



# The EV Charging Company

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# Agenda

- I. Introduction to Virta
- II. Industry overview
- III. Virta's solution to market needs

# Our story

 Established

2013

 Offices

Helsinki  
Berlin  
Stockholm

We empower our customers to support electric vehicles and renewable energy.

We believe in an open world where anyone can contribute.

As the innovation leader we push the industry forward.

# Key figures

1 300

Charging points connected  
to Virta platforms

48

B2B customers

53 000

Charging points connected  
through roaming

18


Energy companies  
as owners

# We are a top European player

Our services are being used in 9 countries and 70 cities around Europe.

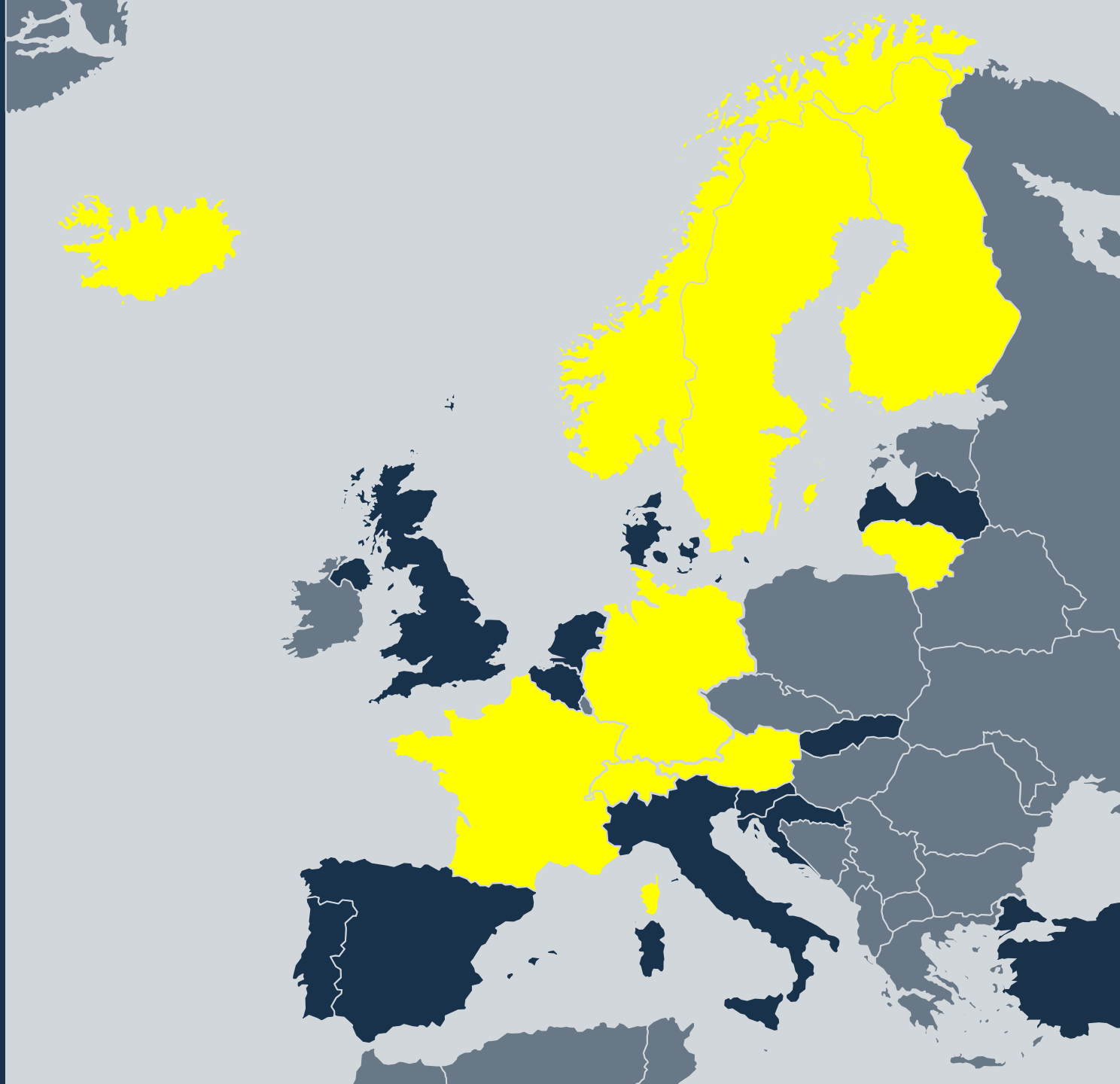
We are the market leader in Switzerland, Finland and Iceland.

