



## EV Readiness for Every Parking Space



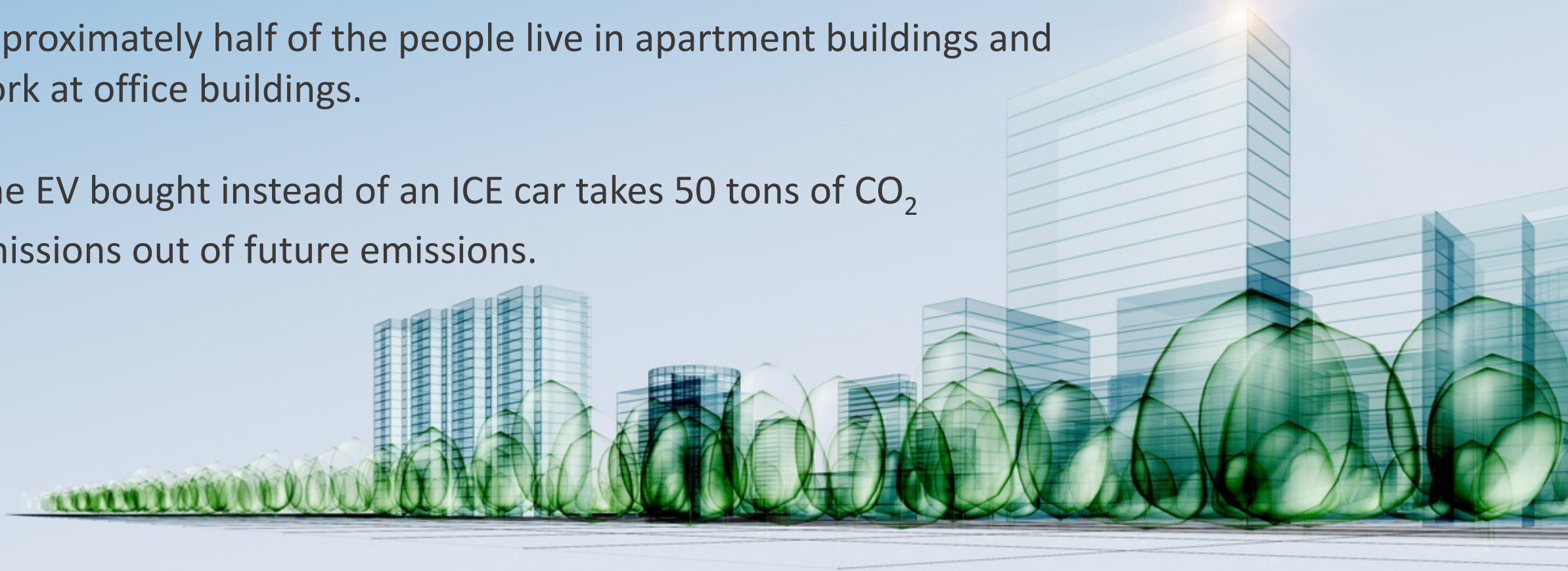
# ELECTRIC MOBILITY DISRUPTION



In 2014, we estimated that 10 – 15% of the cars will be electric by 2025.

Approximately half of the people live in apartment buildings and work at office buildings.

One EV bought instead of an ICE car takes 50 tons of CO<sub>2</sub> emissions out of future emissions.



