



German Showcase Programme E-Mobility 2013 – 2017 Results, Perspectives, Legal Framework

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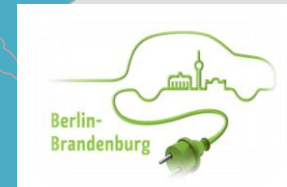
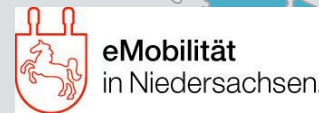
EVS30 Symposium, Stuttgart, Germany
10th October 2017

- Owner-managed company, founded 2009
- Consulting services for ministries, public authorities and private companies
- Topics: mobility, digitisation, innovation funding
- Approach: Building a broad consensus for controversial issues by including perspectives of all stakeholders
- Parallel Impact Research – funding programmes E-Mobility



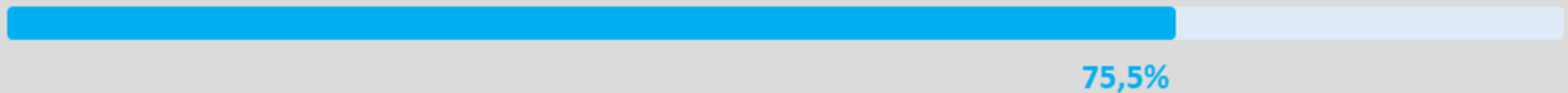
The E-Mobility Showcase Programme Germany

- 4 showcases in 6 German federal states
- 145 projects with 340 institutions
- Duration 2012 – 2016
- 180 Mio. € federal funding, 70 Mio. € regional funding
- Total project volume: more than 500 Mio. €
- Objectives: Pooling of German competences in the field of EVs, energy supply and transport systems – visualization of e-mobility in regional demonstration projects



Recognition of the Showcase Programme, regional showcases and/or individual projects*

YES



NO



*respondents were asked about the projects in their respecting places of residence

Vehicles in the German Showcase Programme (Investments)

- 2,500 passenger cars, thereof approx. 90 % BEV
- 1,000 Pedelecs
- 8 light vehicles
- 20 motorcycles



Vehicles in the German Showcase Programme (Investments)



- 71 heavy duty and commercial vehicles
- 65 buses
- 15 municipal vehicles



Charging Stations in the Showcase Programme (Investments)