 Virta services in use

 Connections through roaming



| The Electric Vehicle Charging Company



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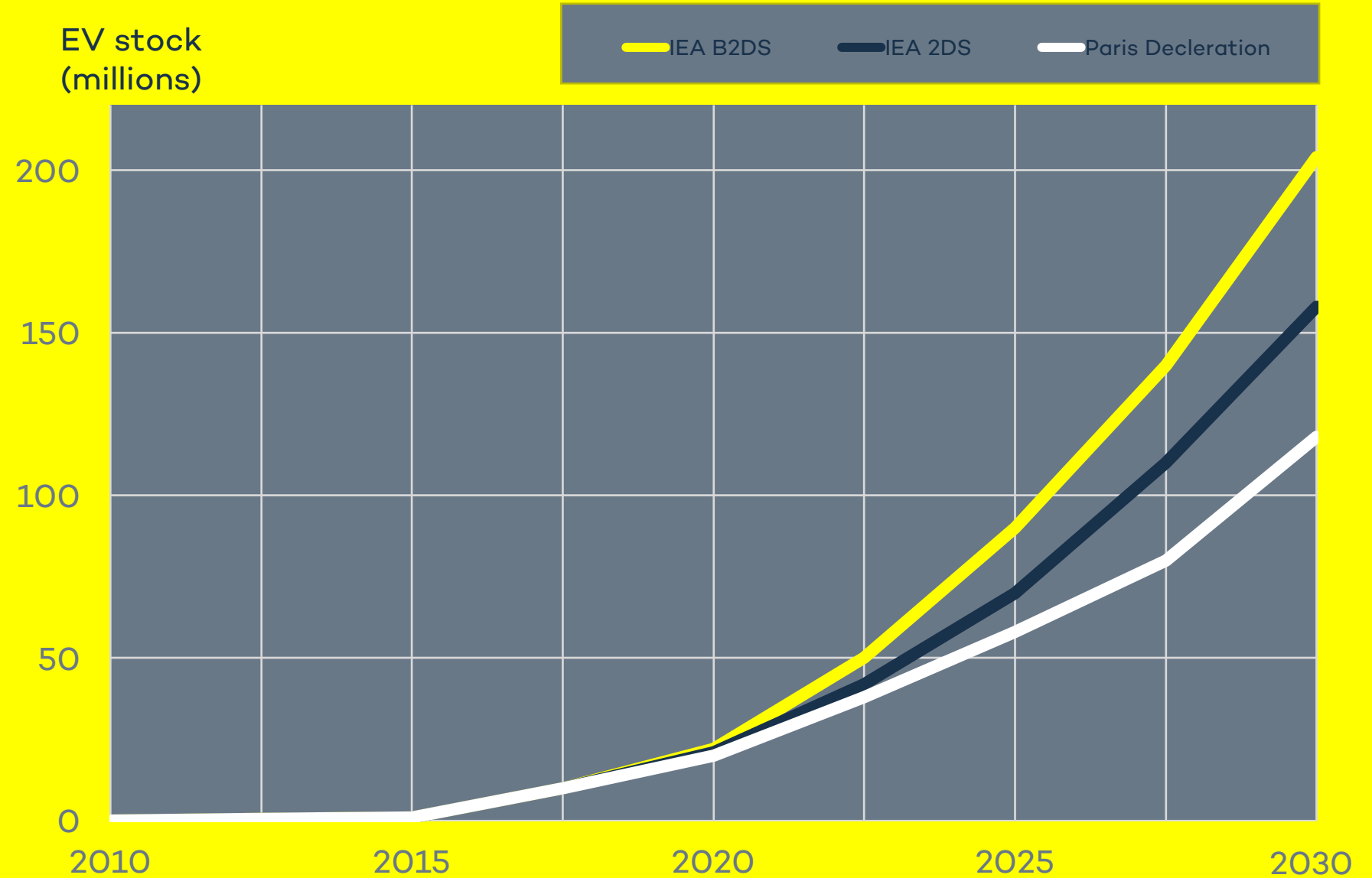
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# EV's will take over the market

To support the  
growth we need  
charging infra.

