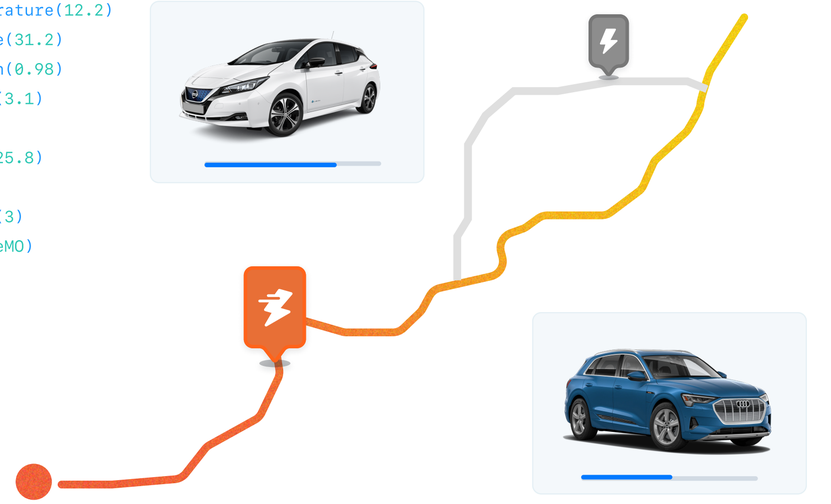
Road Situational



Chargetrip EV Routing

Context based

```
.origin(origin)
.destination(destination)
.batteryCapacity(40)
.batteryTemperature(12.2)
.stateOfCharge(31.2)
.stateOfHealth(0.98)
.tirePressure(3.1)
.weight(1800)
.temperature(25.8)
.occupants(4)
.drivingStyle(3)
.adapter(CHAdeMO)
```



```
.origin(origin)
.destination(destination)
.batteryCapacity(80)
.batteryTemperature(14.1)
.stateOfCharge(44.9)
.stateOfHealth(0.99)
.tirePressure(3.1)
.weight(2400)
.temperature(11.3)
.occupants(1)
.drivingStyle(3)
.adapter(null)
```

from: **All ICE vehicles receive the same route based on traffic**

[Audi A6, Audi Q3, Nissan Pathfinder]

to: **Every EV receives a custom route based on context**

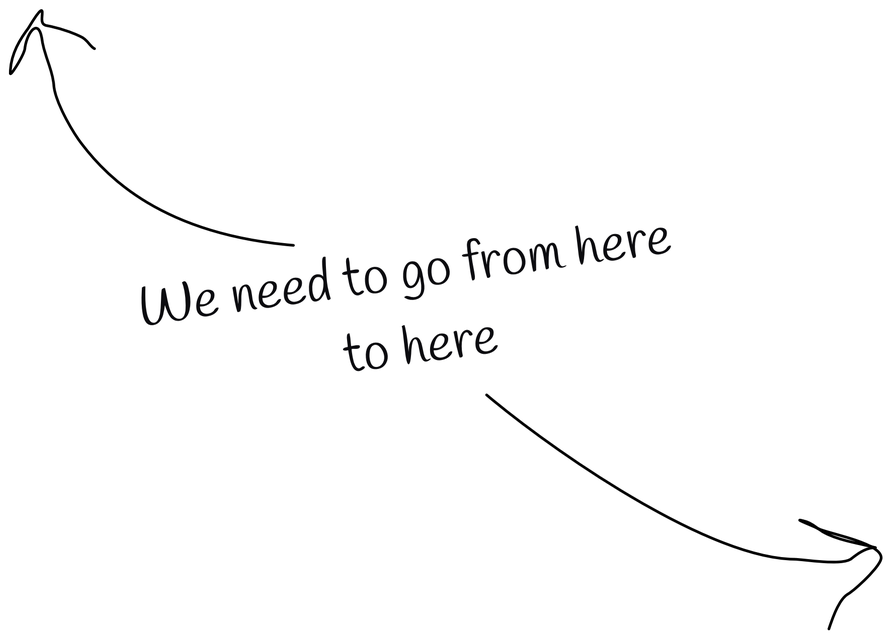
[Audi E-tron 50% SoC, Nissan Leaf 80% SoC]

Traditional ICE Routing

Road-Situational Routing

Road Situational

Distance, Speed, Traffic, Incidents, Tolls...



Chargetrip EV Routing

Context Based

Road Situational

Distance, Speed, Traffic, Incidents, Tolls...

Driver Compatibility

Payment Preference
Time
Context
Driving Style...