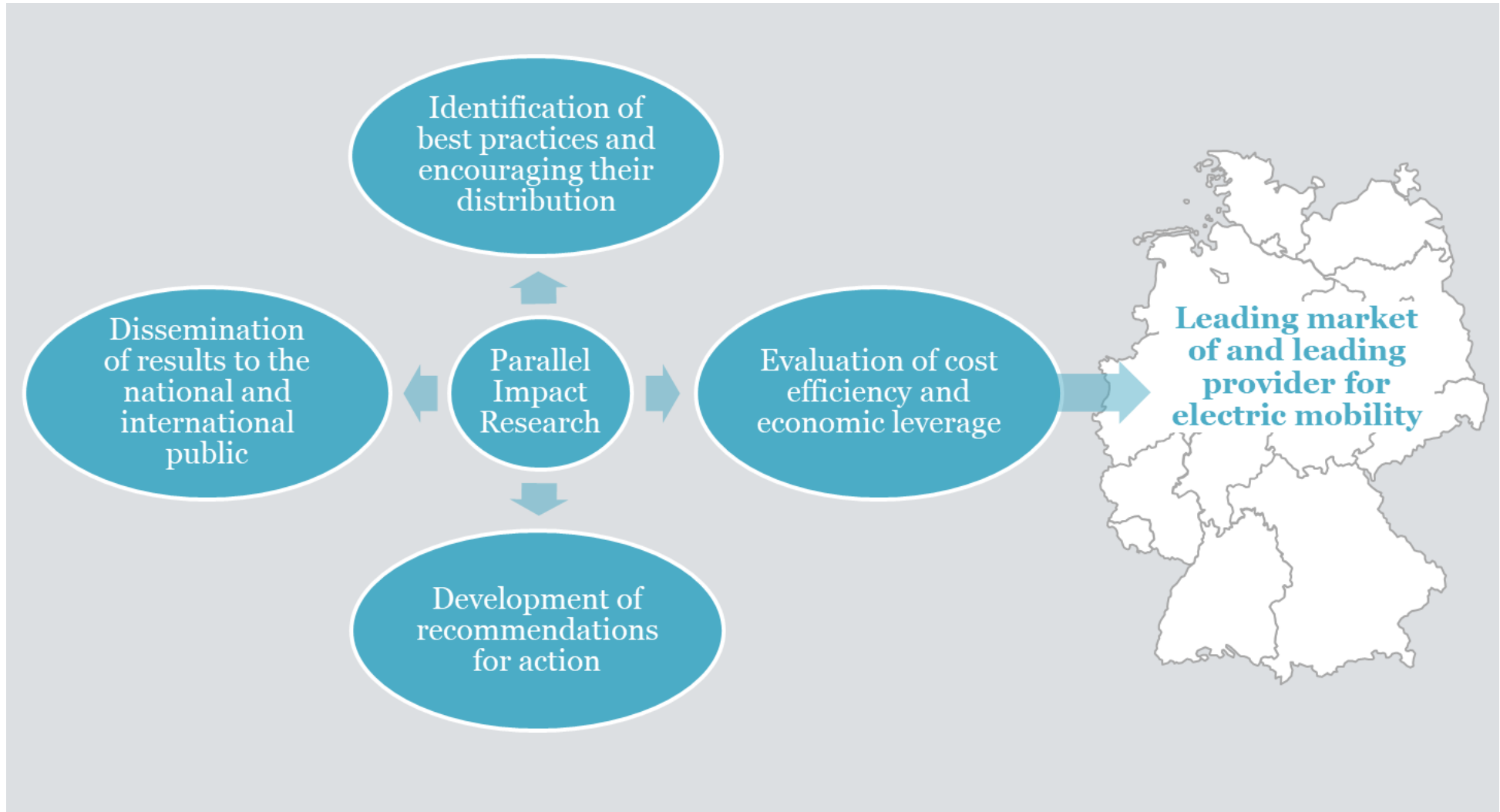
- 1,990 AC charging points
- 105 DC charging points
- 3 inductive charging points (HPC)

Approx. 2,100 installed charging points in total



- Electric mobility is already suitable for everyday use.
- An increasing number of application scenarios with EVs is already profitable.
- Regulatory barriers were removed.
- The cars of the future will be electric.

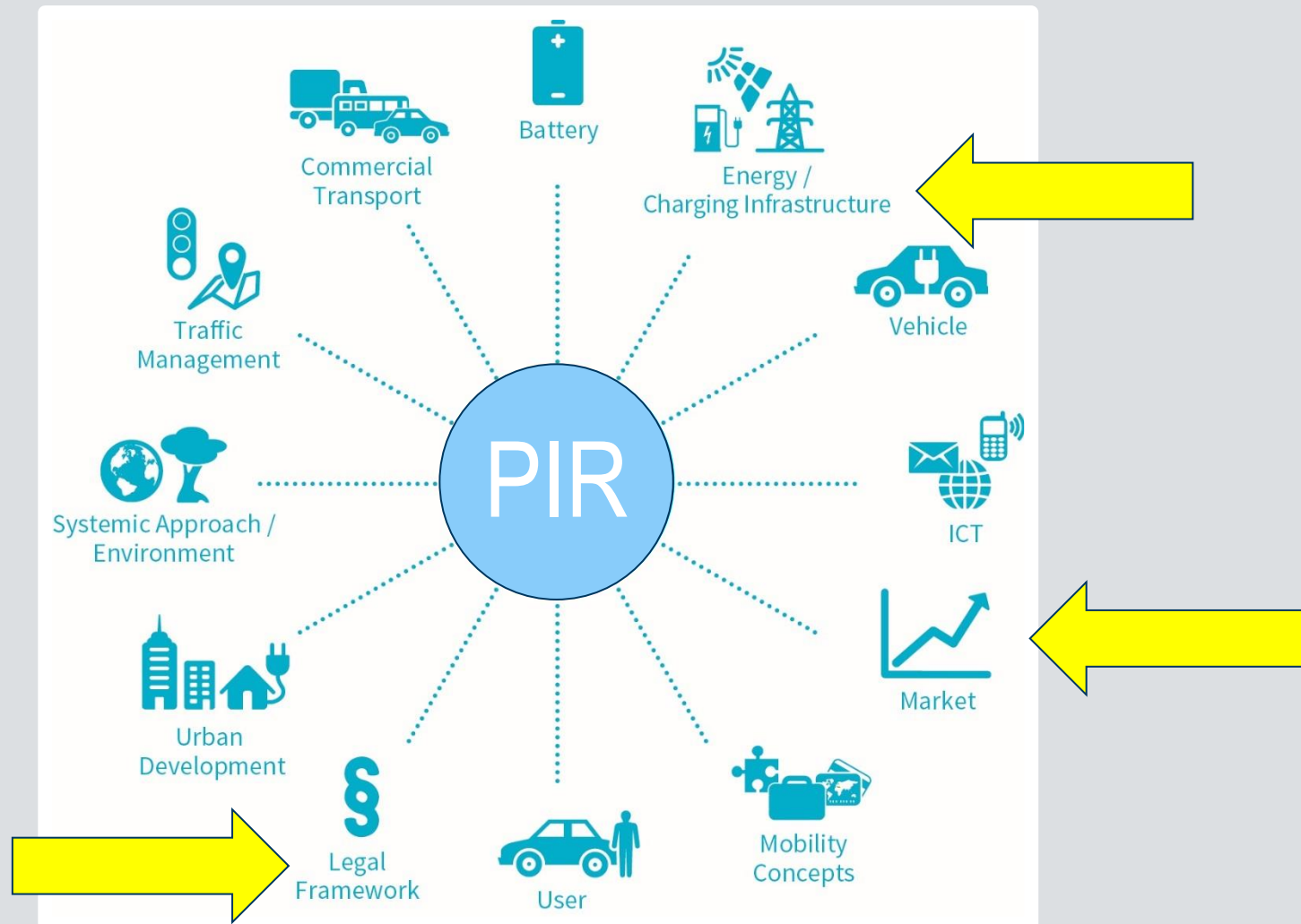
Objectives of the Parallel Impact Research



