Charging Infrastructure Ramp-Up in Germany

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Manager National Centre for Charging Infrastructure Europe

05.09.2024

The NOW GmbH

Who are we?

- **The NOW GmbH…**
  - …was founded in 2008, is a federally-owned company and is instructed and commissioned by the German Federal Ministries.
  - …is a partner of the German Federal Government with regard to the topics of mobility & technology.
- **Our vision:** A climate-neutral society.
- **Our mission:** We support the German Federal Government in its climate & industrial policy goals.

Our thematic partnerships so far:

- Charging infrastructure
- Battery-electric mobility
- Hydrogen technology
- Hydrogen Mobility
- Renewable Fuels
- Stationary fuel cell technology

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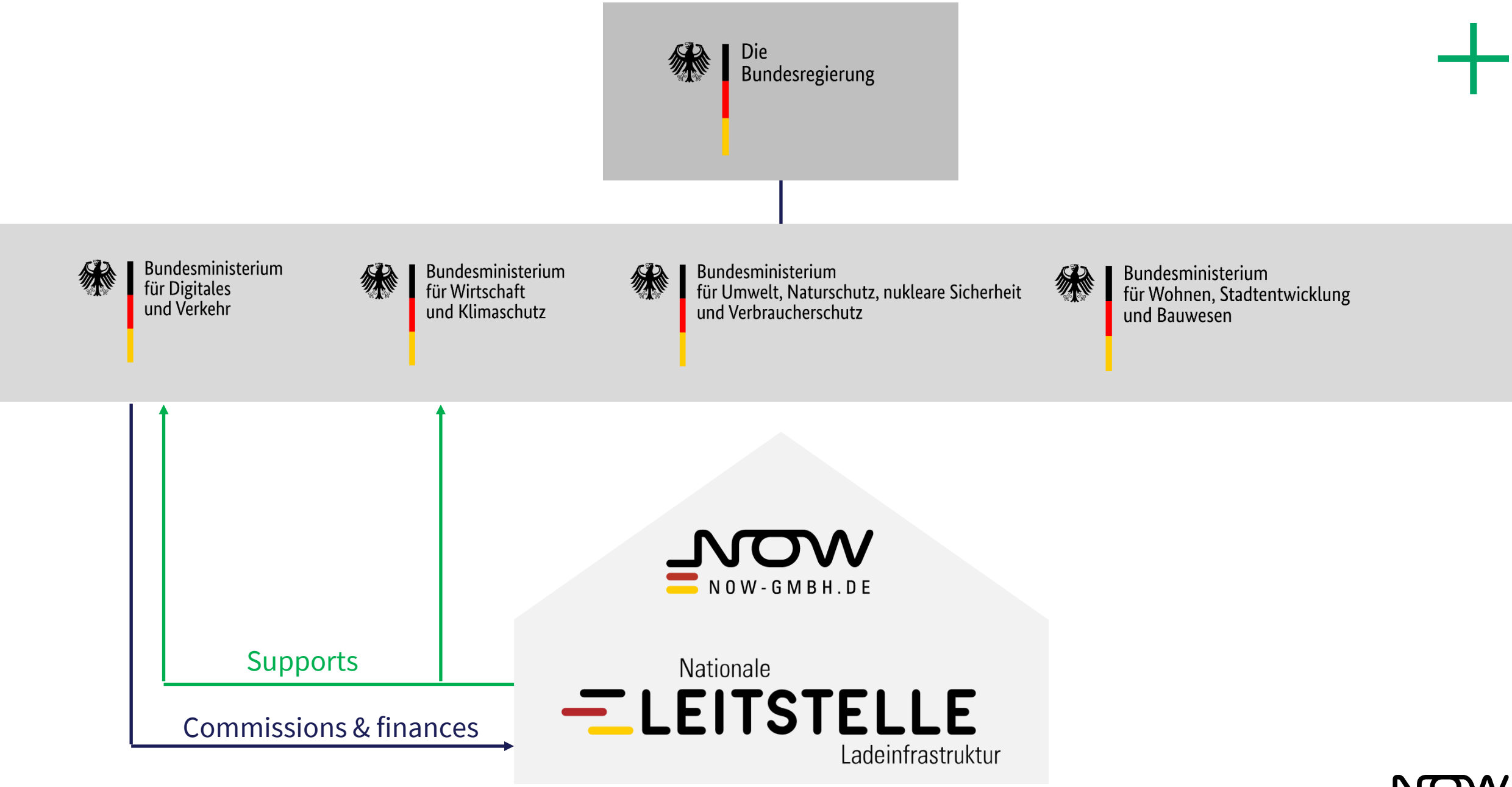
Die Bundesregierung
Bundesministerium für Digitales und Verkehr
Bundesministerium für Wirtschaft und Klimaschutz
Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz
Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen
Supports
Commissions & finances
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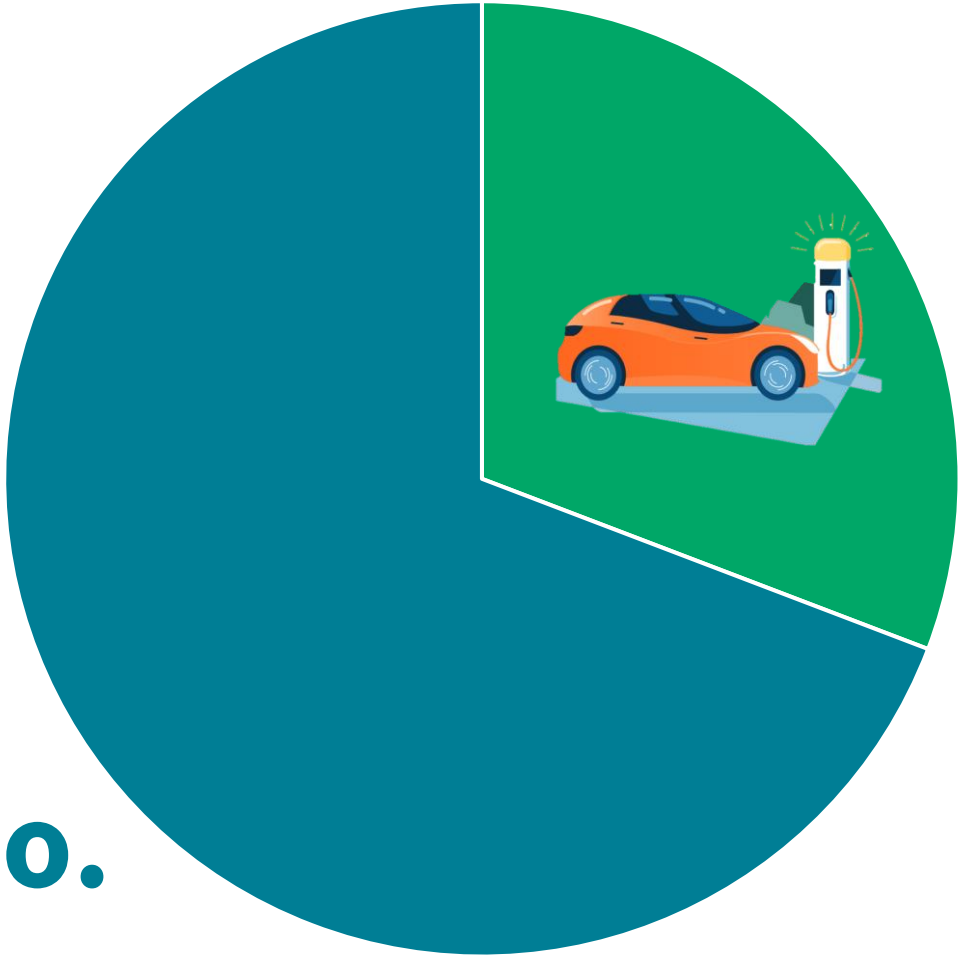
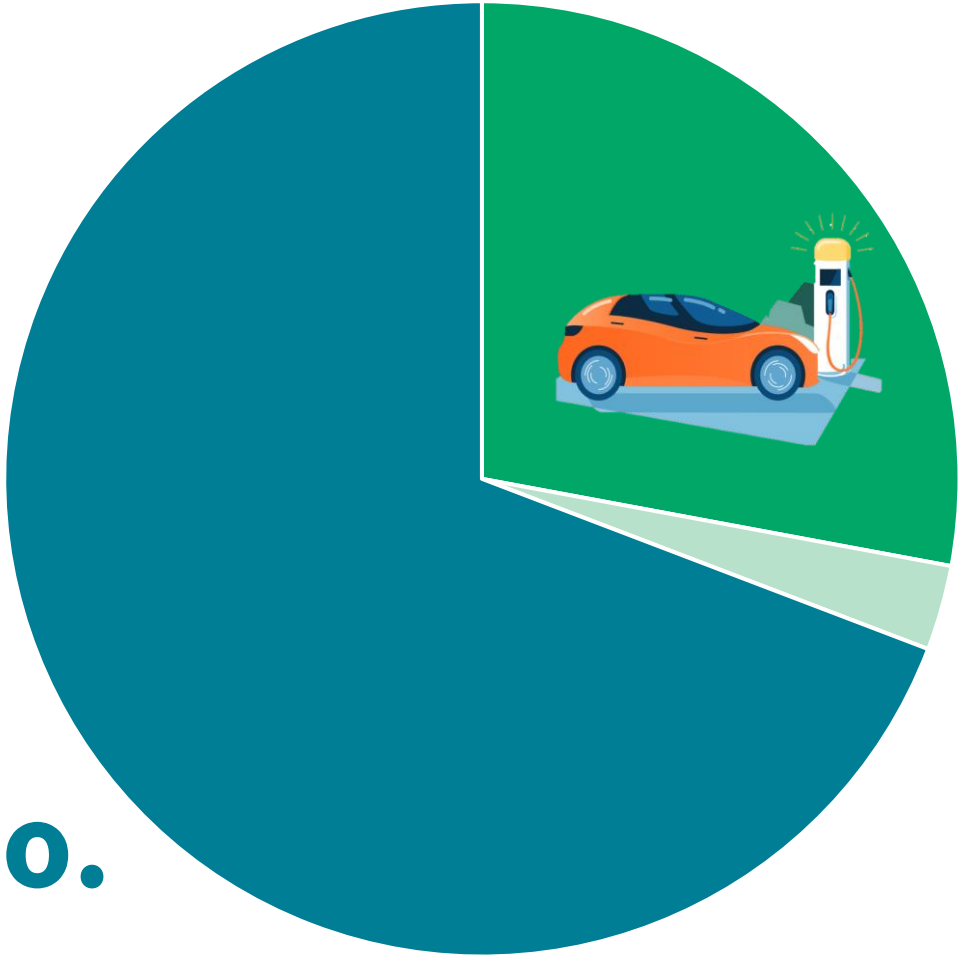
Nationale
LEITSTELLE
Ladeinfrastruktur



15 Mio.

33.7 Mio.



33.7 Mio.

15 Mio.

(1.4 Mio. achieved)