Car Compatibility

Plug-type
Speed
Power
Performance...

Charging Options

Plug-type
Charging Speed
Charging Power
Availability
Predicted Availability
Price
Amenities...

Consumption Variables

Weather
Temperature
Road Elevation
RoadSurface
Curvature
mics

+ many more variables

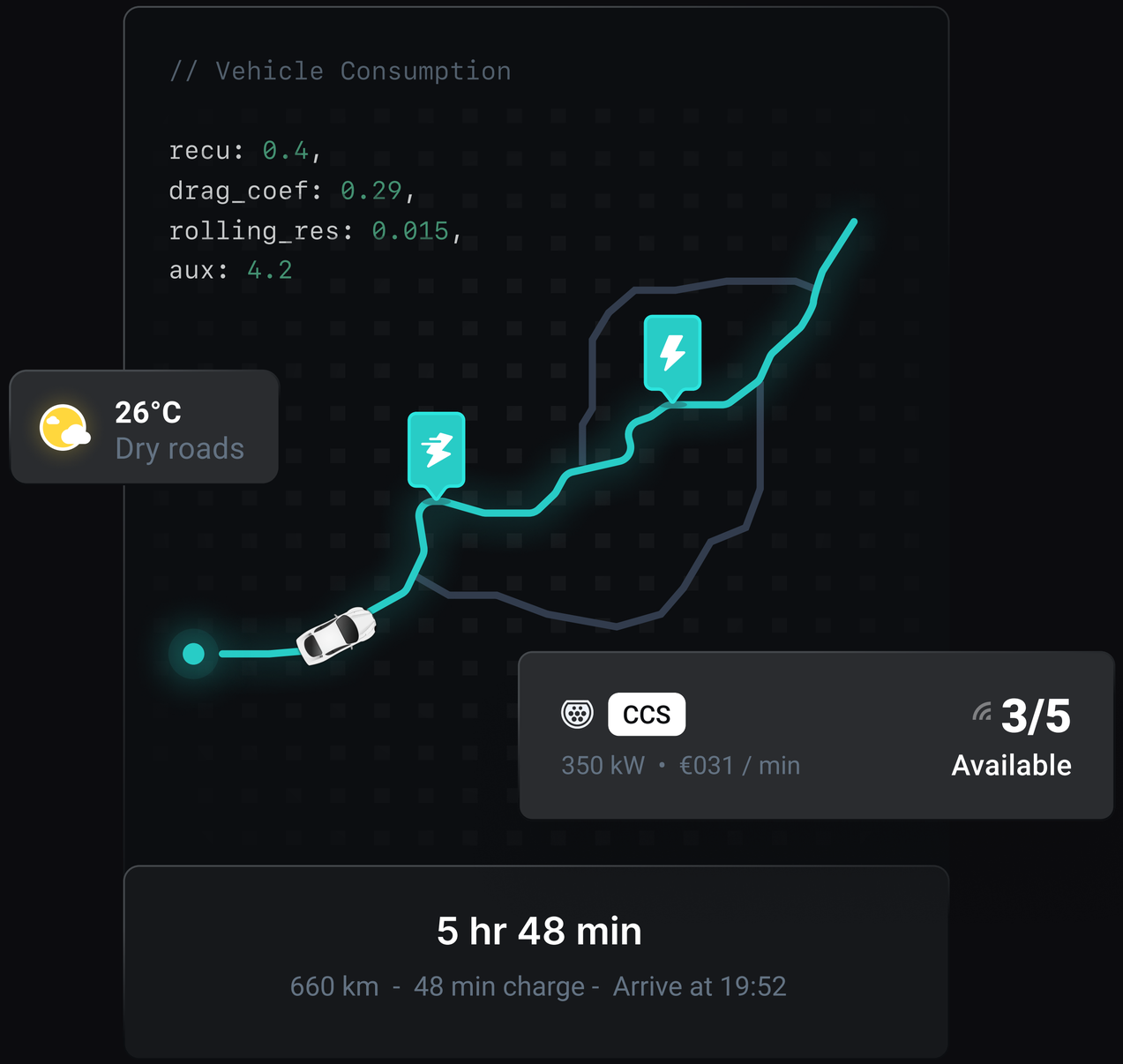
And this engine already helps

E-mobility service providers and fleets optimize EV-use for their customers and employees

...for over 150.000 drivers
a month or 10% of all BEV's in Europe* ...

