



City of Oslo



Oslo – The EV Capital of the World

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Agency for Urban Environment
City of Oslo

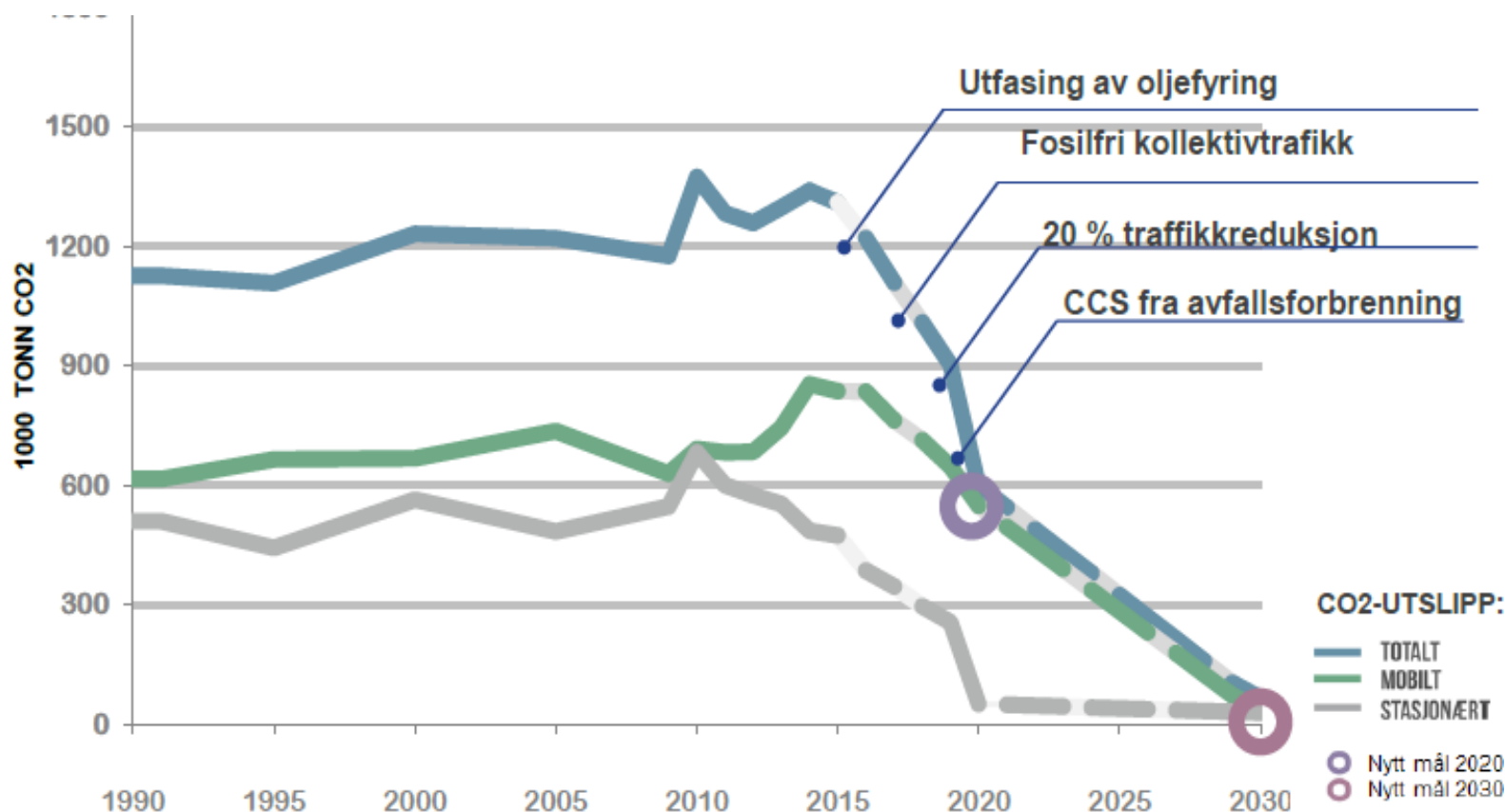
Making EVs the right choice

With 61% of global emissions in Oslo coming from the transport sector, the only way to reduce emissions in our cities is to boost a green shift in transportation. In 2008, Oslo adopted a ten-point plan to reduce CO2 emissions, to which the large scale introduction of EVs plays a big part.



Ambitious goals – Carbon-neutral by 2030?

Climate goals in Oslo: 50 % CO₂-reduction in 2020, 95 % CO₂-reduction in 2030



Making EVs the right choice - incentives on purchase

- **High taxes on fossil fuel cars**
- **25% Value Added Tax (VAT)**
- **«One-time registration fee»**
calculated on the basis of:
 - the weight of the vehicle
 - the emissions (CO2 and NOX)
 - the engine size (ccm) or effect (hp)
- Electric vehicles have
NO TAXES OR FEES
Saves at least 10 000 EUROS

Price example in Euro:

■ Sweden:	
VW Golf gasoline	20 000
VW E-Golf	41 200
■ Norway:	
VW Golf gasoline	30 000
VW E-Golf	28 500



AN EXTREMe electric example: tesla Model S vs Chevrolet Camaro



Tesla S Model

Price in Norway : 63 000 EUR

Price in Sweden : 80 000 EUR

Chevrolet Camaro

Price in Norway: 172 000 EUR

Price in Sweden: 50 500 EUR



Making EV the right choice - Incentives on use

- **Free access on toll roads (1997)**

In Oslo € 3,5 – 5, National roads

- and tunnels up to

€ 20.

