Gemeente
Amsterdam

# The Amsterdam approach

## to building a (fast) charging network

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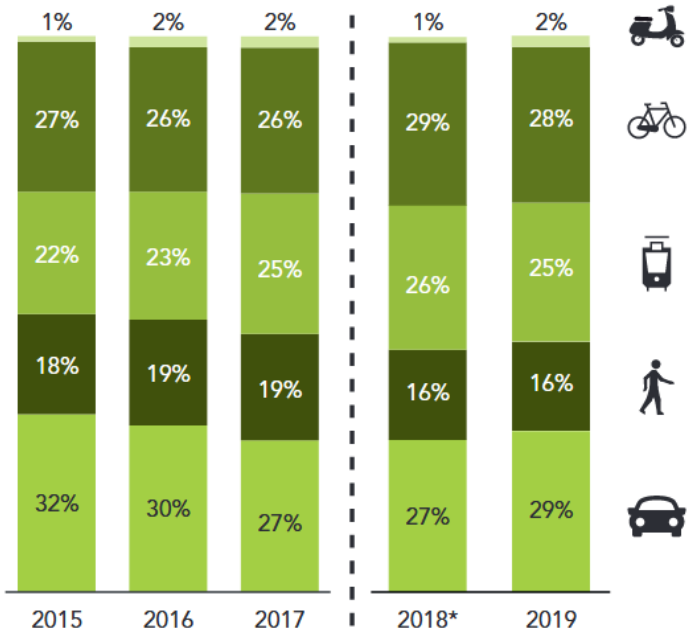
# Amsterdam: a brief introduction

## Facts and figures

- City, population of ~870.000
- Urban area, population of ~1.6 million
- Number of bikes ~880.000
- Number of private cars ~240.000
- Number of electric private cars ~10.900



# Amsterdam: a brief introduction

## Commitment to clean air

- → Clean Air Action Plan
- → -9% $CO_2$ by 2030

- → 2025: taxis, delivery vans, lorries and buses emission-free
- → 2030: all urban traffic emission-free

## Strategic Plan "Recharge me"

# The four strategic lines (1)

## Facilitate

- Rollout strategy
- Energy strategy
- Private- and semi-public charging infrastructure
- Public charging infrastructure

## Regulate

- Expand current environmental zones and tighten requirements
- Introduction of environmental zone for cars (1 November 2020)
- Introduce zero-emission zone (2025)

# The four strategic lines (2)

## Stimulate

- Subsidies for various target groups
- Expand privileges for e-drivers (e.g. parking permits)
- Take action in the most highly polluted streets with a package of targeted measures

## Communicate

- Public awareness campaigns about clean air and green transportation
- Involve and stimulate business EV market
- City leads by example
- Reach people when they have to make decisions regarding transportation