* https://www.eafo.eu/vehicles-and-fleet/m1

Chargetrip’s Product Line-up

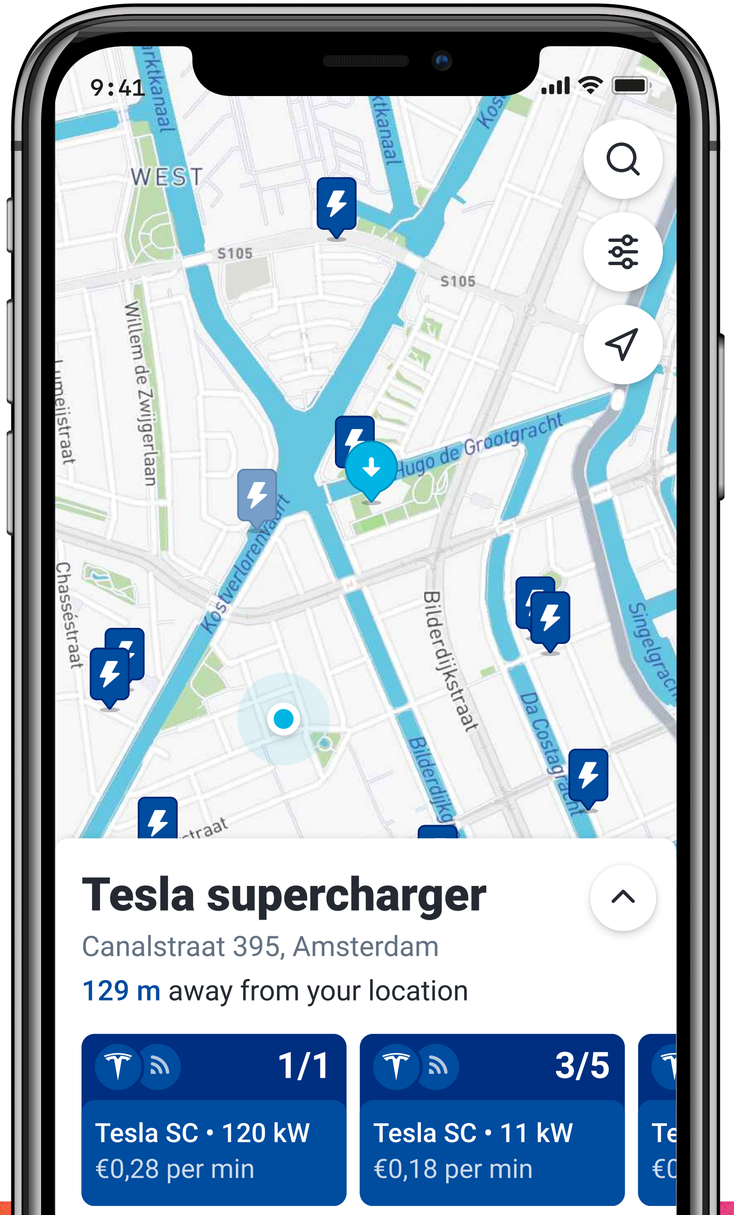


Chargetrip API

We expose the Chargetrip routing engine through the Chargetrip GraphQL API.

Our powerful API allows you to develop next-generation e-mobility tools. Make driving and charging effortless for individual drivers and fleets by offering integrated route planning in your apps.

Our routing engine is designed with high volume connected mobility in mind. We use revolutionary graph database technology, combined with a proprietary route planning algorithm, that is optimized for multiple real-time variables.