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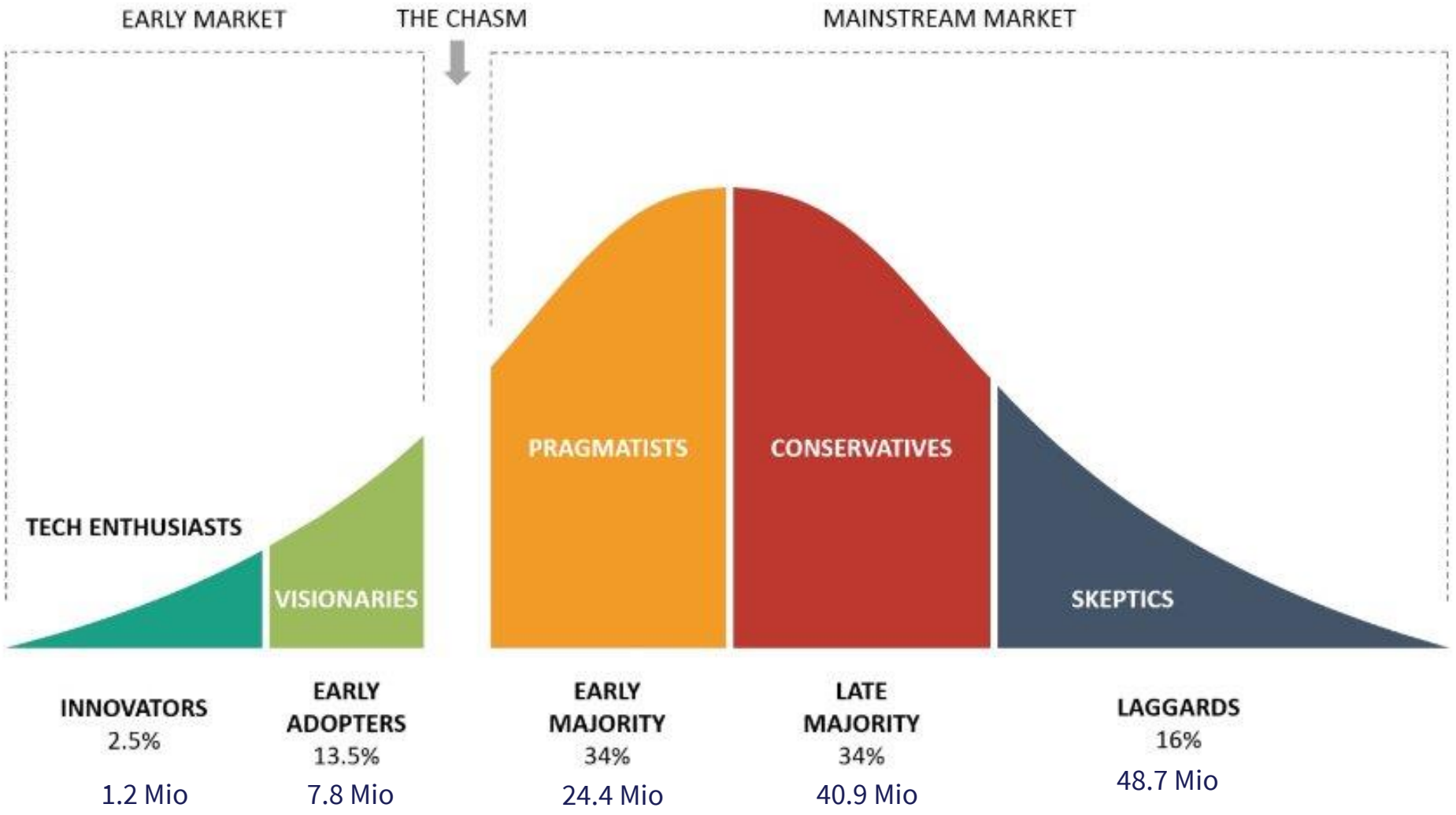
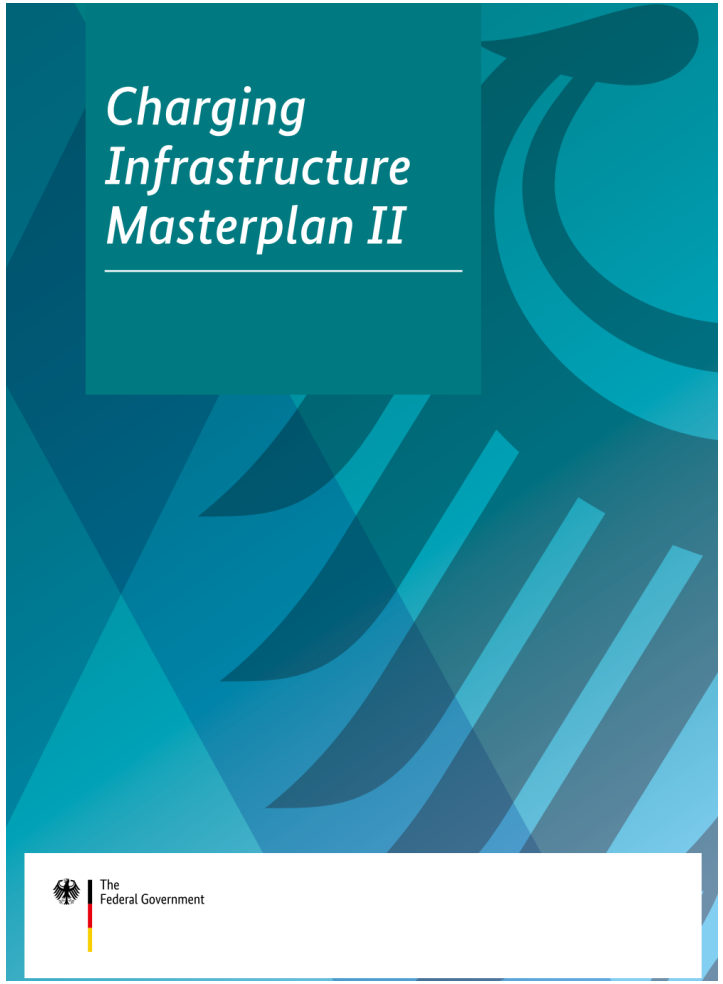