- **Free parking (1999)**

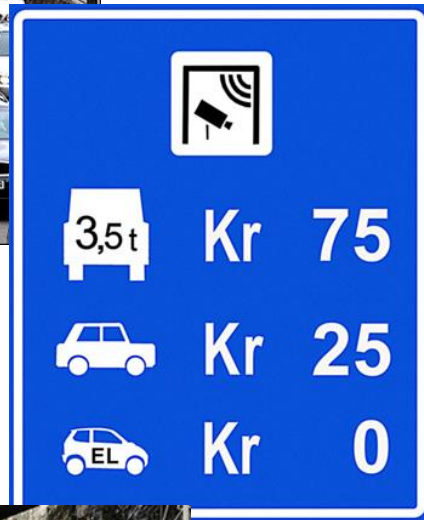
€ 2 – 5 per hour

- **Access to use bus and taxi lanes (2003)**

Saves 20 min -1 hour per day

- **Free transport on ferries (2009)**

€ 12 – 24 each way



Making EVs the right choice – The main focus from 2008



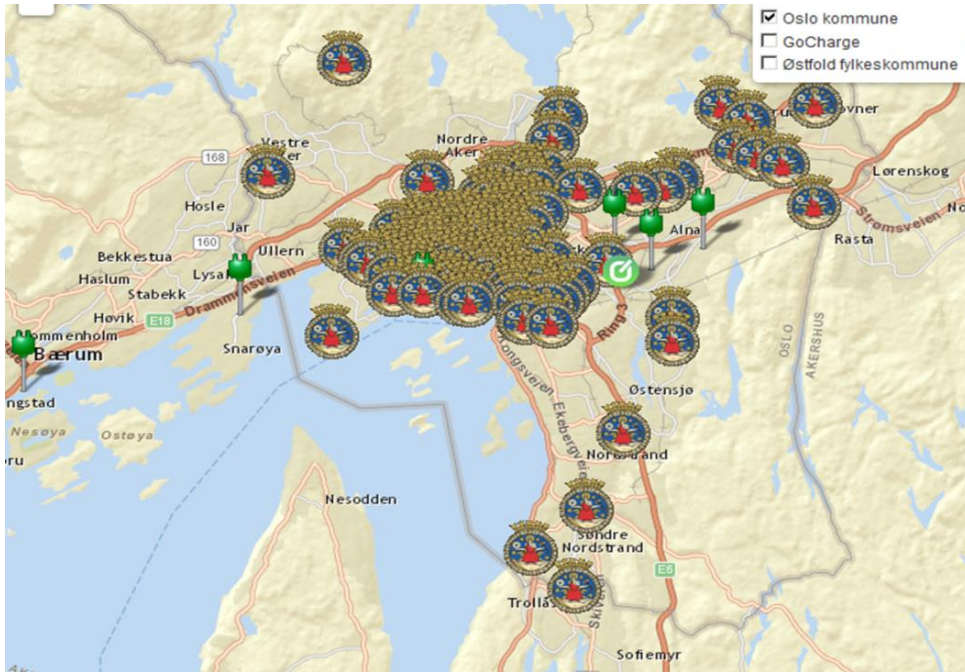
Making EVs the right choice - Charging infrastructure

To **kick-start** the adoption of EVs electrical vehicle the City of Oslo has contributed to the proliferation of an adequate charging infrastructure. Today Oslo is Norway's, and probably the Worlds, largest owner of charging infrastructure.

Seeing- is believing. Easily available charging infrastructure made the driving an EV attractive and convenient, but also helped to raise public awareness and increase understanding about EVs.