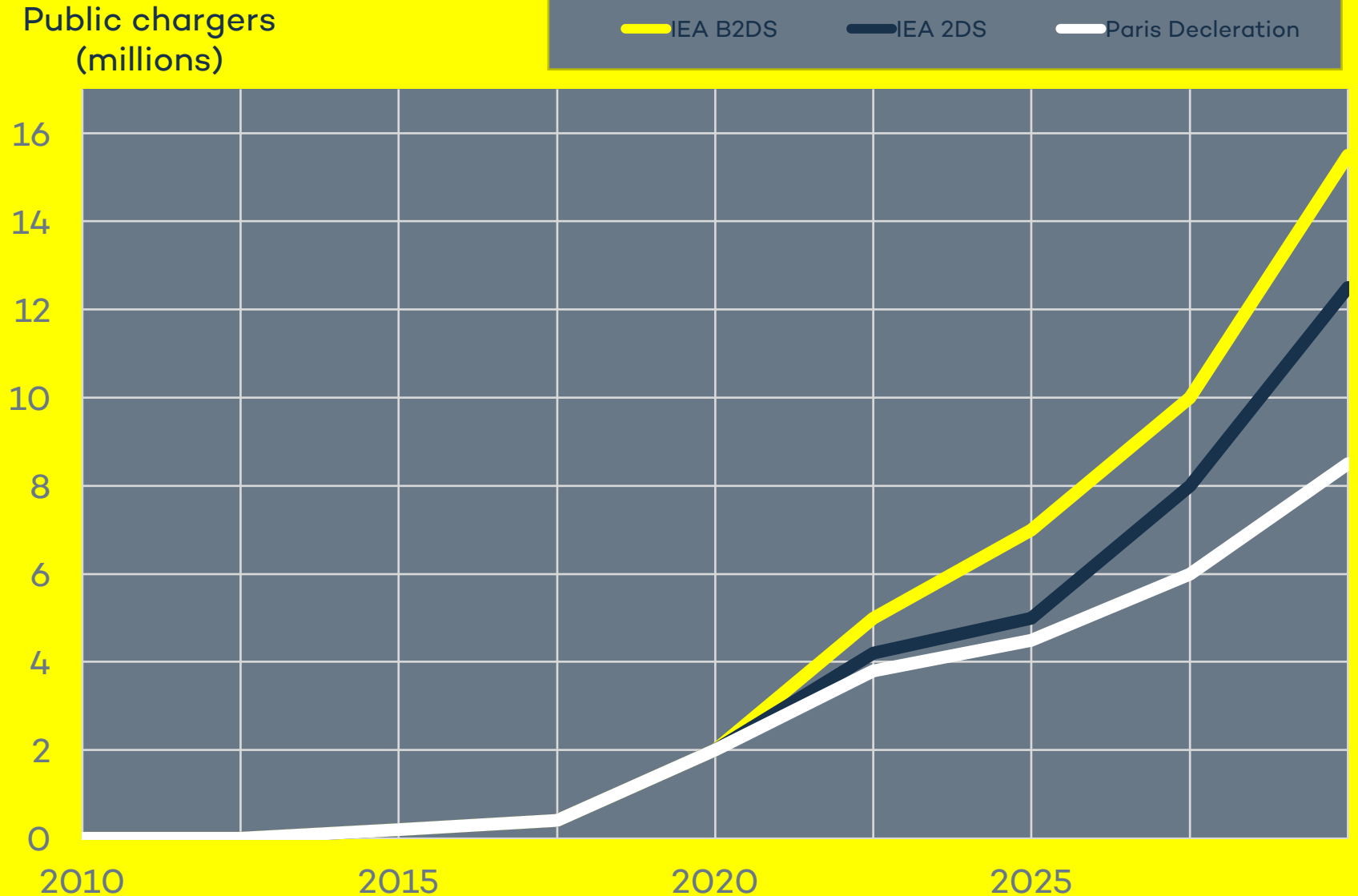


Source: IEA Global EV Outlook 2017



# Demand for charging grows on par with EV's

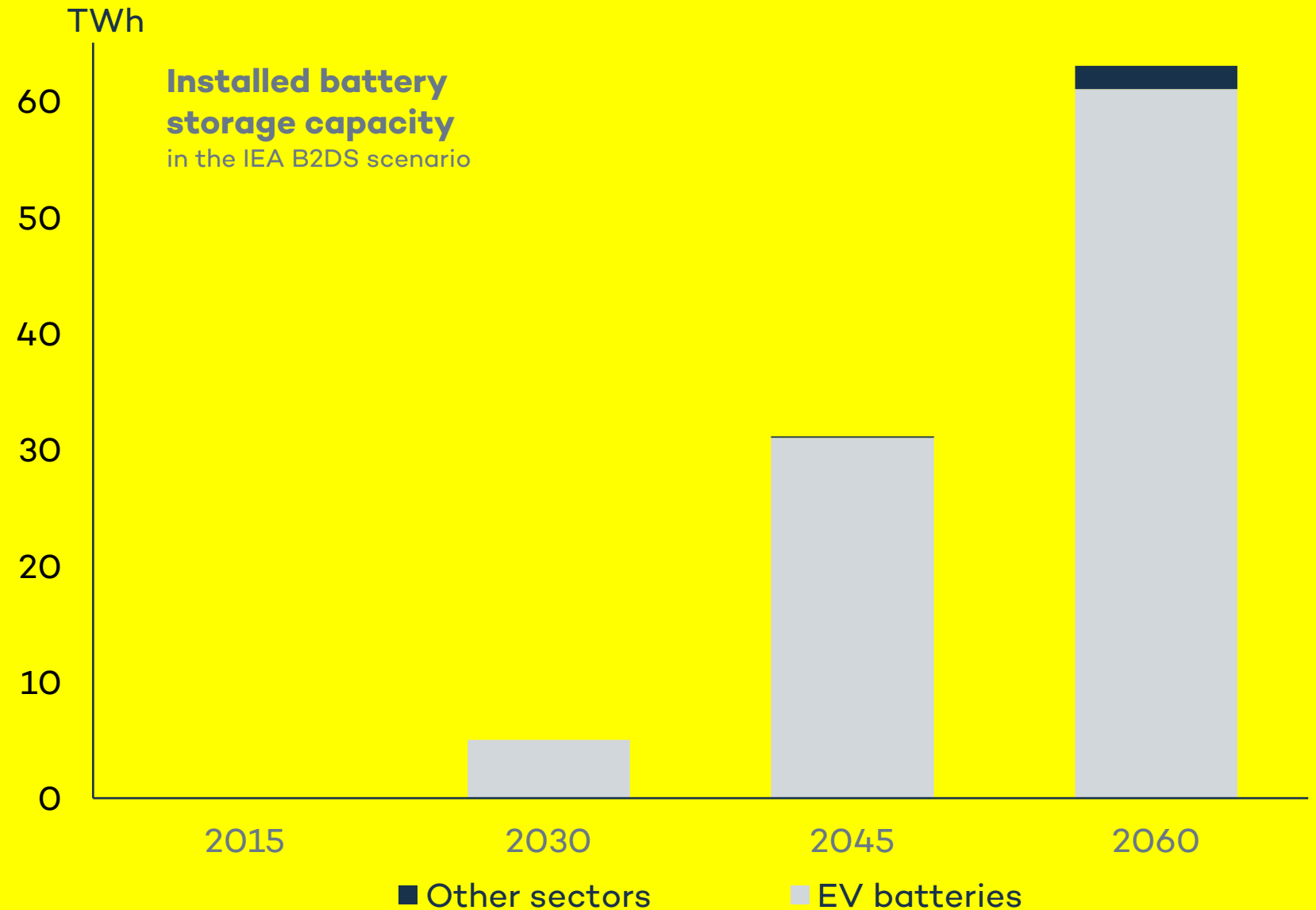
All EV's require public and private charging.