Chargetrip white-label mobile application

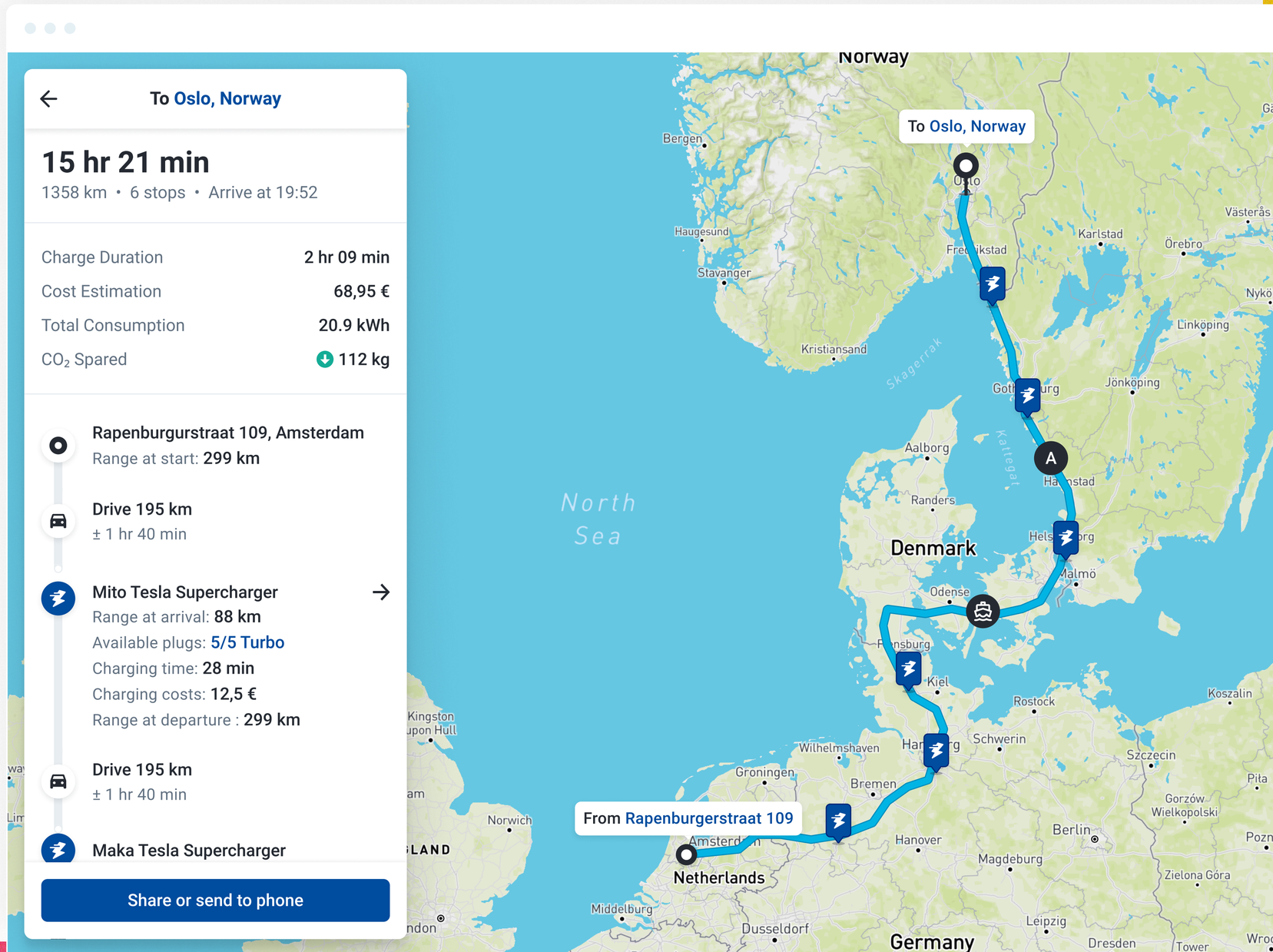
Ready-made EV routing mobile applications for iOS and Android, powered by the Chargetrip routing engine.

Fully brandable and customizable to specific business needs.

Chargetrip white-label web application

A responsive web-based route planner powered by Chargetrip's routing engine, to help drivers make the switch to electric mobility.

Fully brandable and customizable to specific business needs.



Use cases per industry

We offer Businesses the tools to unlock the true potential of Electric Mobility



EV Routing for CPOs & EMSPs

Increase revenue

by directing drivers to your charging stations and amenities

Improve utilization

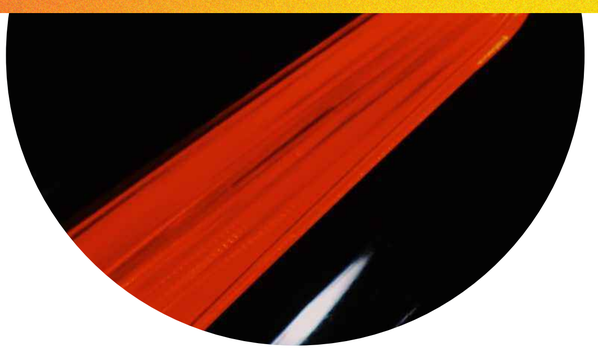
disperse charge traffics over your Charge Point Network

Improve end-user experience

by offering a smart seamless EV driver application that integrates EV routing with services like payments

Strength your positioning

as a service provider for e-mobility among B2C and B2B clients



EV Routing for OEMs



Enhance end-user experience

gain a competitive advantage in your markets with a seamless EV drivng and charging UX

Persuade prospective customers

by showing them how easy it is to plan trips; combating skepticisms and anxiety

Boost sales

by using your EV routing application as a marketing tool







EV routing for Tech & Media companies

Increase your audience

by engaging the growing number of EV drivers

Increase revenue

from tech-savvy early-adopters

Increase you competitive advantage

by investing in your e-mobility positioning



EV Routing for Fleets

Optimize TCOs

by charging at conveniente locations and times

Untangle operational complexity

our API is integrable with other fleet management tools to simplify day-to-day operations

Adapt it to your business rules

we consider your charge infrastructure, each vehicle SoC, and also include drop-off and loading points

Company Summary

Traction

Our ambition is to accelerate the global renewable energy transition by building intelligent software that makes using electric mobility intuitive and efficient for individual drivers and entire fleets.