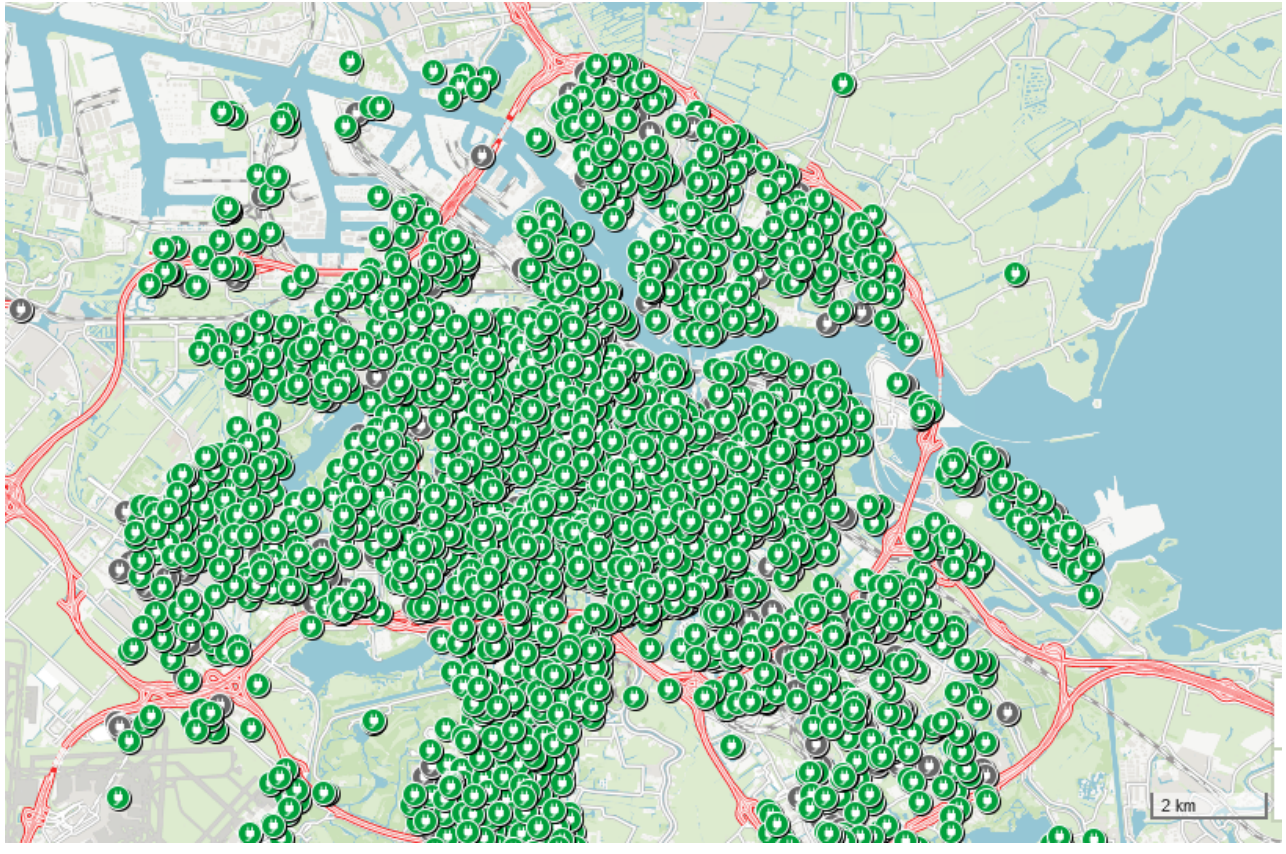
# Where we stand today

**Currently…**

- → 32 public fast chargers by the City of Amsterdam
- → 24 public fast chargers by commercial parties
- → 5.000 regular charging points