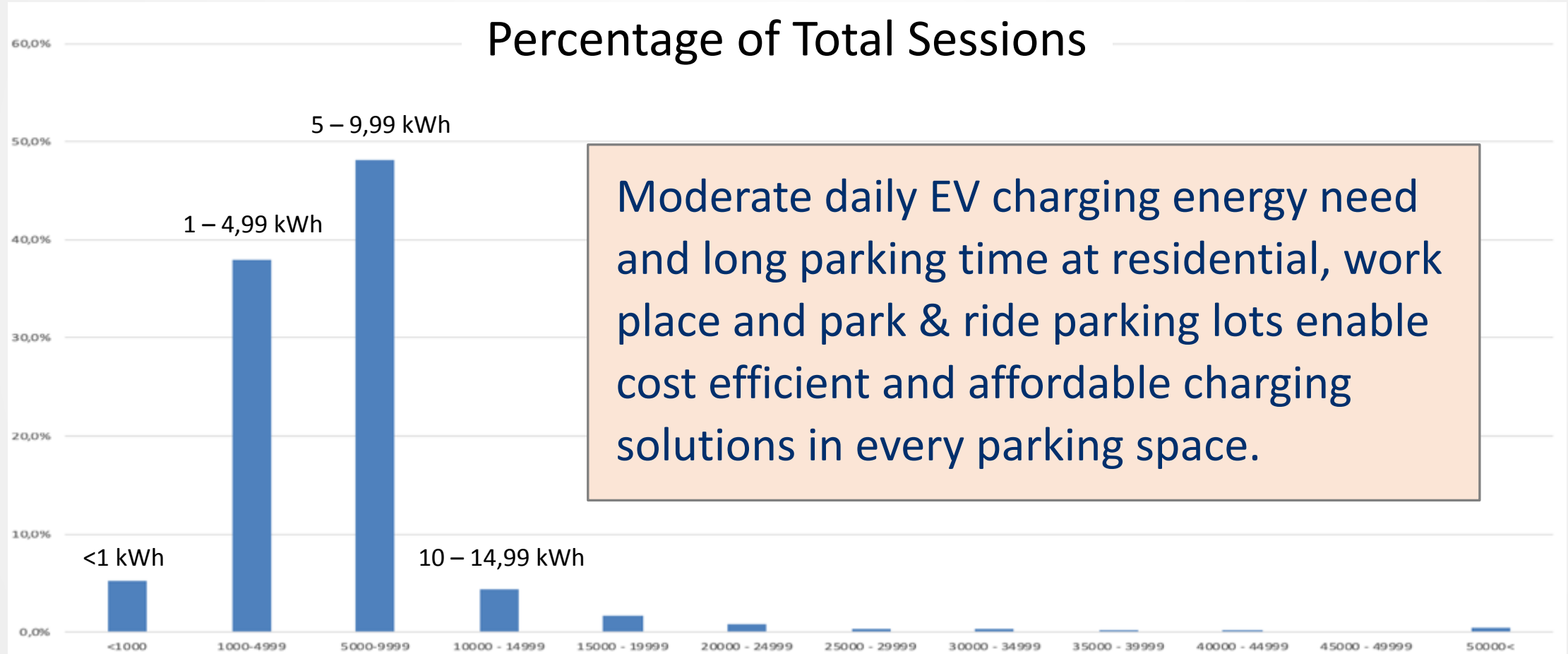


# EV CHARGING IN REAL ESTATE

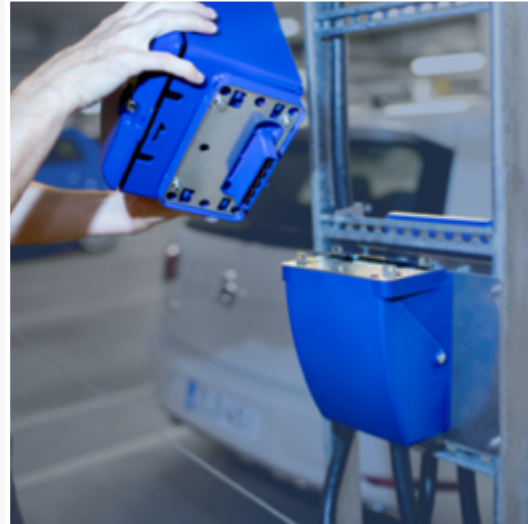
- Scaling the number of EVs
- Financial and profitability requirements for all parties
- Technology and future-proofing
- Limited availability of electrical power
- Multi-stakeholder decision making process
- Smart grid and smart building considerations
- Government and public pressures, such as the EPB Directive



# ENERGY USE – MOST CHARGING SESSIONS ARE BELOW 10kWh



# PLUG-AND-PLAY CHARGING STATION



The charging unit can be installed in the Quick Connector by plug and play. The users select the power level and price to match their need, from a 3.7 kW to a 22 kW unit, provided as a service.