Government strategy framework

Charging Infrastructure Masterplan II



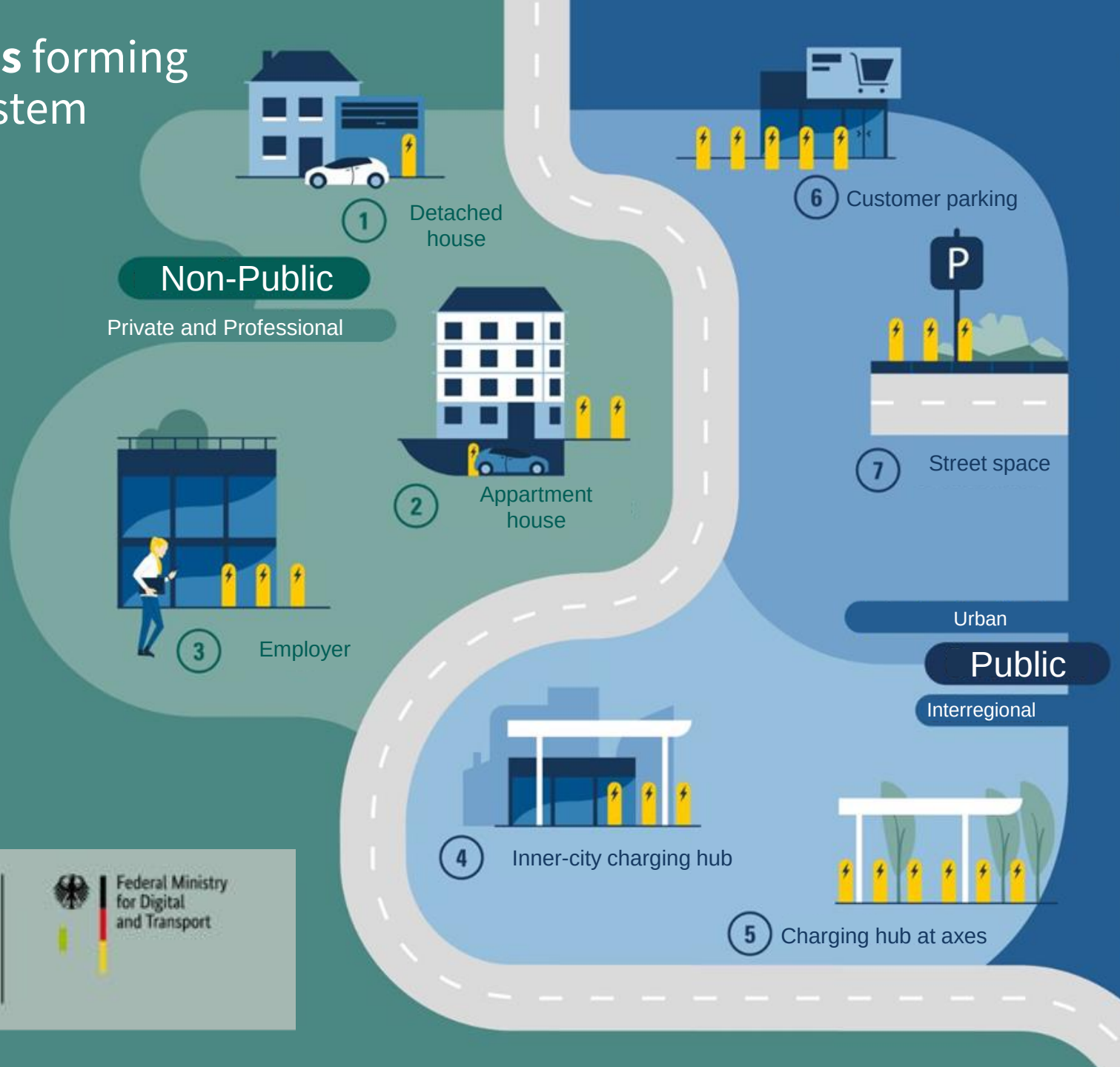
Development and implementation of **68 measures** together with public and private actors

Broad scope, e.g. in the fields of grid planning, municipalities, data-driven innovation and heavy-duty vehicles

Strategy was **adopted by the Federal Government in October 2022.**

English version is available online:
https://nationale-leitstelle.de/wp-content/uploads/2023/01/Masterplan-Ladeinfrastruktur-II-der-Bundesregierung_Englisch_DIN_A4_barrierefrei.pdf