With 170.000+ EV drivers per month on our platform, we have the leading expertise in providing the best end-user driving and charging experience.

In 12 months we aim to be active in three continents having doubled our customer-base.

Success stories

1. Together with **Norsk Elbilforening**, we operate the world's first dedicated EV route planning app, in the most mature EV market in the world.

2. We built the **Porsche** Charge Map that removes the barriers of range and charge anxiety for potential customers.

3. Norway's largest media company **Schibsted** uses the Chargetrip API to develop Elton, its free-to-end-user EV charging app.

4. Chargetrip's EV Routing is integrated in the EnBW Mobility+ app, Germany's leading EV app operated by **Energie Baden-Württemberg**.

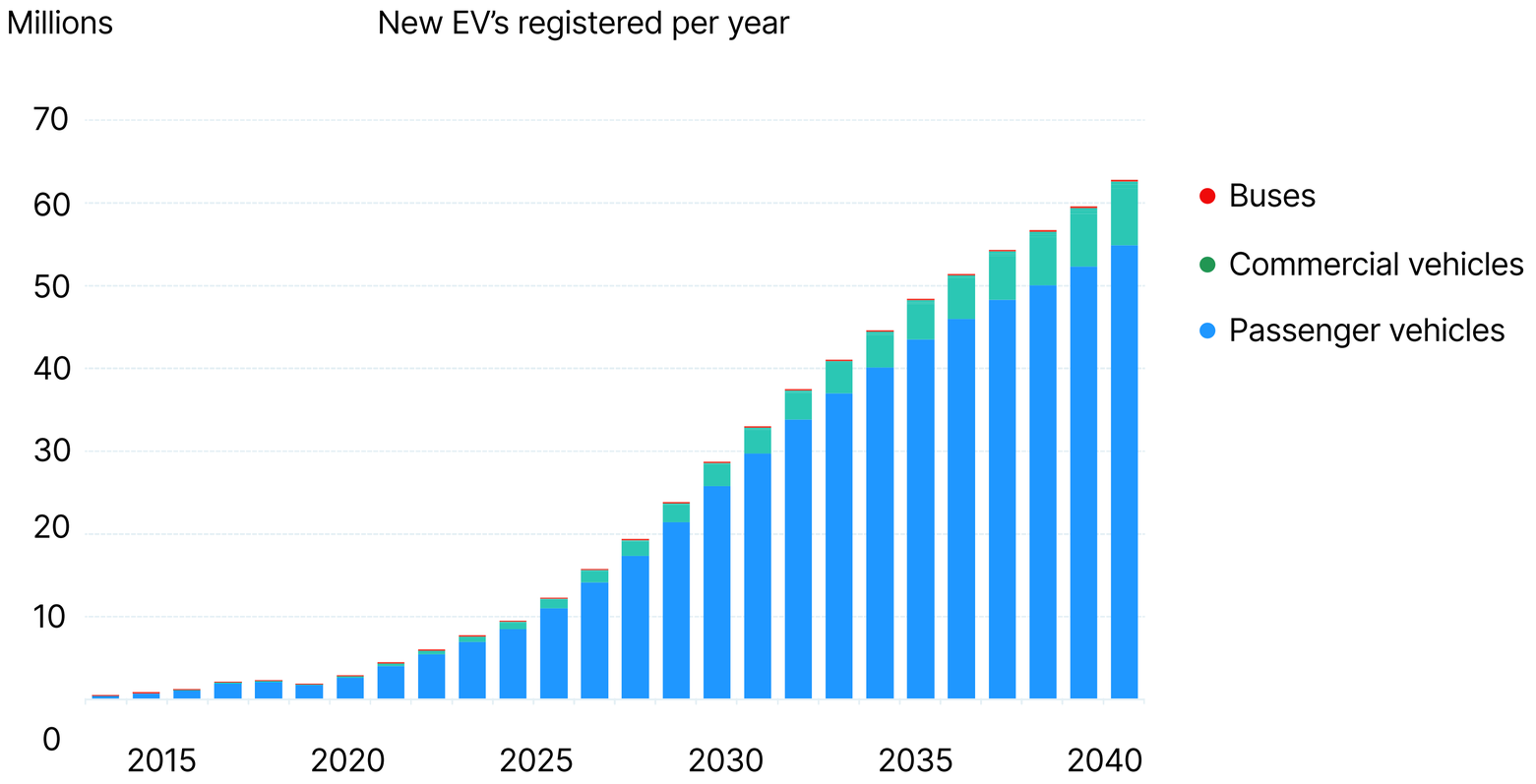
Hold up! There are only 3M EV's on the road today. What's the potential?