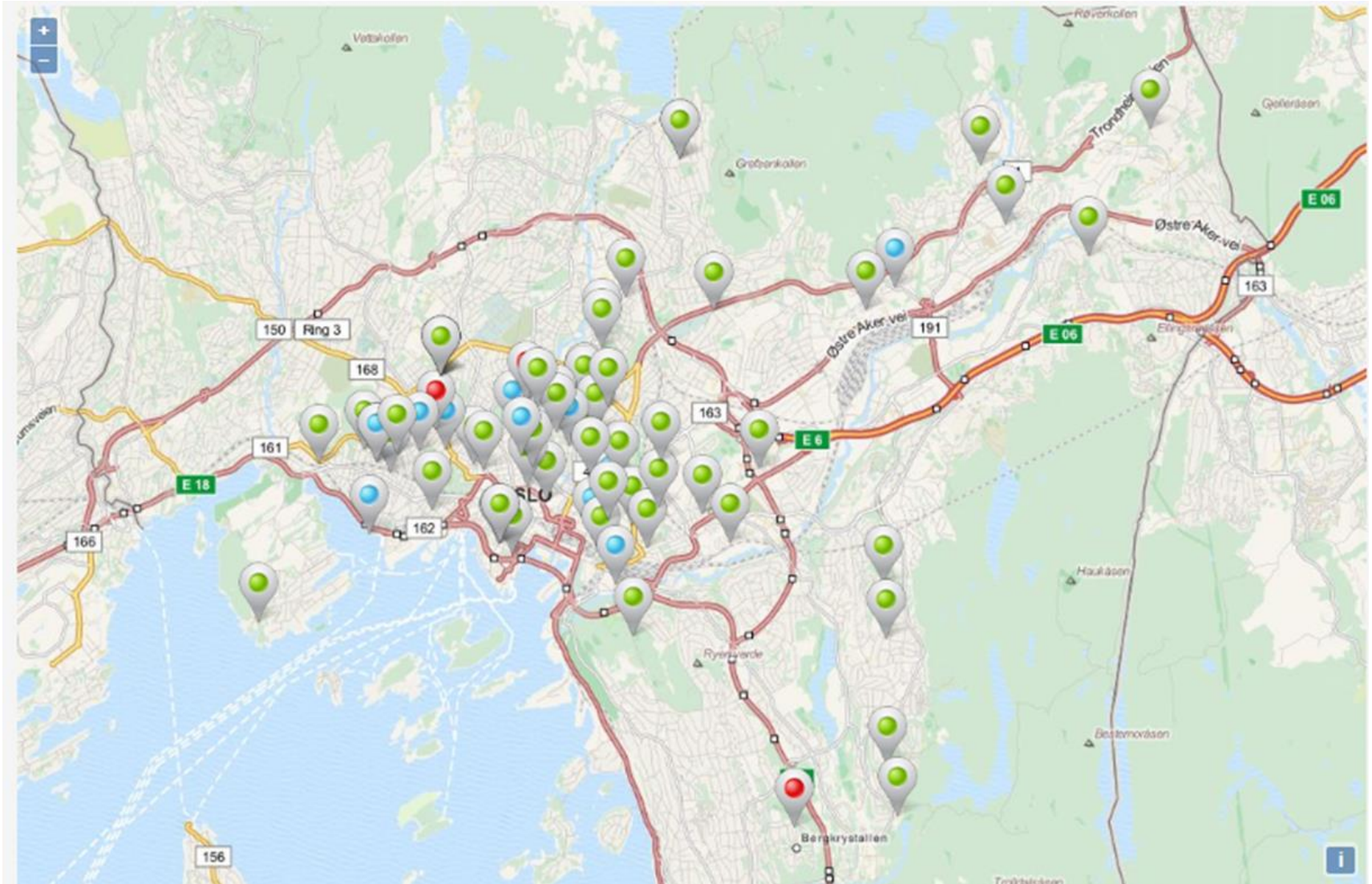
Making EVs the right choice - Charging infrastructure



- The City of Oslo is today the country's largest owner of charging infrastructure with 1200 on-street charging point on public ground
- 200 new charging points will be deployed within 2017
- The City will offer more than 1400 public charging points within 2017
- Total number of public available charging point, including private ones, is close to 2000. 600 with support from the City



Back-office solution- Charging infrastructure



Oslo went from this ...



To this ...



Making EV the right choice

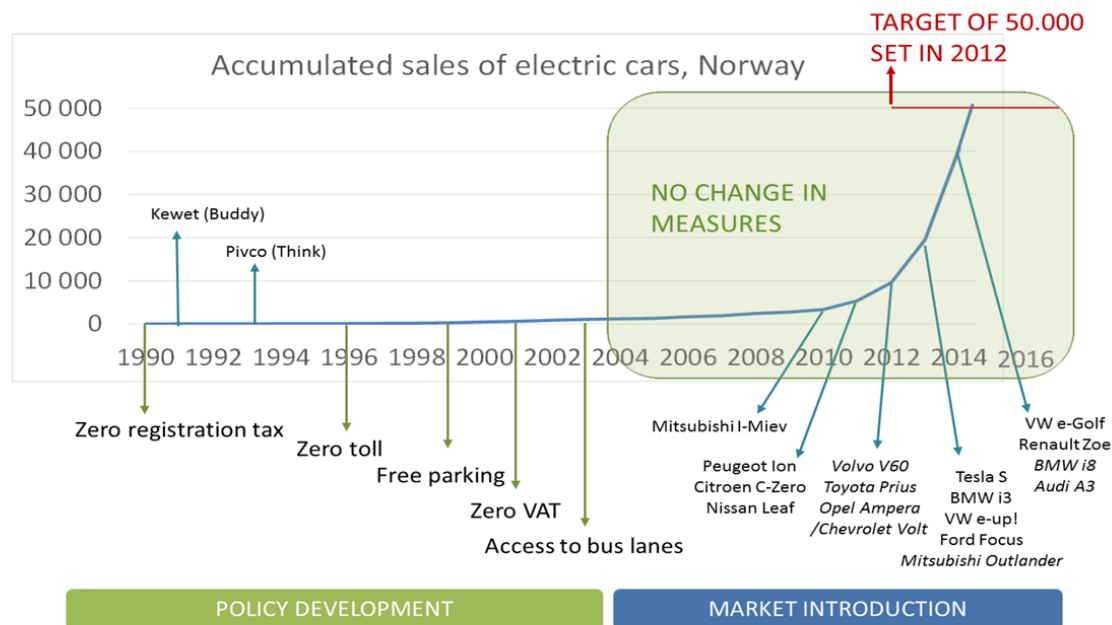
Making EVs the right choice: **three** critical success factors:

- EVs must be **cheap to buy** (no purchasing tax, no VAT)
- **Cheap to use** (free parking, free electricity, free passing in toll gates)
- **Convenient** to use (easy access to charging)