# USING THE EXISTING POLE HEATER CABLING INFRA: 1 500 000 PARKING SPACES



- Type2 and heating
- Left-right independent
- 1x32A or 3x32A
- Schuko 16A
- Multiple manufacturers



## Multi-apartment flats with outdoor parking

- Using the existing cables
- All parking spaces as a one go or one-by-one
- Heating and EV charging uses the same cabling
- Cable renovation easy to align with any larger renovation

## Key criteria for selection

- Affordability
- Multifunctionality
- User can choose the power level
- Equal for all tenants
- Easy management for Housing company

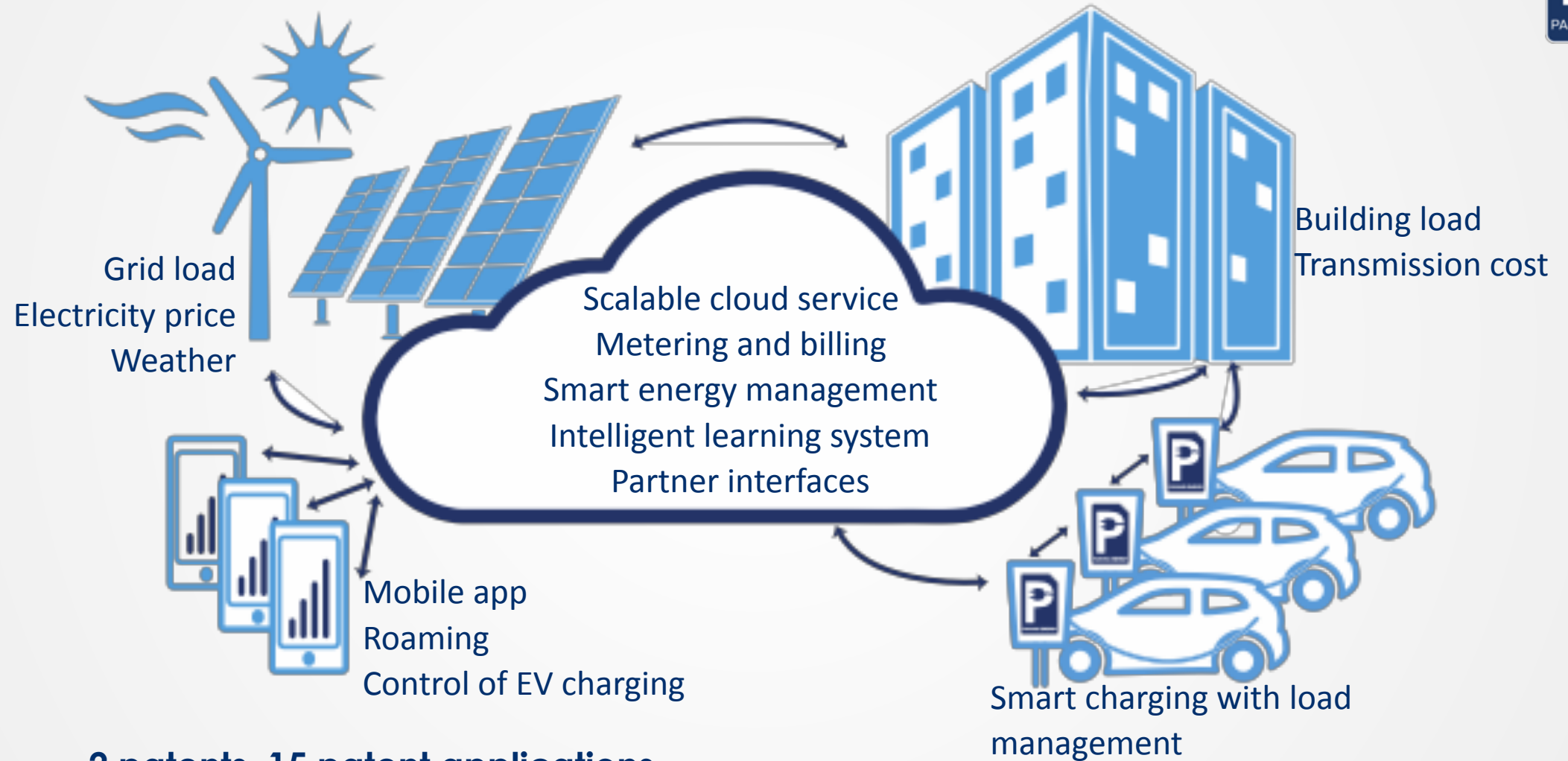


# MULTIVENDOR SYSTEM ADDS COMPETITION AND FLEXIBILITY



Charger manufacturers  
provide Quick Connector  
compatible charging  
stations

## DIGITAL ECOSYSTEM TO SOLVE ALL NEEDS FOR THE REAL ESTATE MARKET



**2 patents, 15 patent applications,  
open licensing for vertical ecosystem**