Source: IEA Global EV Outlook 2017

# EV's are big batteries on wheels

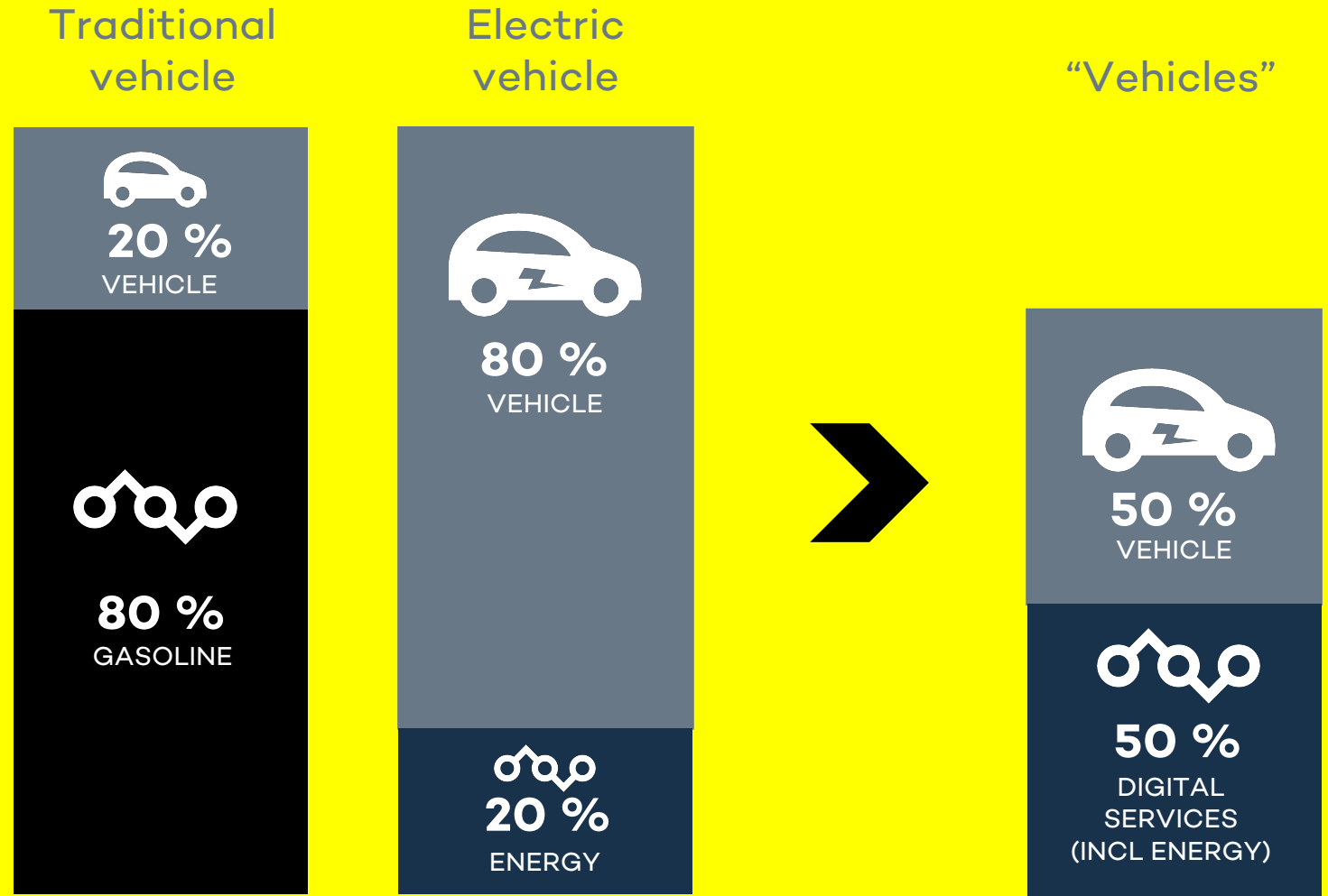
The vast majority of future energy storage capacity will have four wheels.