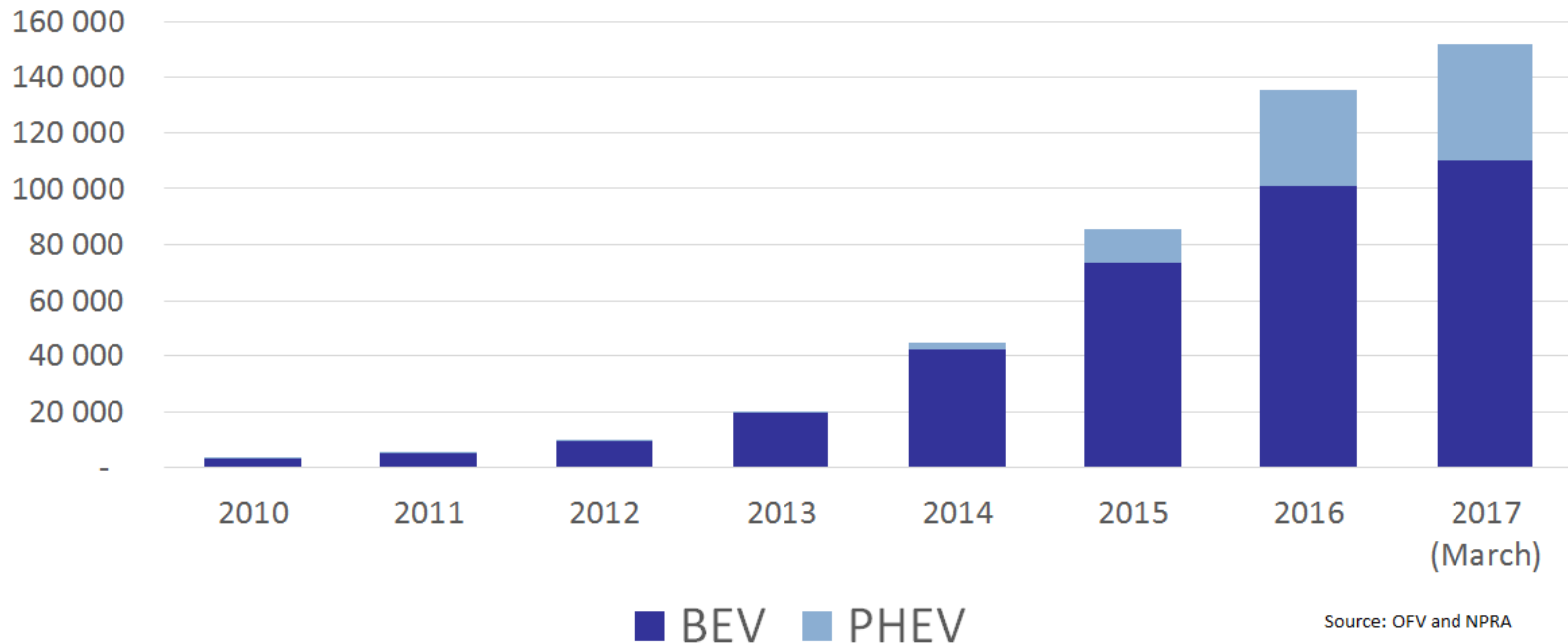
You also need **the right product** to succeed



Development of policy and sales



Passing 150 000 EVs in Norway!