Scientific Research Areas of the Parallel Impact Research – E-Mobility Showcase in Germany



Scientific Research Areas of the Parallel Impact Research – E-Mobility Showcase in Germany



➤ More than 500 involved players
(institutions)

➤ Round 70 workshops

➤ 39 Result Documents

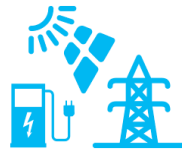
www.schaufenster-elektromobilitaet.org

➤ More than 30.000 printed copies

➤ Round 1.500 recipients of the newsletter

➤ Over 150.000 visitors of the website





- Setting up the visible public charging infrastructure is important in terms of perception and usability
- Although e-vehicles are currently charged mainly at home or at work
- The charging infrastructure needed by 2020 is estimated at 36,000 regular charging points and 7,000 fast-charging points with public access
- In 2016 there were only 5,836 regular and 153 fast-charging points in Germany
- The development of convenient e-roaming platforms that are compatible all over Europe is swiftly advancing
- Sustainable business models for operating the charging infrastructure are still missing
- Since 2017 the Federal Ministry of Transport and Digital Infrastructure is promoting the installation of 5,000 additional fast-charging stations and 10,000 regular charging points through its federal programme “Ladeinfrastruktur” (Charging Infrastructure) with € 300 Million until 2020.

Results: Market – International Benchmark



	Nether-lands	Norway	France	China	South Korea	Japan	USA
car tax exemption or reduction related to CO ₂ emissions	●	●	●	●		●	●
reduced taxation of company fleet cars	●	●	●				
exemption from VAT		●		●		●	
buyer's premium			●	● (regional)	●	●	●
access privileges for EVs (environmental zone, extended delivery times, toll cuts ...)	●	●	●	●			
privileged parking (free of charge, EV exclusive parking)		●		●			●
access to privileged lanes		●			●		●

www.schaufenster-elektromobilitaet.org (in english)



- Since 2016: Buyers of new vehicles are entitled to a purchase grant co-financed by the Federal Government and the automotive industry – € 4,000 for BEVs and € 3,000 for PHEVs. Total funding is limited to € 600 Mio. until 2019.
- The 'Charging Station Ordinance' (Ladesäulenverordnung), which entered into force on March 2016, sets common standards for charging stations. It contains binding rules on socket standards and minimum requirements for the establishment and operation of charging stations.
- Public procurement initiative for EVs: At least 20 % of the Federal Government's fleet must be comprised of electric vehicles in the future.
- Between January 2016 and December 2020 new non-hybrid EVs are exempted from the motor vehicle tax for a period of ten years.
- The 'Electric Mobility Act' (Elektromobilitätsgesetz), in force until 2030, sets the rules for the labelling of EVs. Additionally, it permits municipalities to grant preferential treatment to EVs.