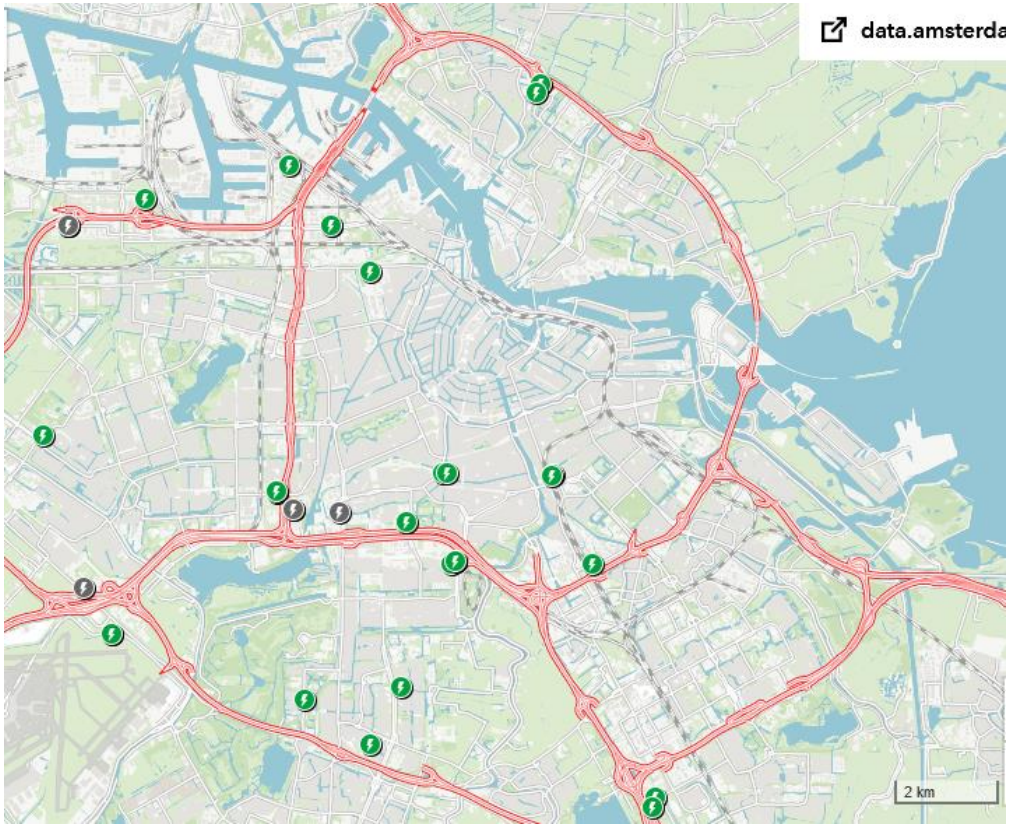
# Where we stand today

## regular charging points



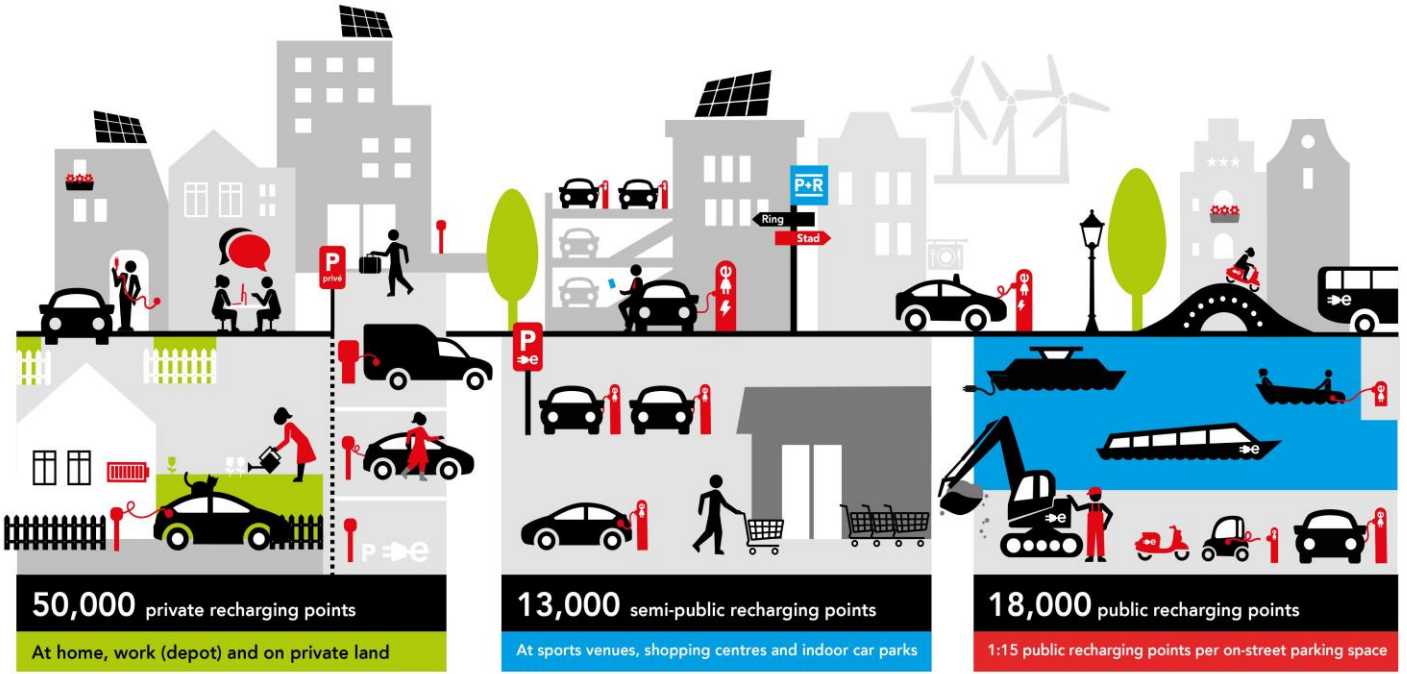
# Where we stand today:

