

# THE CHANGING DRIVER EXPERIENCE

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#### **Drivers of EV Revolution**

Transportation remains the least diversified, most carbon-intensive sector of human activity in terms of energy demand. Oil intensity of transportation:



2 However, multiple factors are aligning to set the electric mobility revolution in motion, including:



Government net-zero ambitions and policy action;

e.g., EU Green Deal, -90% emissions from transport by 2050 compared to 1990 levels

Source: European Commission



Shrinking cost of batteries: -

-85% between 2013 and 2023 to around \$100/kWh -> unsubsidized price parity of EVs and internal combustion engine vehicles

Source: IDC on BNEF data



Growing climate conscience of general public, especially younger generations:

Globally, **Gen-Z (18-24 y/o)** are almost **four times** as interested in emobility products and services than 53y/o+

Source: IDC

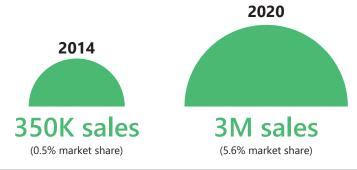




### **EV Take-up**

EV passenger car sales have increased almost tenfold in six years. Despite the COVID-19 crisis, 2020 was the strongest year on record for EV sales

Source: IDC on IEA (International Energy Agency) and OICA (International Organization of Motor Vehicle Manufacturers ) data



**Advanced EV markets** have entered exponential growth phase — Norway 2020, **75% EV passenger** car market share



also picking up speed — Germany 2020, 13% share

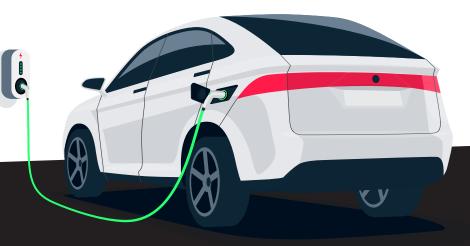
Large auto markets are EV passenger car market

Global EV passenger car stock expected to increase almost sixfold in next 5 years

Source: IDC on EIA and BNEF (BloombergNEF) data

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#### **Demand for Infrastructure**

Deployment of charging infrastructure will be the real pace setter of the EV revolution. Public charging infrastructure is growing at pace globally but needs to accelerate to enable convenience, range, and autonomy for EV drivers.

Global number of EV passenger cars per publicly

accessible charger

Source: IDC on IEA data

2014 6.5

2020 7.8

Advanced EV markets are struggling to keep up

NO 433

cars per public charger

**Examples of regional public EV charging infrastructure rollout targets** 

Sources: European Commission, European Automobile Manufacturers' Association, U.S. White House



**EU Green Deal:** 

1M public chargers by 2025



U.S. American Jobs Plan:

National network of 500,000 chargers

by 2030

ACEA recommendations:

2024 | 1M

2029 3M





## Trend #1 - "Democratization" of Mobility Services

"Refueling becomes recharging"

industry expands from one dominated by oil companies to one that includes, as a minimum, utilities, municipalities, commercial space owners, and fuel retailers...



Examples of "future charging experience" driven by technology and business innovation, with different equipment, solutions, and services offered for different use cases and types of EV drivers.



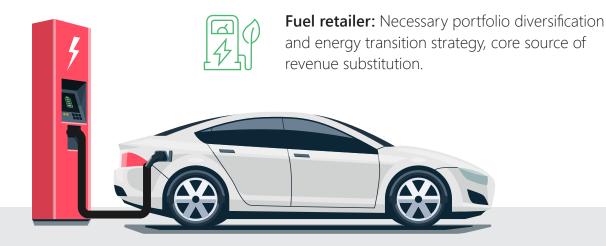
**Commercial space owners:** Promotion of sustainability/social responsibility values, customer experience and loyalty, future-proofing operations.



**Municipalities:** Promotion of sustainable mobility, better air quality, improved livability standards, and city attractiveness.



**Utilities:** Core business expansion and integration downstream into mobility services.







## Trend #2 - The Changing Driver Experience

"Refueling becomes recharging"

consumer demand shifts from a spot refueling transaction to a more expanded recharging experience.



Examples of "future charging experience" driven by technology and business innovation, with different equipment, solutions, and services offered for different use cases and types of EV drivers.



**Commercial space owners:** Contextual advertising and in-store promotions at the charging point, loyalty program and parking access automation, customer self-service, remote concierge, queue management functionality.



**Municipalities:** Automatic emobility service provider recognition, touchless charging, self-service onward journey planning directly at the charging point.



**Utilities:** Smart charging, EV load aggregation, vehicle-to-grid, behind-the-meter energy optimization services, open EV roaming, touchless charging, consolidated billing.



**Fuel retailer:** Automatic customer recognition and "fuel card" management, touchless charging, self-service convenience stores. From traditional forecourt to multi-service point of presence.