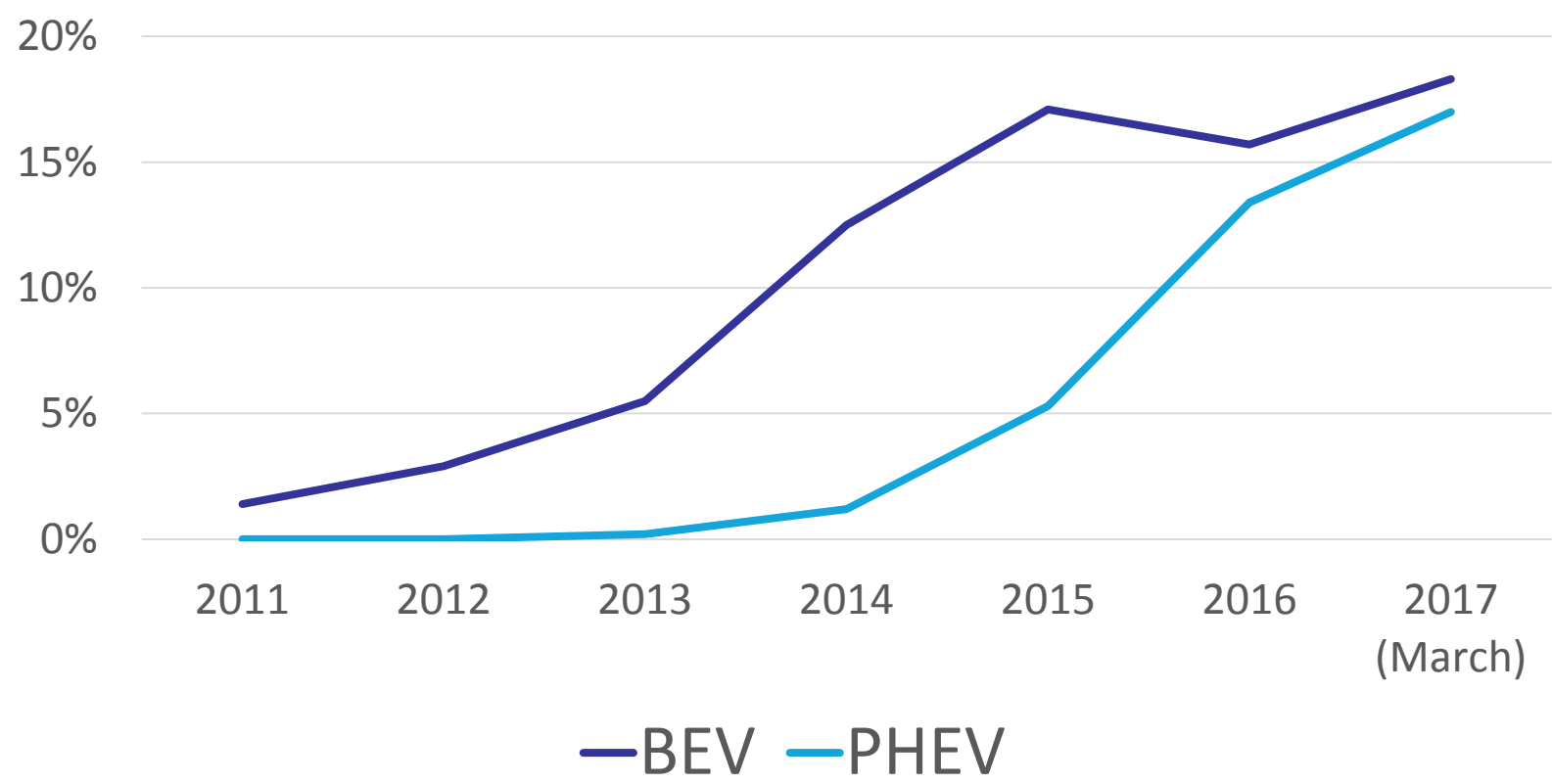
Norsk

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Success breeds success, but also creates challenges. In 2016 close to 30 % of all cars sold in the Oslo region were either a pure electric vehicle (24,4 %) or a plug-in vehicle (15,4 %).



Market shares BEVs and PHEVs in Norway



EV sales are boosting - close to 50% in Oslo!

The share of EVs and Plug-in hybrids has increased to 50% in 2017. This is fantastic, but it also creates a challenges!

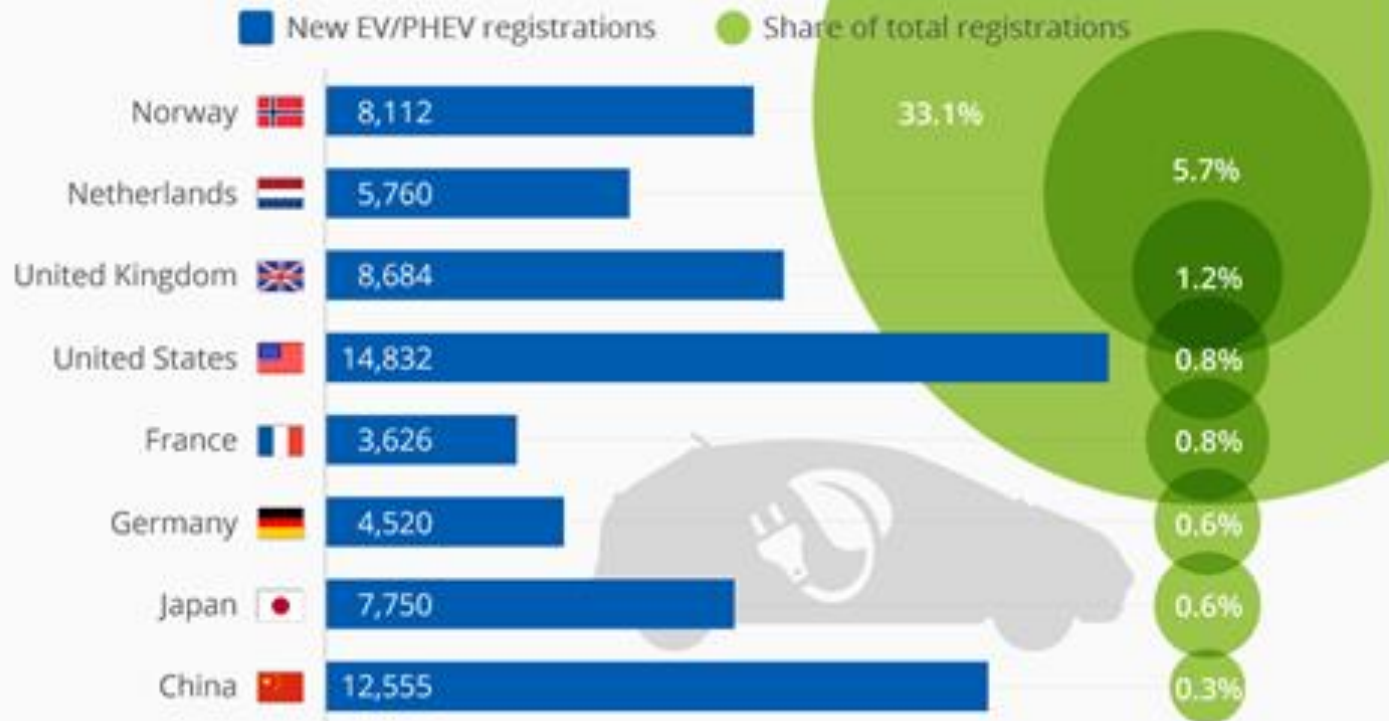
From 1 (charger) - 4 (car), to 1-10 in one year...