## fast charging points



# The recharging infrastructure mix in 2030

amsterdam.nl/elektrisch




Recharging takes place on private land as far as possible

A public recharging infrastructure spread across the district

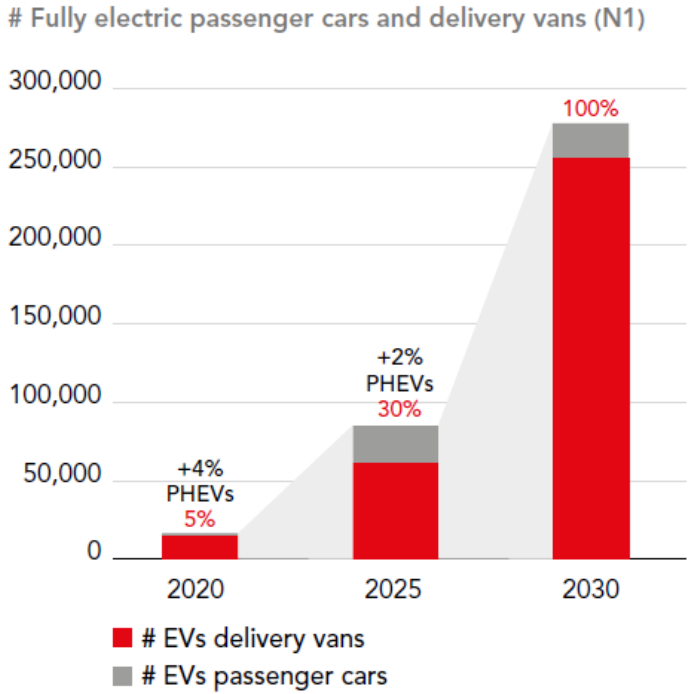
We facilitate provision of high-power recharging points at strategic locations

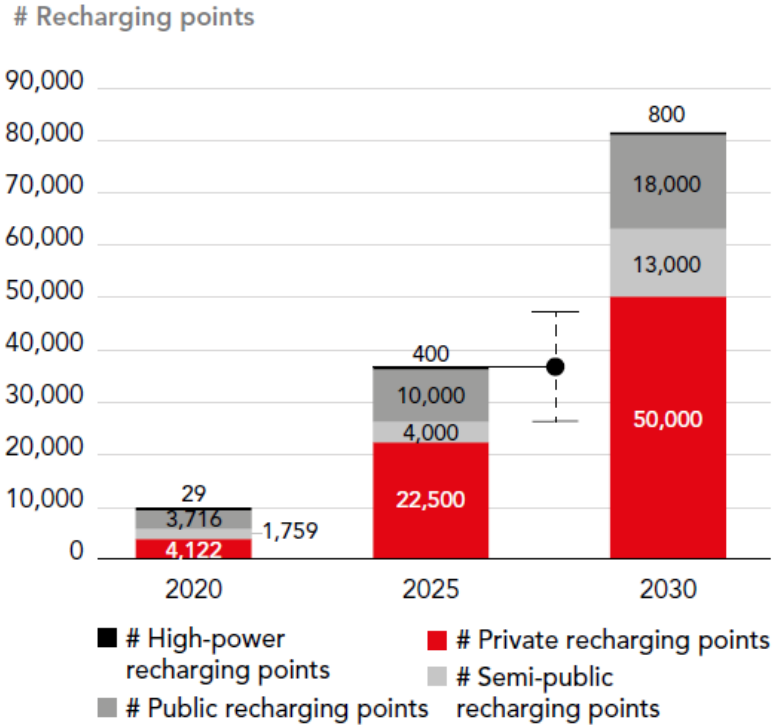
Public recharging infrastructure provided on a strategic and data-driven basis