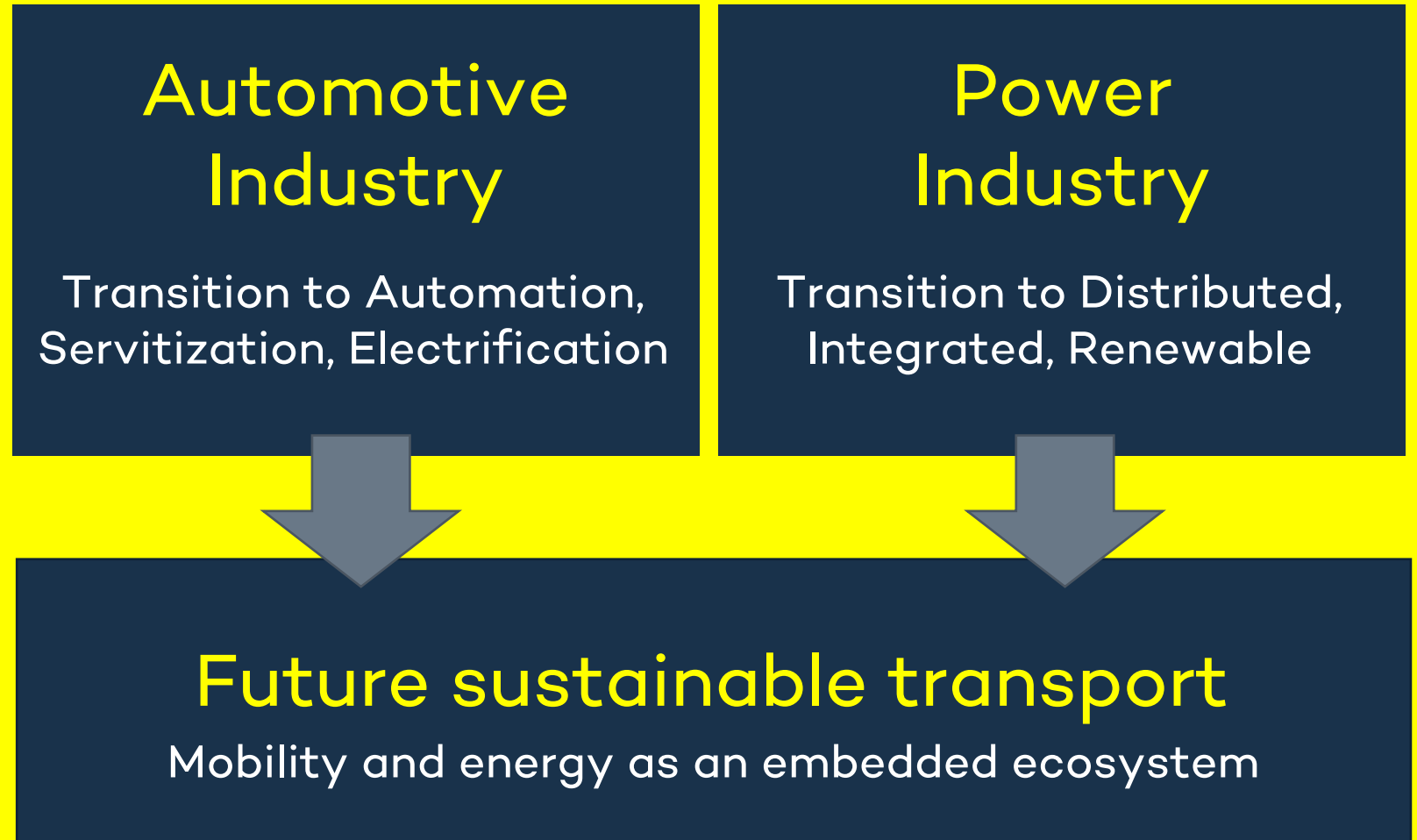
Source: IEA Electricity well below 2 degrees: from challenges to opportunities 2017

# The automotive industry is in turmoil

The split between OPEX and