Seven use cases forming the charging system



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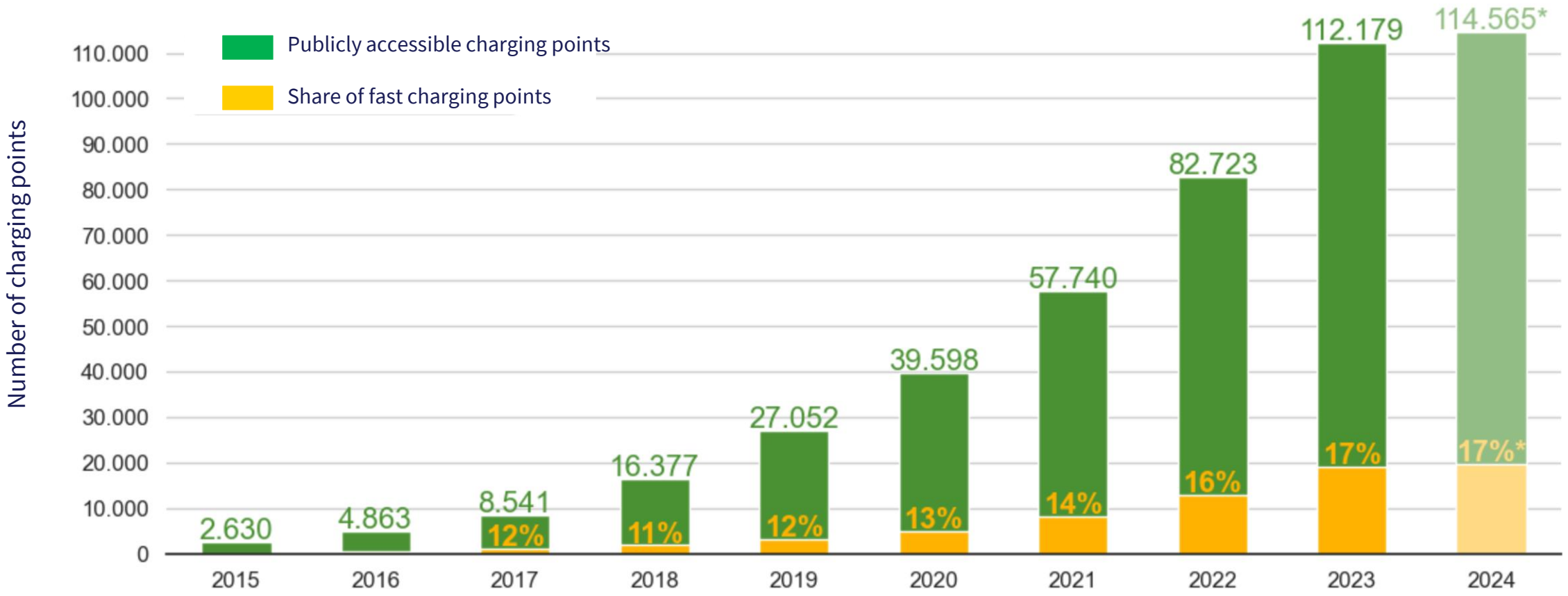
National Centre for Charging Infrastructure

Federal Ministry for Digital and Transport

Number of public charging points in Germany

per year incl. share of fast charging points



*In contrast to previous years, the current year may include less than 12 months, which may result in lower growth.
Data basis: Commissioning according to BNetzA charging station register, of 21.03.2024, source: Bundesnetzagentur.de

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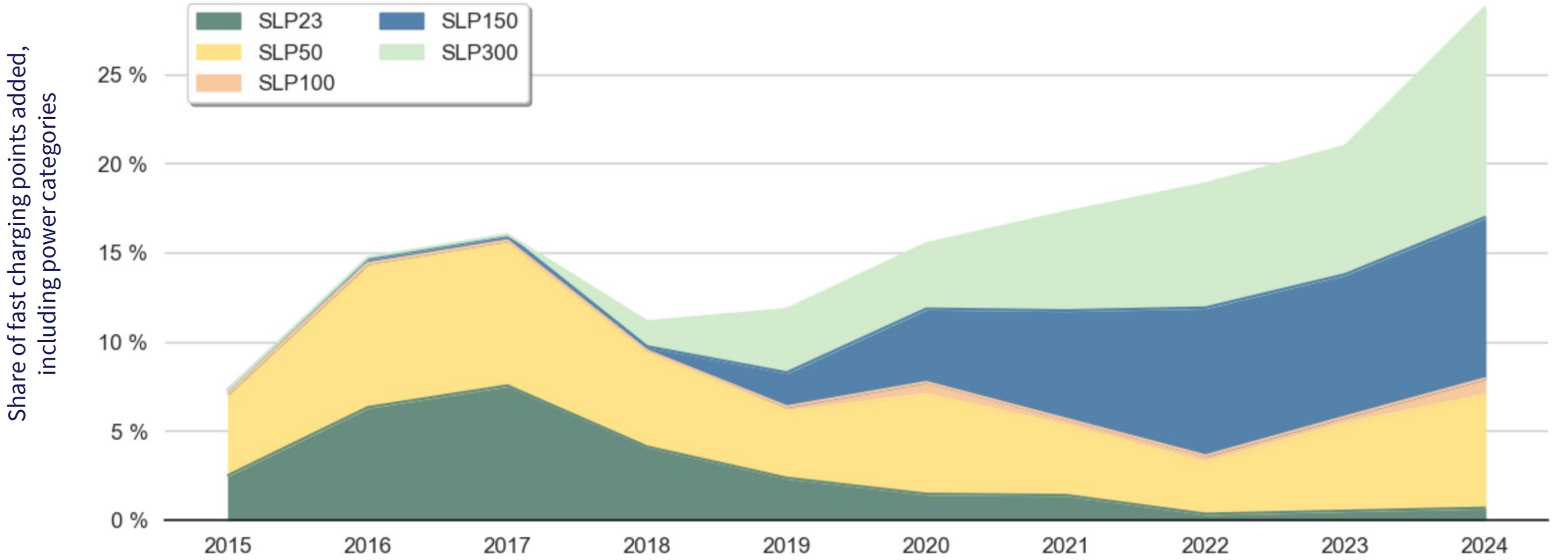
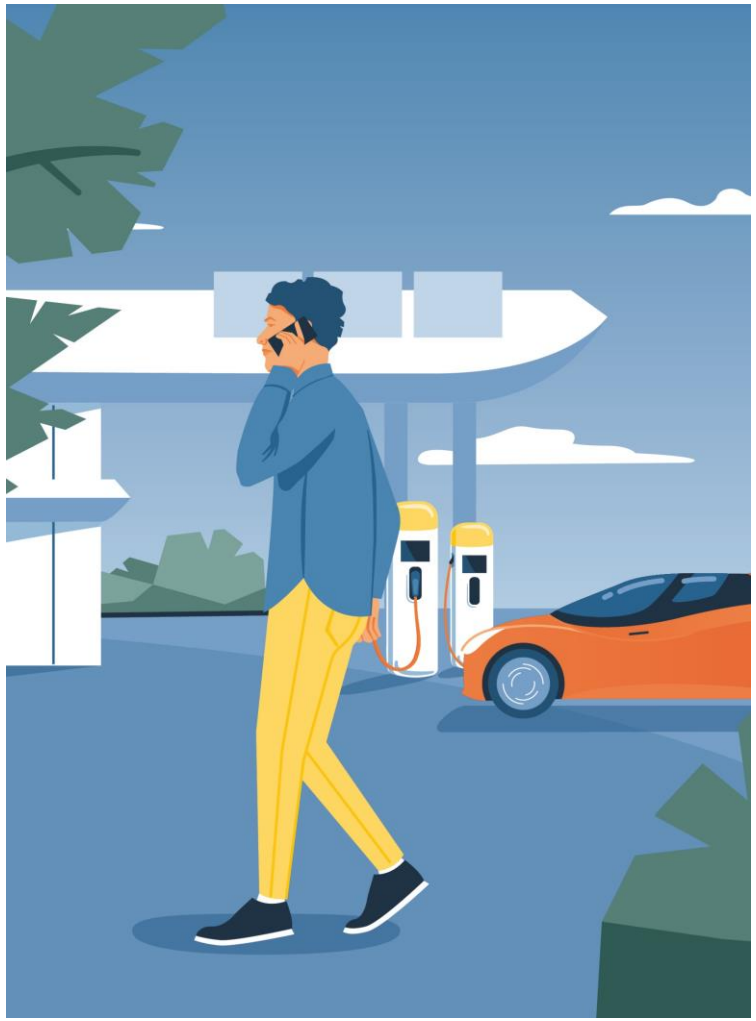
Public fast charging points by power output