# OFFICE PROPERTY DEPLOYMENTS



## Mutual Insurance Co HQ in Helsinki

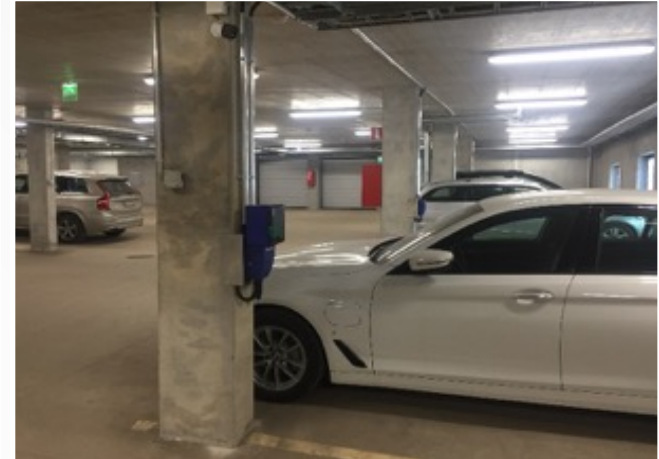
- 238 spaces, all cabled and ready for EVs
- Total investment 90,000 € – under 400 € per space
- Fast increasing take-up with tenants



## Key selection factors

- Low cabling cost
- Future-proof, choice of charging stations
- Turn-key service for the property owner
- Simple process and flexibility for tenants

# RESIDENTIAL DEPLOYMENTS – APARTMENT BUILDINGS



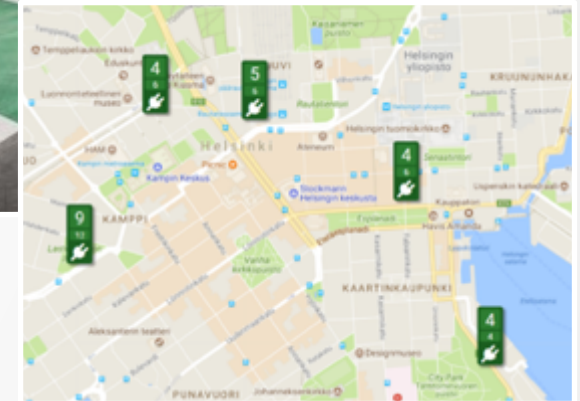


# PUBLIC PARKING DEPLOYMENTS



## Commercial parking operators

- Multiple sites, expanding rapidly
- Exceptionally satisfied customers



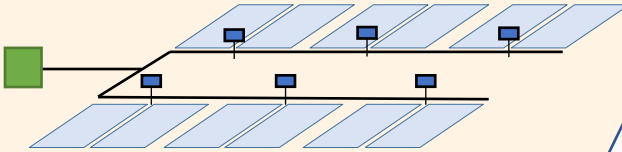
## Key selection factors

- Future-proof, choice of charging stations
- Intelligent energy management
- Low cabling cost, flexibility
- Customer satisfaction