550 M

EVs on the road by 2040.
25% are part of a fleet.[1]

EV services will grow 270% between 2020 and 2024.[2]

The Route Optimization Software Market is estimated to reach $10.9 billion by 2025.[3]

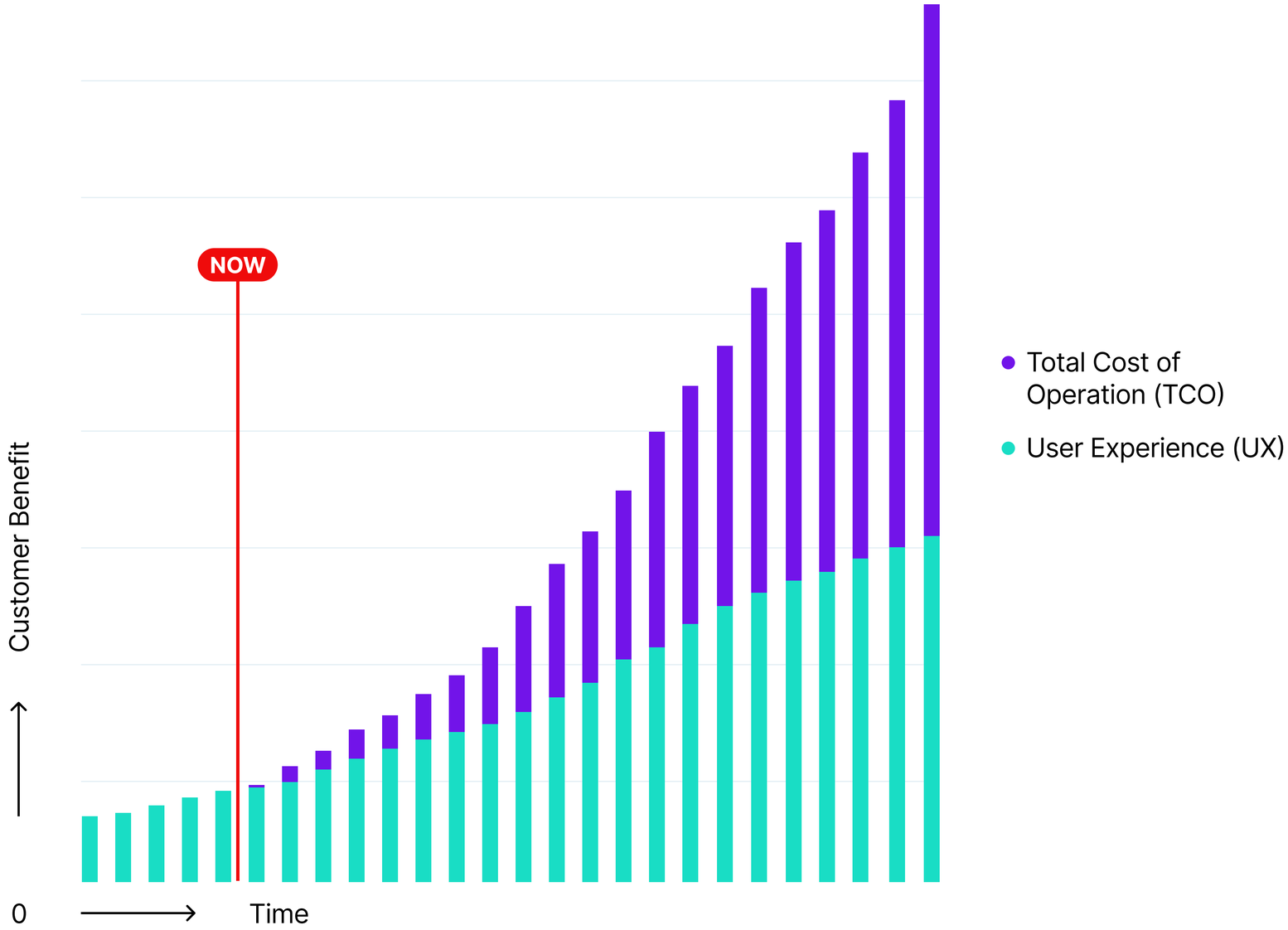


[1]Bloomberg NEF, [2]ABI Research, [3]Industry Arc

Growing Commercial Benefits as EV Market Matures

Initial EV adoption is driven by private drivers. EV Routing is relevant for EMSPs and OEMs who want to improve the UX of Charging and Driving for their end-users.