Data basis: Installations according to the list of charging stations, last update: 21.03.2024, source: Bundesnetzagentur.de

2 guiding principles

Reliable charging infrastructure



Comprehensive: charging points must be built nationwide, in advance, and where users expect them

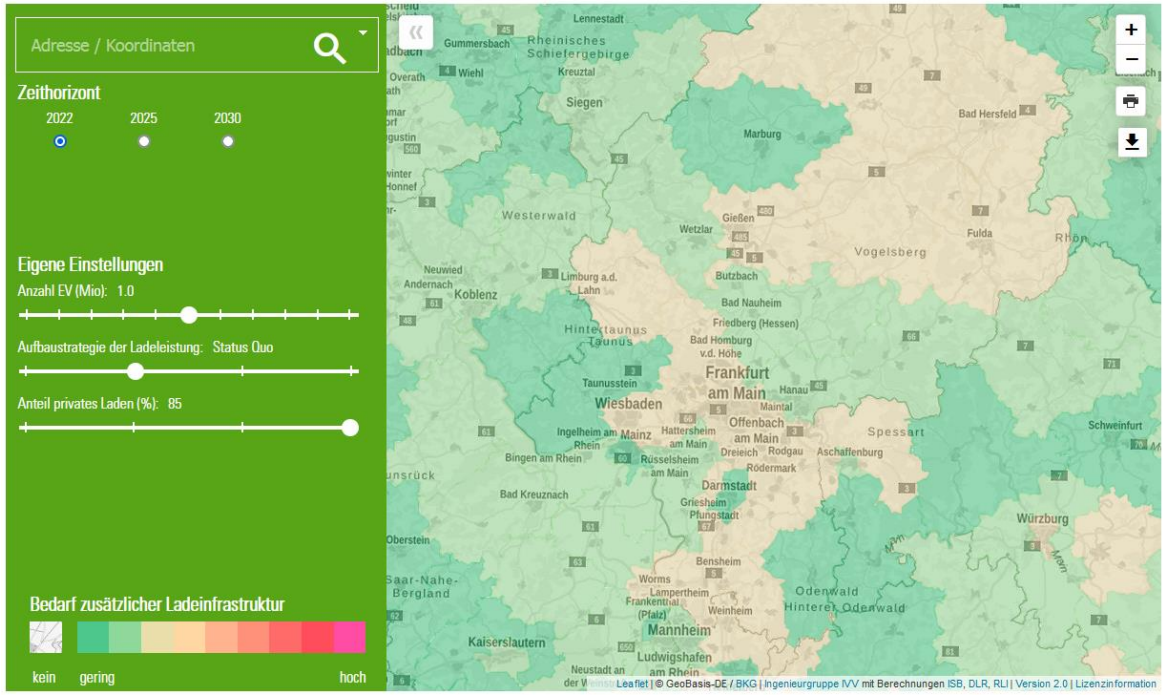
Demand-based: the number of charging points and their capacity must meet (future) demands