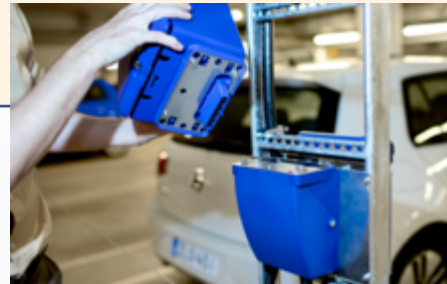
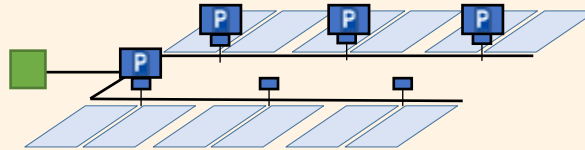
# CABLING IS THE KEY TO EV ACCELERATION

## 1. Cabling



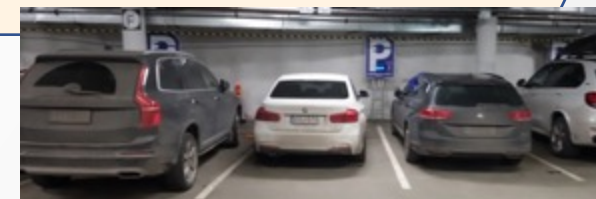
**Regulation**  
**Financing**  
**Incentives**