CAPEX of a vehicle will change drastically.



Automotive  
and power  
industries will  
converge



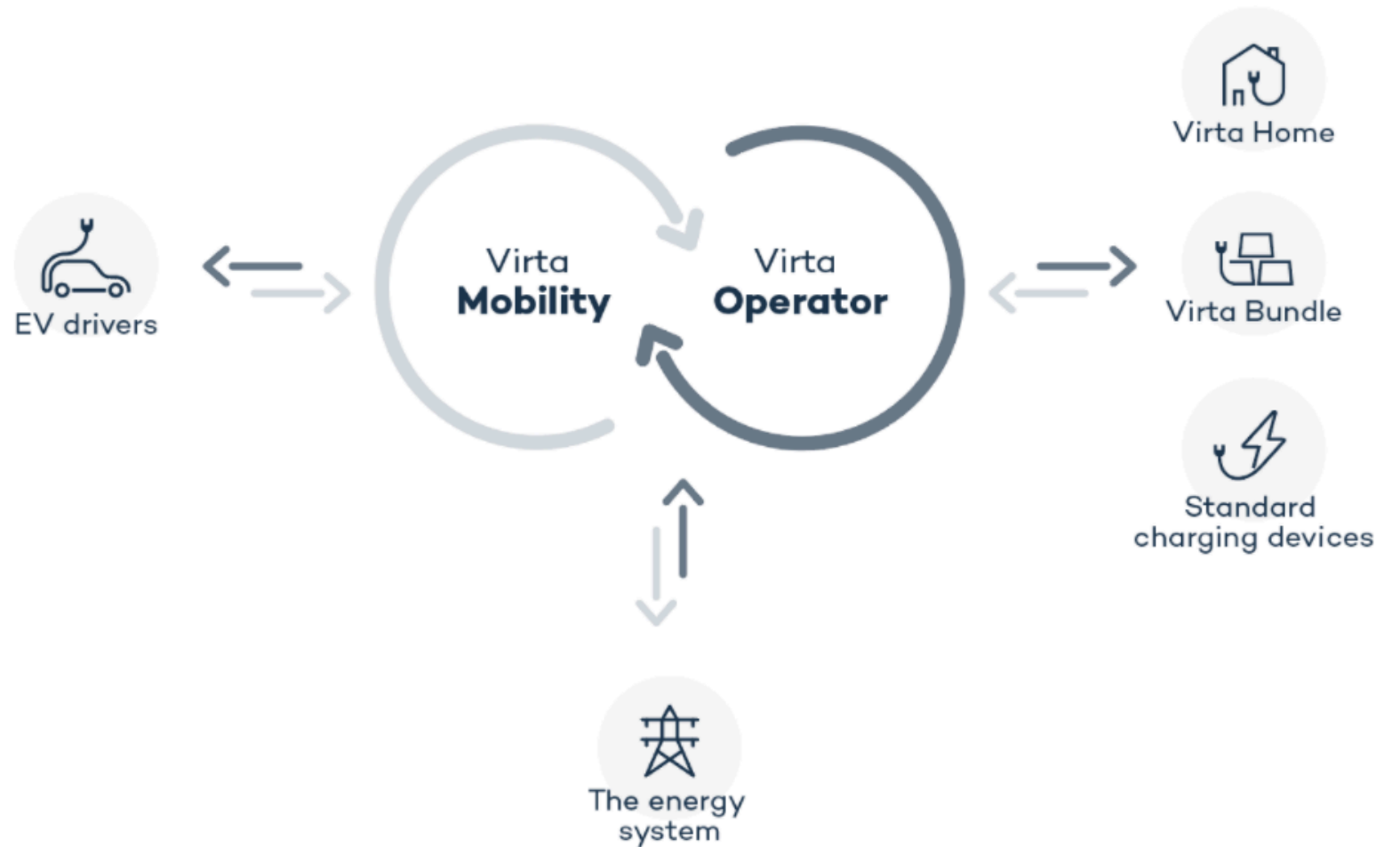
Two disrupting industries reinforcing each other