Working together on a city-wide network of hydrogen refuelling stations

# What will we need?

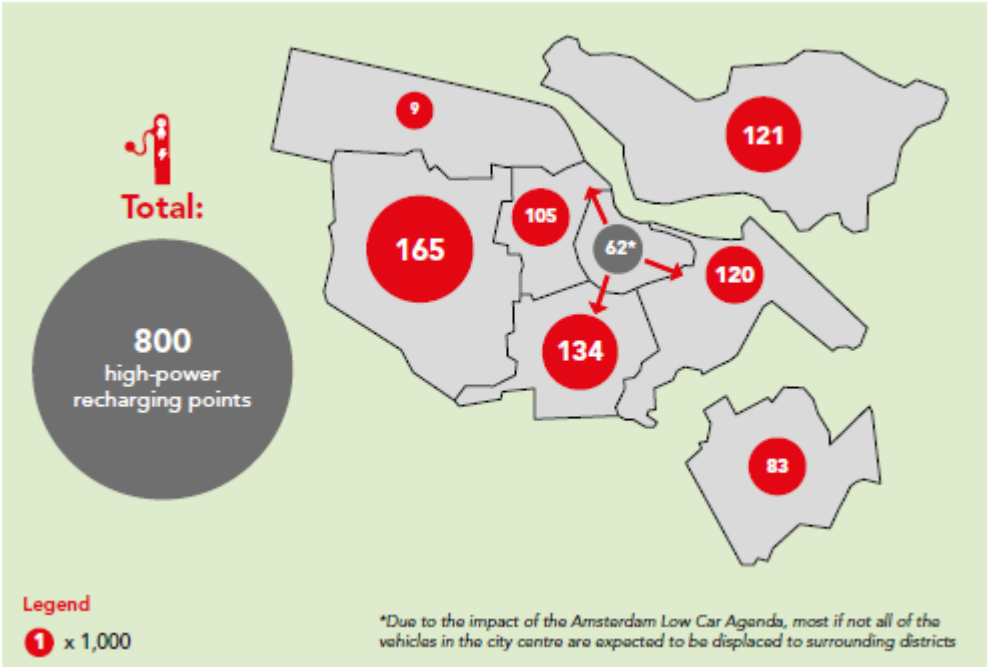
## Projections for charging points for cars and vans