## 2. EV Charging are installed by demand



**Market driven**  
**Working business models**  
**Profitable**

## 3. Ev market accelerates



**Everyone can buy**  
**No bottlenecks**  
**All cars become plug-in**

# FINLAND'S NEW PUBLIC GRANT BY ARA FOR EV READINESS HAS BEEN A GREAT SUCCESS

## Duration and amount:

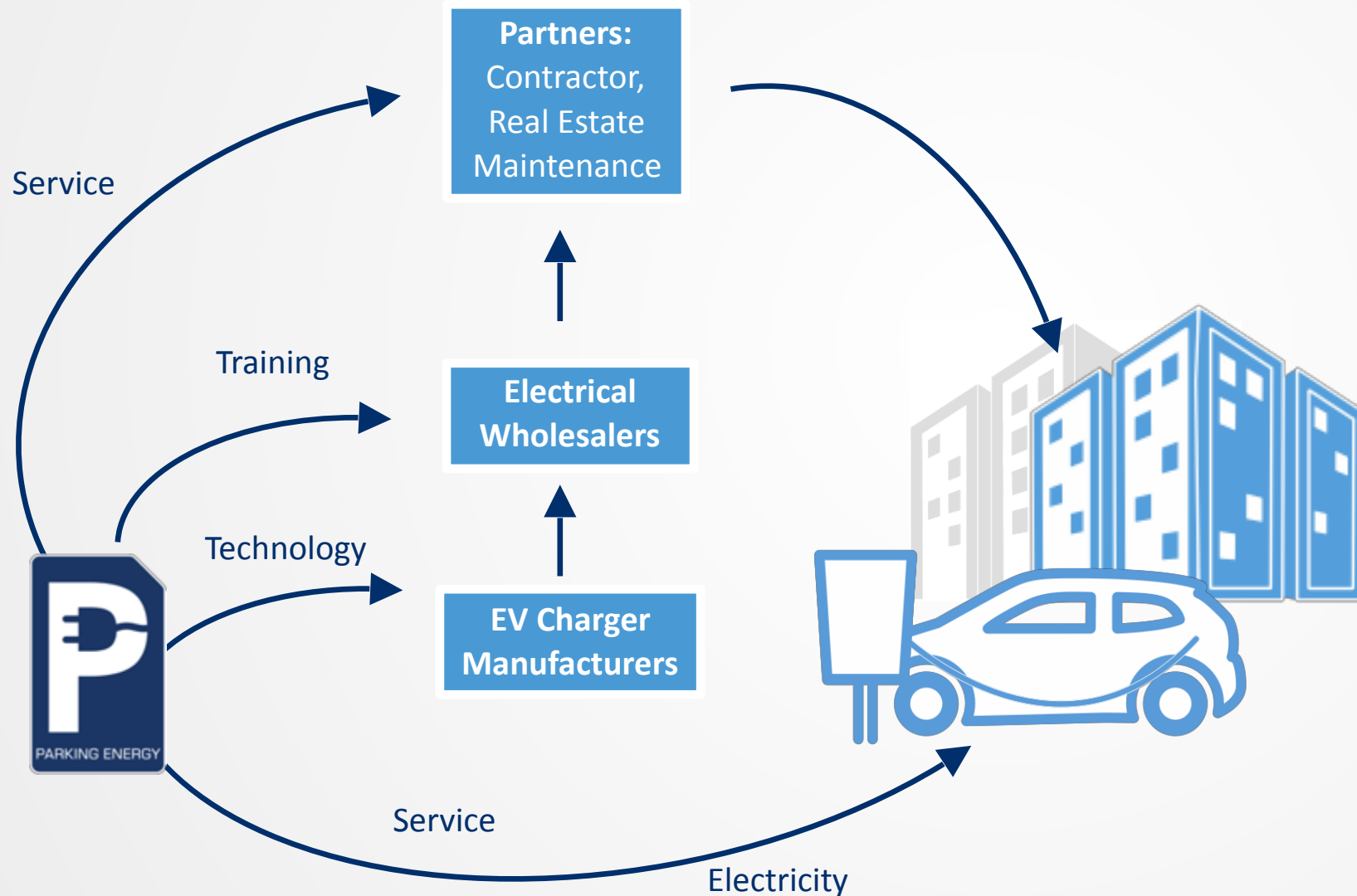
- Started on August 1, 2018; ends December 31, 2021; four calendar years
- 1.5 Million € / year, including 1.5 Million for the second half of 2018!
- The grant is 35% of the project cost, including VAT, and the largest amount is 90,000 €
- Rental housing companies are capped to 200,000 € / company

## The grant can be used for:

- **Cabling systems for EV charging**
- Surveys and planning
- Renovating or increasing the capacity of the electrical system
- Earthworks
- Materials and work

**The first ARA grant decision was given on October 8, 2018 for a Parking Energy implementation!**

# ECOSYSTEM BUSINESS MODEL



- Scales through partnership
- License model
- End customer gets a consistent product
- **Creates a vertical ecosystem**



# Thank You



**Parking Energy Ltd**  
Itälahdenkatu 18 A  
00210 Helsinki  
Finland  
[www.parkingenergy.com](http://www.parkingenergy.com)



Climate Solver  
2018 prize  
World Wildlife Fund  
Sweden 2018



STARTUP  
OF THE YEAR

Real Estate Start-  
up of the Year  
Finland  
2015



Best Pitch – Mobility and  
Smart Buildings  
Cleantech Venture Day  
Finland 2018



Wolves Summit  
Finalist  
Poland  
2018



Top 30 company in  
Area C start-up  
connector  
Denmark 2018



Top 10 Smart City  
Start-up  
Real Estate  
Innovation Forum  
Germany 2018



Top 25 most  
innovative cleantech  
start-up  
Sweden 2018



eMove360 award  
candidate  
Germany  
2018



Honorable Award  
Automobile and  
Mobility Service  
Innovation  
Finland  
2019



Top 25 Global  
Company to fight  
Climate Change  
Global Climate  
Action Summit  
San Francisco, 2018