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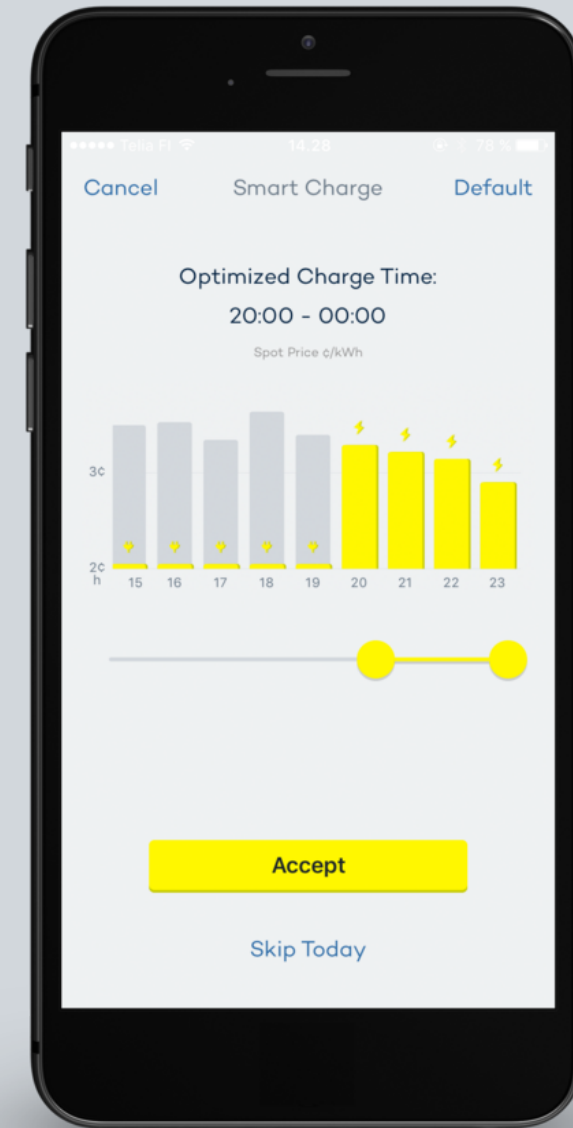
# Virta EV charging platform

Our services work separately or seamlessly together to support different business models.



# Virta Home

- The most advanced home charging service
- Optimizes charging based on electricity prices
- Enables charging point sharing and automatic reporting