The World's first mass market

Norway Leads The World's Electric Vehicle Market

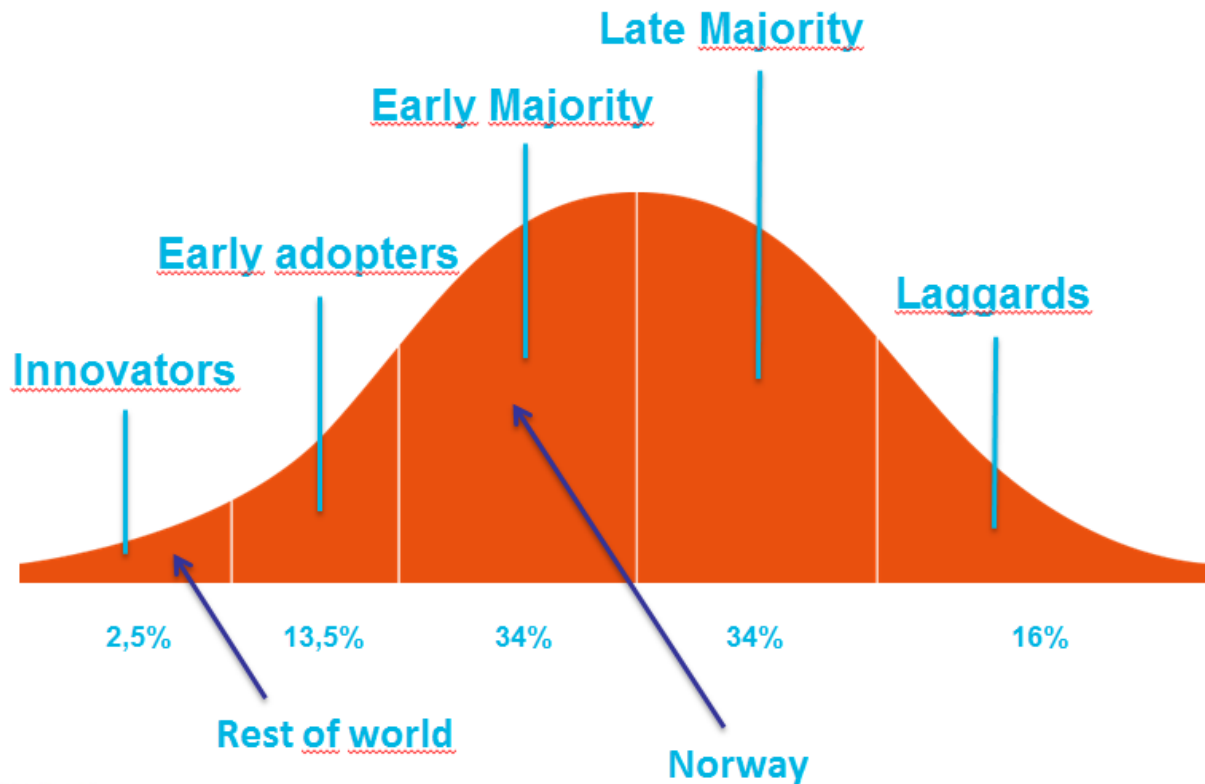
New EV/PHEV registrations and share of total registrations in Q1 2015*