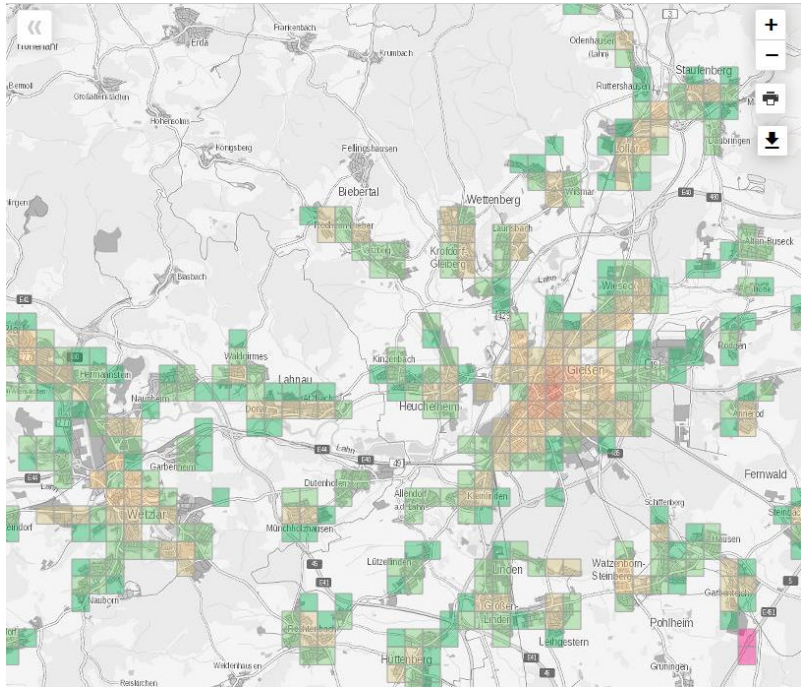
User-friendly: charging points must provide easy access and transparent pricing models

Data driven analysis

of charging on demand

StandortTOOL





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The „Deutschlandnetz“

Nationwide fast charging network

- New approach: **public tenders** in addition to funding
- Goal: a nationwide fast charging network for medium- and long-range travels → **closing foreseeable gaps**
- Scope: installation and operation of at least **1,000 fast charging sites** with 4 to 16 charging points within pre-determined areas/locations
  - 200 sites along highways (Autobahn)
  - 900 sites in urban and rural regions
- Contract-based approach ensures a **reliable installation and operation** of charging sites and **common rules** regarding payment options, quality etc.

Heavy-duty vehicles

An initial charging network is needed

More and more manufacturers announce the **launch of electric long-distance truck** models

Businesses expect **consistent standards and high reliability** in their sensitive logistics operations

Considerable challenges for the **power grids** due to high charging capacities and **site availability**

Charging scenarios for heavy-duty commercial vehicles

4 **Transshipment points**

4 **Transshipment points**
e.g. goods distribution centres

1 **Own company premises**

1 **Own company premises**
e.g. depot, on-site transport

PUBLIC

NON-PUBLIC

5 **Charging hub in industrial estates**

5 **Charging hub in industrial estates**
e.g. supplier's yard, roadside, public parking area at freight forwarder's premises

2 **Other company premises**

2 **Other company premises**
e.g. loading or unloading site at customer's premises, cooperation between companies

6 7 **Charging hub on highways**

6 **Charging hub on highways**
Night charging/longer breaks

3 **Mobile charging points**

3 **Mobile charging points**
e.g. for construction site vehicles

7 **Charging hub on highways**
Interim charging/driving breaks

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Federal Ministry for Digital and Transport

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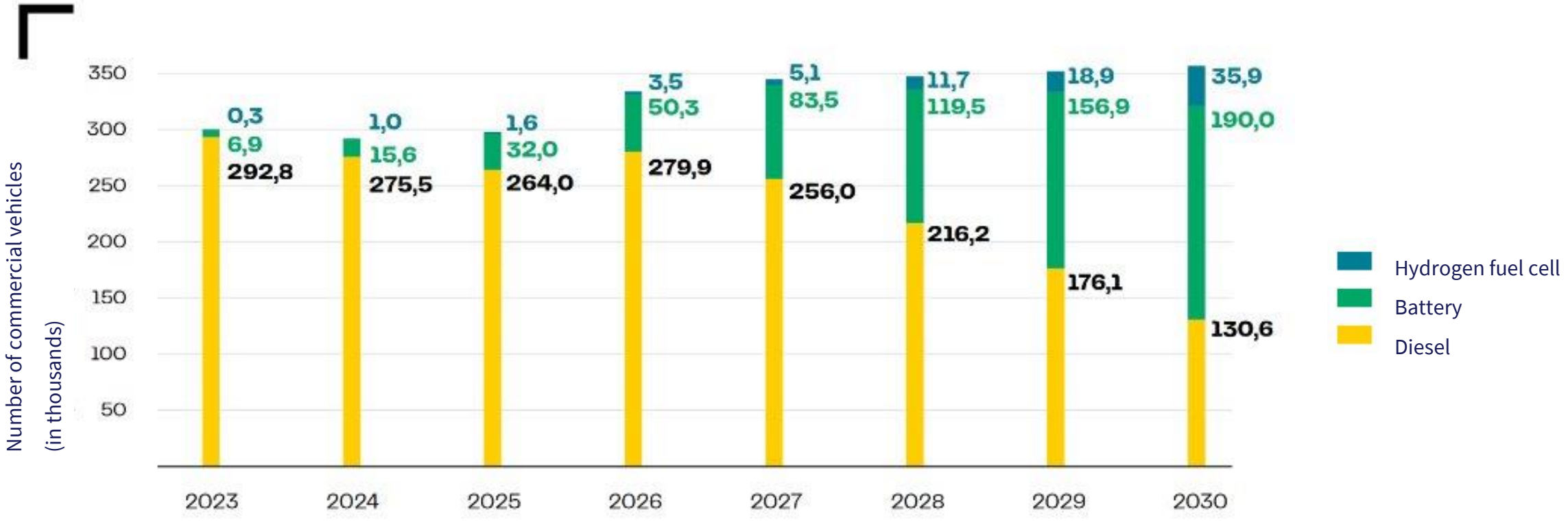
GESAMTKONZEPT KLIMAFREUNDLICHE NUTZFAHRZEUGE