Later on, EV Routing is crucial for optimizing the Total Cost of Operating EV Fleets. By late 2021 MSPs, Telematic Service Provider, and Fleet Operators will start to integrate EV Routing.

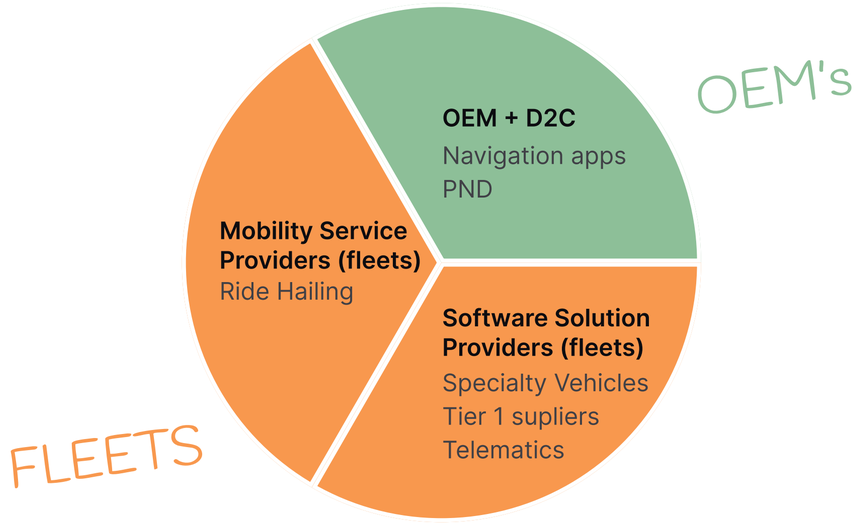


KPMG, McKinsey & Company

EV Routing is relevant for more Industries

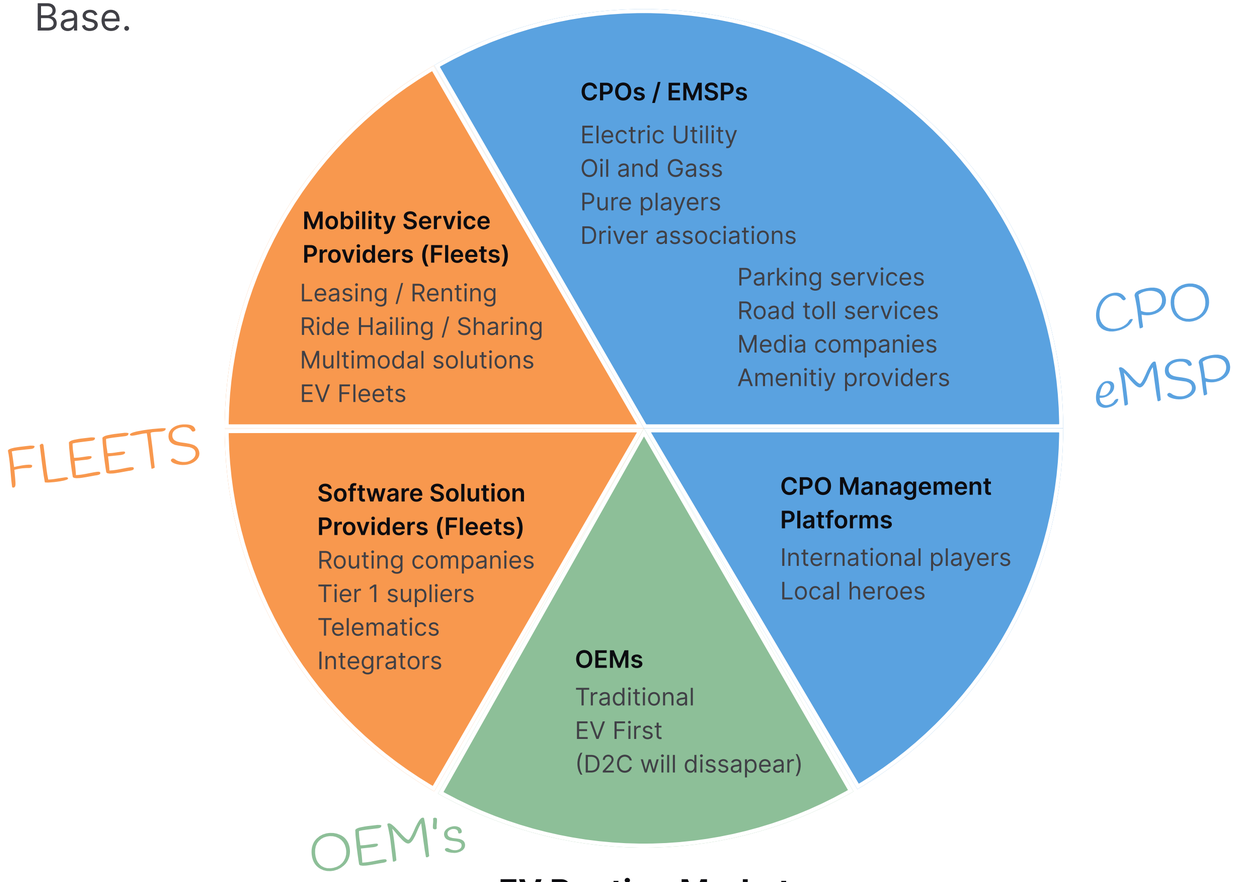
Traditional Routing Providers lack Installed EV Customer Base.