Source: IHS Automotive

Forbes statista

The World's first mass market

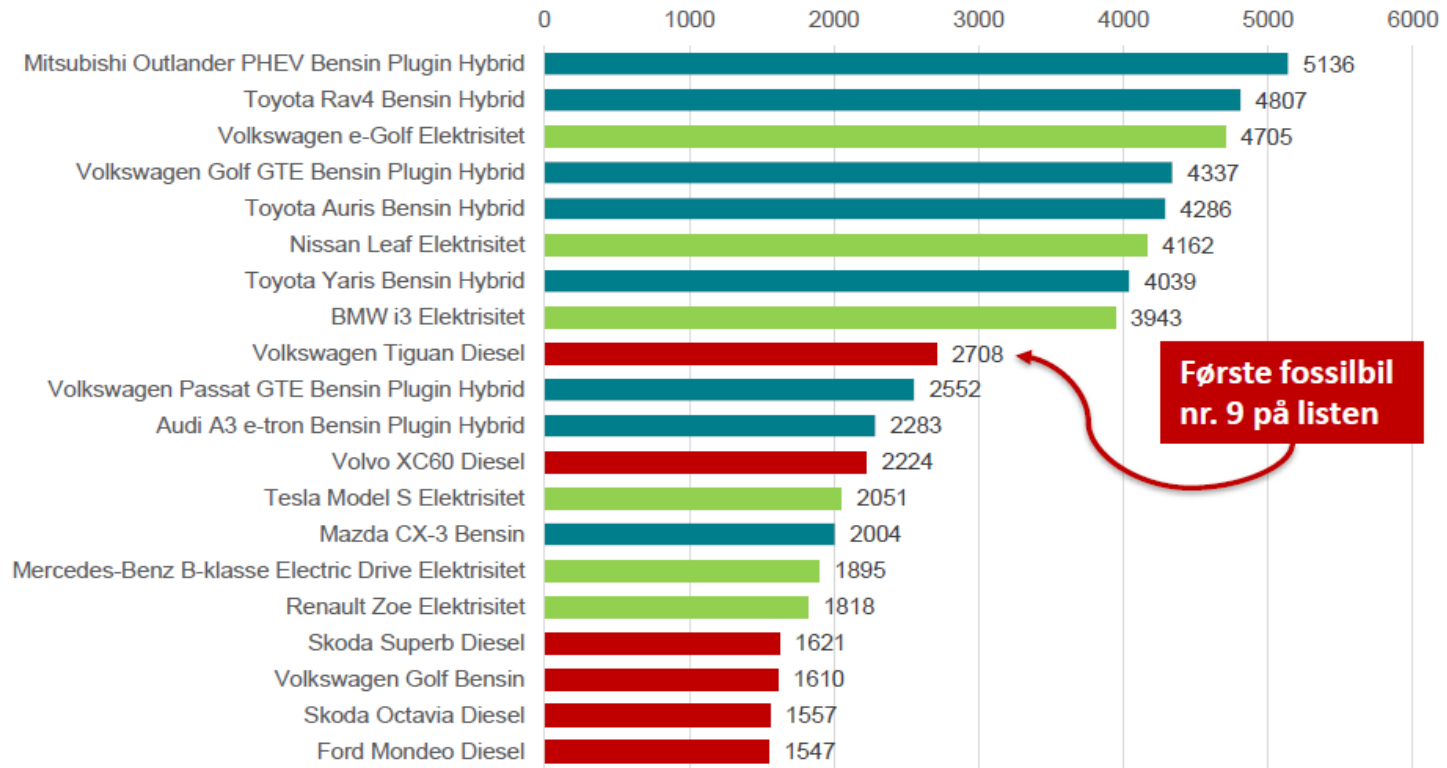


Norwegian
EV Association

elbil.no



Top 10 passenger car models in 2016 – 9 are electric



10.01.2017

12

OFV.no



The growth of EV sales are boosting



The growth of EV sales are boosting

The growth of EVs has been much faster and bigger than anticipated!

In January and February 2017 the share of EVs and Plug-in hybrids has increased to 50%.

From 1-4 EV per charging point, to 1-10 ...



New focus areas

*Never change a winning concept
but always stay flexible*



In order to catch up we also need to:

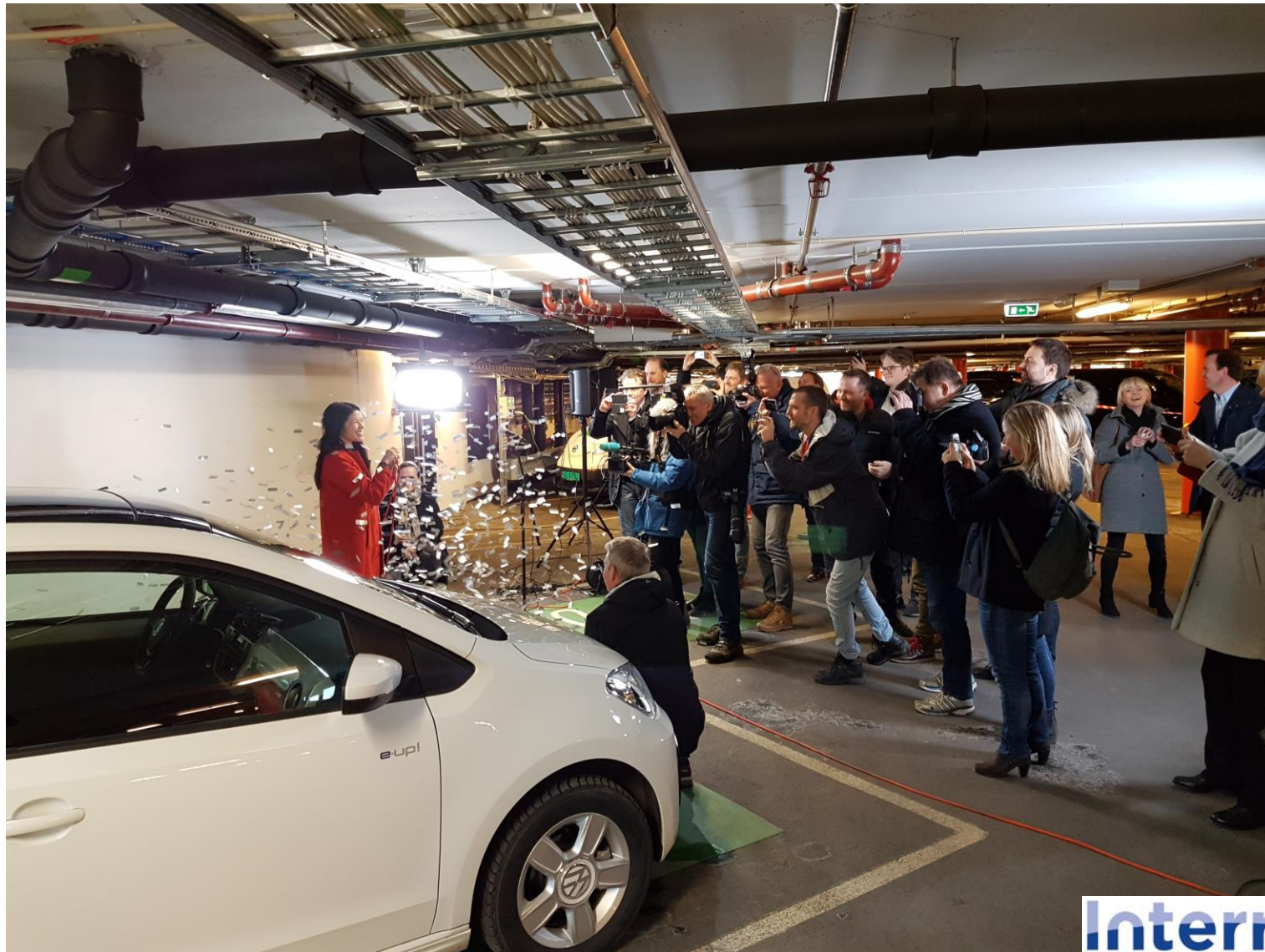
- Establishing **fast chargers** in cooperation with private actors in the corridors in and out of the City
- **Indoor parking garages for EVs** (Akershus, Vulkan). The World's first dedicated P-houses for EVs only
- Build large “**Centre of excellence**” for **professional users** of EVs with flexible charging and pre-booking opportunities. Dualistic structure. The same garage offers free residential parking during night-time.
- **Fossil-free public transportation (2020)**