Clean Room Talks

Results



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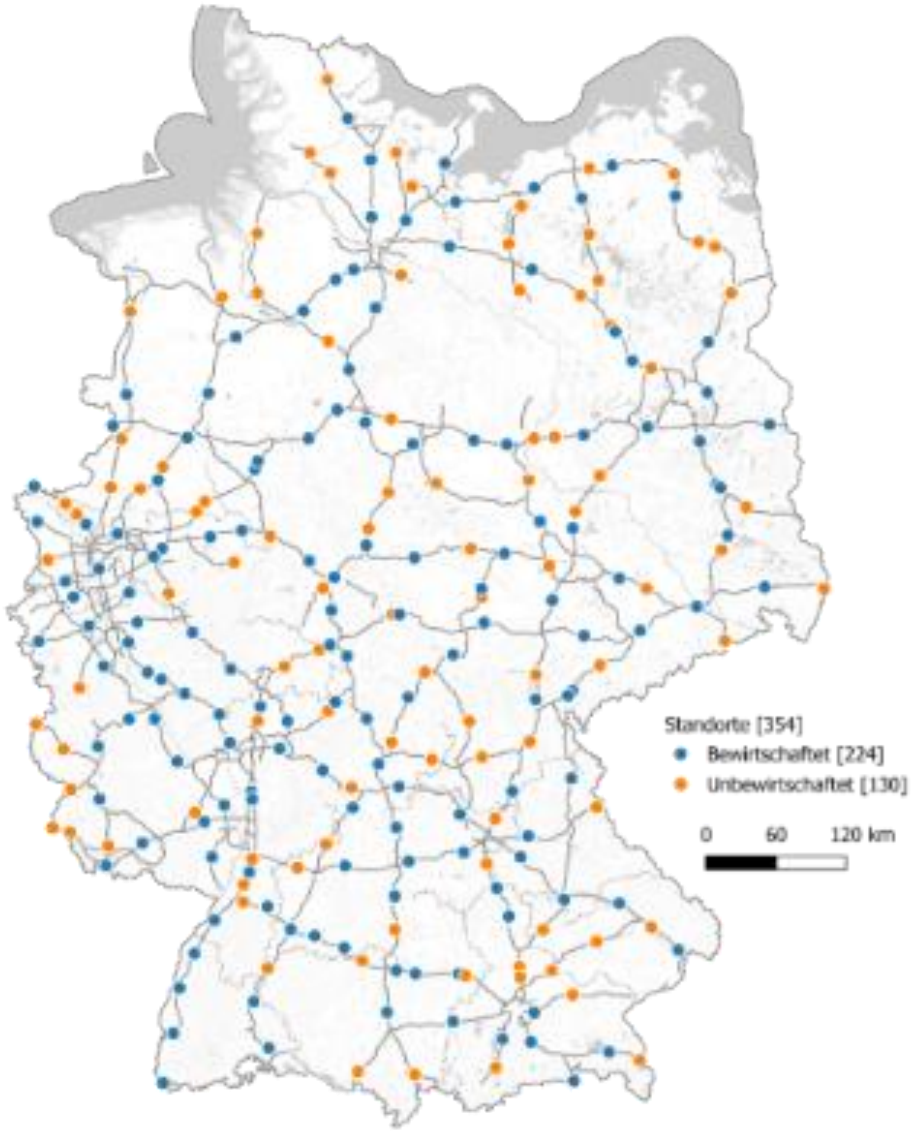
Location & number of charging points

Charging Network for E-Trucks

- 354 locations
- 224 serviced rest areas
- 130 unserviced rest areas
- 1803 MCS, 2397 CCS charging points
- Network coverage: 94%
- Charging demand coverage: 2/3



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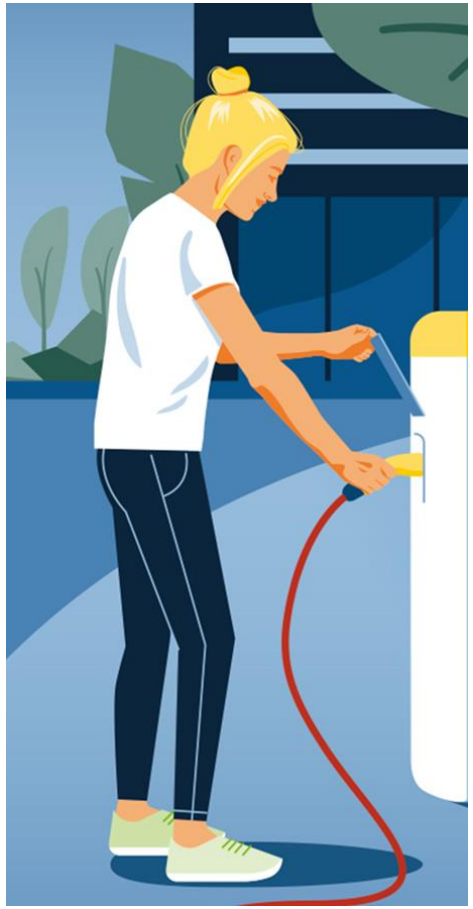
Regulation on the deployment of alternative fuels infrastructure
(AFIR)

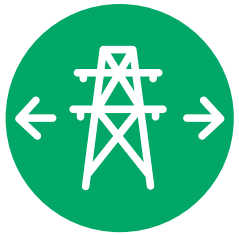


- Mandatory **infrastructure deployment targets** for **road, maritime and aviation**
- Improving the **quality of / user experience** at electric recharging and hydrogen refueling infrastructure
- Technical specifications to improve **interoperability**
- **Reporting mechanisms** to ensure that targets are met

New stage: scaling and profitability

Current and future challenges

Increased **ambition**, e.g. CO_2 targets for new cars, geopolitical situation



Grid integration due to the increasing number and capacity of CPs

Easy access to **sites**, improvement of **approval procedures**

Charging across **Europe** – consistent targets and standards

Electrification beyond cars: Electric **heavy-duty vehicles**

Federal responsibility to safeguard a **coherent development**

Thank you!

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