And not only are EV's taking over the market but Electric mobility unlocks new customer segments for routing!



Traditional Routing Market

Stable and limited to D2C, OEMs and Logistics.
TomTom and Here are biggest players.



EV Routing Market

Growing, diversified, connected. Optimizing EV Services and Fleets.
Challengers can capture these new segments.

Leadership



Gideon van Dijk
Founder & CEO

Serial entrepreneur. Managed teams of 30+ employees and build products for 30MM+ users. Background in physics and product design.



Pieter Waller
Founder & CCO

Experienced marketeer and entrepreneur. Responsible for the launch of successful Fintech and e-commerce products. Led marketing teams at Bacardi and Louis Vuitton.



Cosmin Petrescu
Head of Development

Engineering executive and mathematician who loves building SaaS products. Background in Computer Science.

Board



Mark Hulsbergen
Founder & Board Member

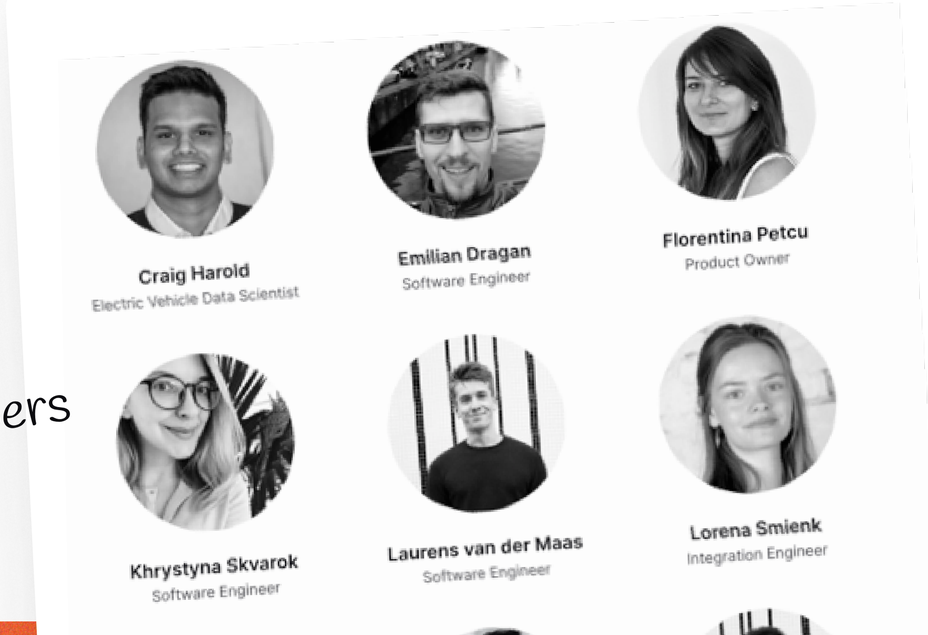


Benoit Savvatier
Board Member



Christian Brynn
Board Member

and 20 awesome Chargetrippers from 8 countries...





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Thank you.

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