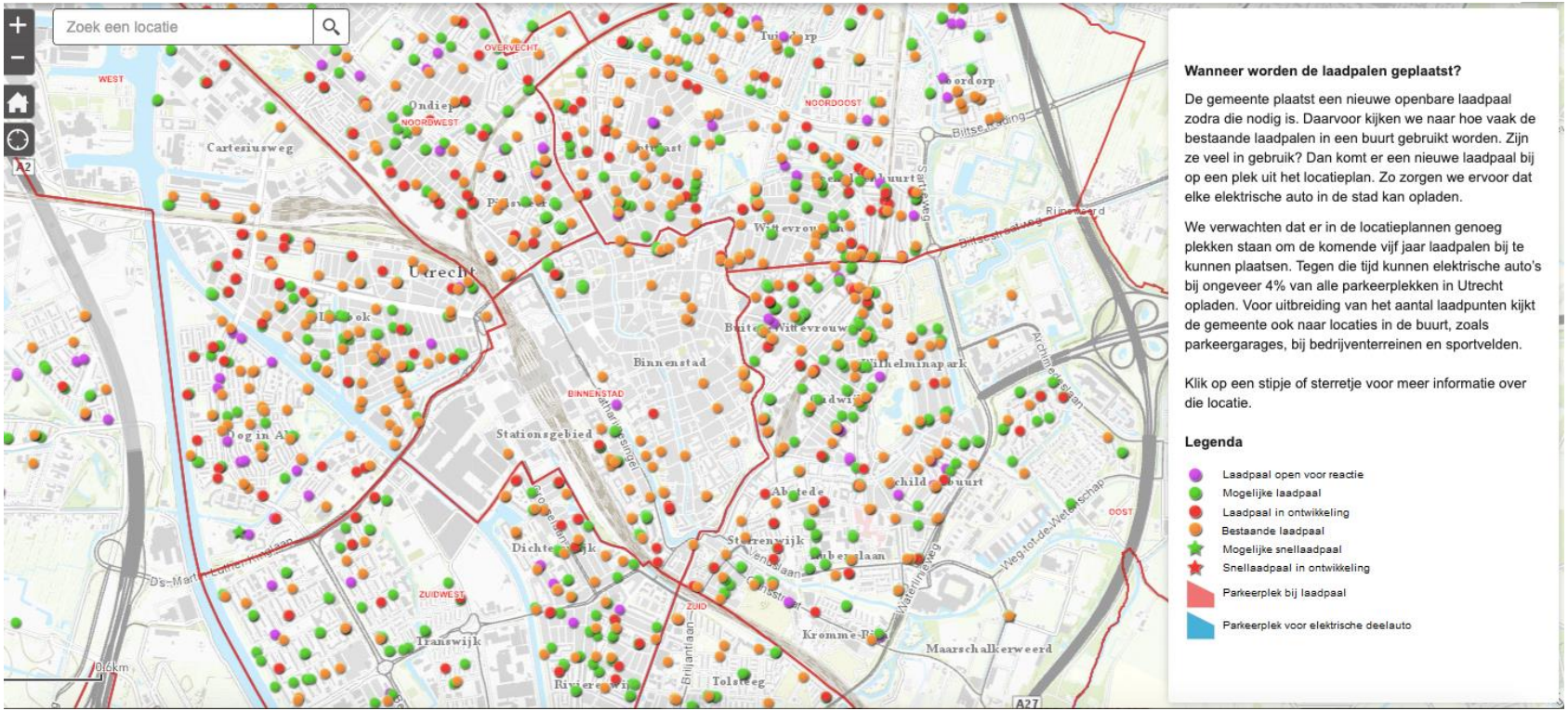



# What will we need?

## Projections for fast charging points for cars and vans



# Location plans



# Implementation

## Rollout strategy

- → Focus on depot chargers (private) and semi-public chargers.
- → Focus on fast charging at destinations, not homes/urban streets.
- → Leave ultra-fast charging to the market.
- → Making it smart:
  - → Multi-usage of grid connections
  - → Facilitating multiple types of users at fast charging stations
  - → Integrating fast charging stations with hubs

# Implementation

## Energy strategy

- The charging infrastructure facilitates smart charging.
- Close cooperation with grid operator Liander to integrate charging points in the electricity network.
- Renewable generation of all electricity for transport in Amsterdam is a precondition.

# Implementation

## Private- and semi-public charging infrastructure

- → Stimulating the realization of charging infrastructure in private and semi-public parking areas and parking garages
- → Use of smart charging and network balancing (V2G and V2X)

## Public charging infrastructure

- → Strategic placement of charging points on public roads
- → Stimulating the realization of charging infrastructure in municipal and public parking areas and parking garages

# Wrap up

## Lessons learned

- Communication, information and collaboration is key
- Smoothen the placement process
- Follow the user
- Carrot and stick
- “Just do it!”

# Wrap up

## Challenges for Amsterdam

- High demand for little public space
- Integration into public space, sub surfaces and the energy grid
- Support base for infrastructure roll- out
- Bridging the gap between owner & user
- Numbers and diversity of charging infrastructure
- Vehicle owners' behaviour

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