New quick charging stations



SEEV4 City – Opening of the Vulkan project



Centre for professional use of EVs, and Parking garages for EVs



Important EU-project; SEEV4 City and FREVUE

Two important EU-project is leading the way as first movers for green freight distribution in Oslo; FREVUE and SEEV4 City



Nyhet!
Vi garanterer minst like gode vilkår som du har i dag

Kjøp bilforsikring nå!

CODAN
FORSIKRING



Parkeringshuset på Vulkan i Oslo får ledetenneg med batteri til effektivisering. (Bild: Sören Mathsson, Fortum)

ELBILLADING Slik blir Norges mest avanserte ladeplass

Fortum tar i bruk batteri, og gir 100 parkeringsplasser mulighet for semihurtig lading.

AV: HARRIS VALLE | KLUBB | PUBLISERT: 7. DES 2016 - 17:58

Facebook 271 Twitter

Fortum åpner et nytt ladeanlegg på Vulkan i Oslo sentrum. Her blir det ladeplasser for 100 elbiler, og det etableres samtidig to hurtigladdere.

Anlegget får en helt ny teknisk løsning, som inkluderer valg av ladeeffekt. Samtidig skal det potensielt store effektuttaket jevnes ut ved hjelp av batterier.

Det skal også bli mulig å reservere plass i anlegget ved hjelp av en app.

Det finnes ingen tilsvarende løsninger i Norge, og antakeligvis heller ikke noe annet sted i verden, forteller Jan Haugen til i Fortum Charge & Drive.

JOBB

Prosjektledert for ny vannforsyning til Oslo OSLO

LES MER

Q&A

Vi spør på UNDERHOLDNING FOR DE BØYA

FREVUE

Freight Electric Vehicles
in Urban Europe

FREVUE provides evidence on how innovative solutions using electric freight vehicles can help to achieve emission free city logistics.

WHY FREVUE?

VIEW ALL >

LATEST NEWS & EVENTS

18 JANUARY 2017
FREVUE FINAL CONFERENCE ON 21 JUNE 2017: SAVE THE DATE!
The FREVUE Final Conference will take place in London (UK) on the 21st June 2017. Save the date!
<https://t.co/mN00Hibn65>
<https://t.co/0fgZ2IR3R>
22 hours ago

12 JANUARY 2017
MILAN: NEW RULES FOR THE ACCESS REGULATION SCHEME
The rules of the access regulation scheme in Milan are changing in February 2017. Some of the new measures give a comparative advantage to the operators using electric freight vehicles.
<https://t.co/LmRfHc0ayw>
6 days ago

FROM TWITTER

FREVUE Final Conference will take place in London on 21st June 2017! Save the date!
<https://t.co/mN00Hibn65>
<https://t.co/0fgZ2IR3R>
22 hours ago

UK Government unveils £20 million funding for low-emission #freight and #logistics trials
<https://t.co/LmRfHc0ayw>
6 days ago

Read our latest factsheet: Environmental requirements in procurement processes - Good practice from @Stockholmstad
<https://t.co/Sky9qBemMR>
9 days ago

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EUROPEAN UNION

CLEAN ENERGIES

ICT

ELECTRIC VEHICLES



A launching customer



A green shift in transport is needed

Everything is connected to everything, in addition to more EVs we need:

- **More public transportation**
- **Greener public transportation.** Fossil-free within 2020 (the official goal)
- Increased focus on facilitation for **pedestrians and cyclists**
- Increased focus on **(green) car sharing**
- **More freight handling by trains**
- **Green freight distribution** in the City
- Electrification and **greener heavy duty vehicles**
- **EL-Taxis**
- **Park and ride solutions**, in combination with EVs
- Increased use of **ITS**
- **Low emission zones**
- **Residential park** (free parking for EVs)
- **Congestion tax** (non for EVs)



Not only private EVs



Not only private EVs



Thank you all for your attention!

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