# Virta Bundle

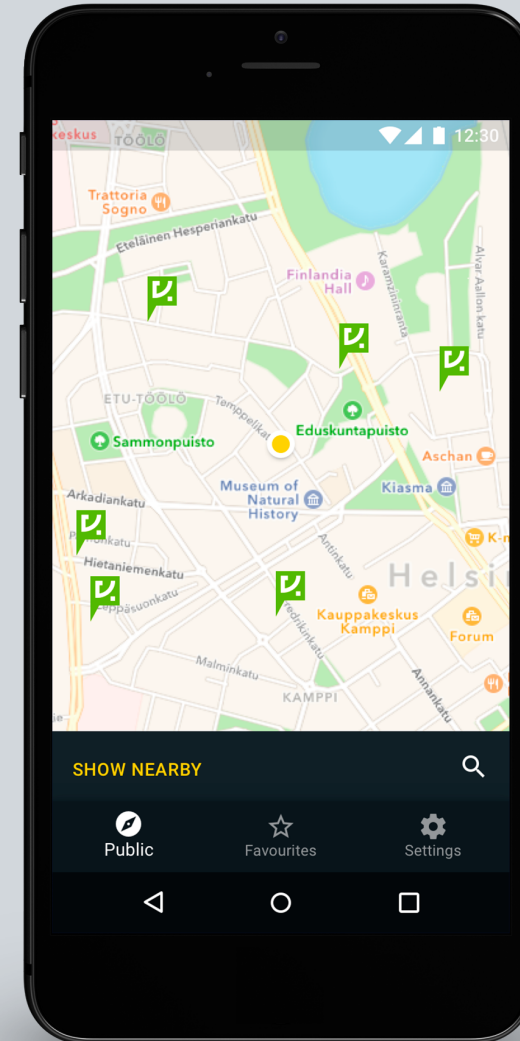
- Smart charging devices with a management system
- Access management and automatic billing
- Dynamic load management to protect electricity grids





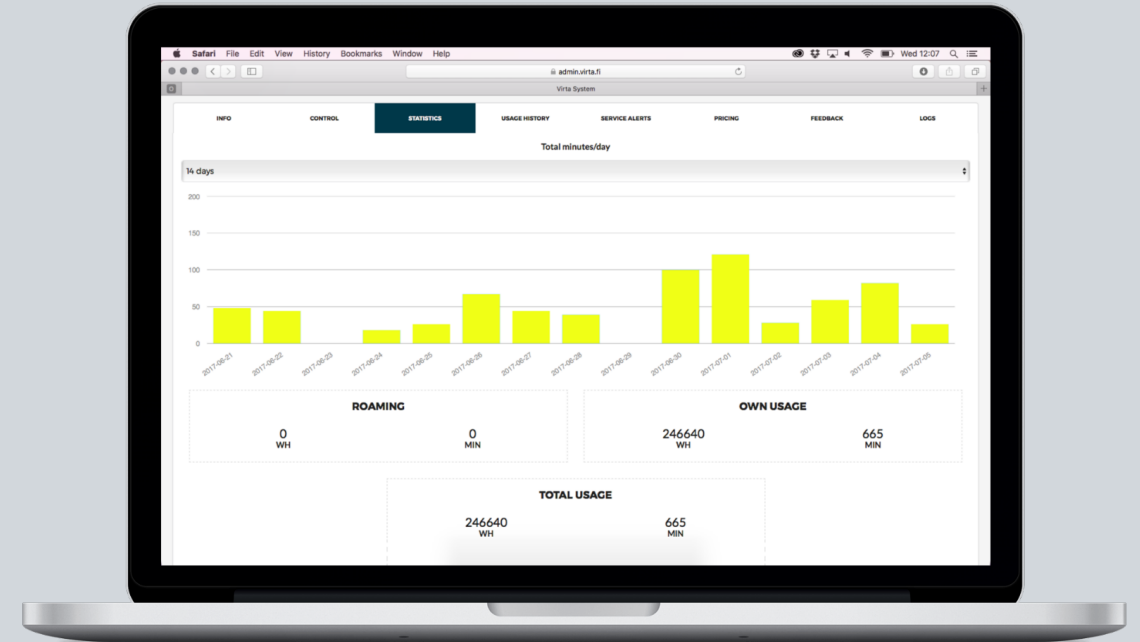
# Virta Mobility

- Frontend to help EV drivers find charging stations and charge
- White-label solutions customized to local needs
- CRM to manage customer accounts



# Virta Operator

- Backend to connect and manage charging infra
- Compatible with a large number of charging device manufacturers
- Adapts to a variety of business models



# Virta Energy

- Demand response for EV's with various signals, eg. grid frequency or electricity market price
- Energy storage by aggregating EV's with V2G bidirectional charging and industrial scale energy storages



# Case Bus Charging

- Helsinki City Transport and Turku Energia have used Virta Operator to manage and control electric bus charging since 2017
- The service is crucial in maintaining reliability of the bus routes as it brings visibility to performance and potential problems
- In addition Turku Energia uses the same system to operate an EV charging network





# We charge.

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