- Networking of Parallel Impact Research with national and federal ministries about legal framework conditions
- Participation of representatives as speaker and providing information
- Integration of national and federal ministries representatives in workshops and the final conference of the Showcase Programme in 2016





Bundesrat

Drucksache 340/16

21.06.16

Gesetzesantrag
der Freistaaten Bayern, Sachsen

**Entwurf eines Gesetzes zur Änderung des Wohnungseigentums-
gesetzes und des Bürgerlichen Gesetzbuchs zur Förderung der
Barrierefreiheit und Elektromobilität**

- Results and recommendations of the Parallel Impact Research act into initiatives to new legal framework
- Example: Initiative of the Council of federal states: Bavaria and Saxony with support of other federal states about
 - Tenancy Law and
 - Condominium Law

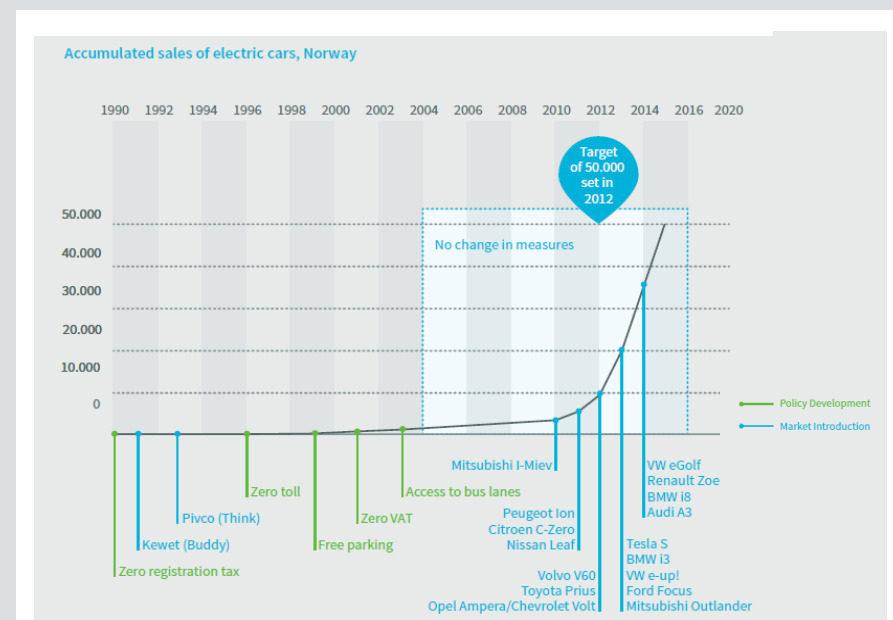
- The introduction of the ‘Electric Mobility Act’ was an important milestone for the implementation of e-mobility in Germany
- The law enables privileged treatment of electric vehicles
- These vehicles have a special licence plate to identify them in stationary and moving traffic
- Municipalities in Germany can introduce different privileges: Parking spaces for electric vehicles at charging stations, no fees for parking, use of designated bus lanes or exceptions from access and transit restrictions.
- Yet to be done is the clear regulation on federal level for permissions (for EVs) or restrictions (for ICEs) in downtowns due to air pollution



- In 2016 the adaptation of the Law on Weights and Measures, the Ordinance on Charging Columns and the revision of the Energy Economy Law stimulated e-mobility even more, in particular the installation of a need-based charging infrastructure
- The lack of a monetary incentive was identified as a major obstacle for the market ramp-up
- Since July 2016, private and commercial buyers can apply for an environmental bonus
- The Law on Tax Incentives for Electromobility removed further barriers that existed: For example, charging at the workplace is no longer considered a non-cash benefit
- Yet to be done are corresponding changes in the Law of Tenancy and the Condominium Law designed to facilitate the installation of charging infrastructure on private properties

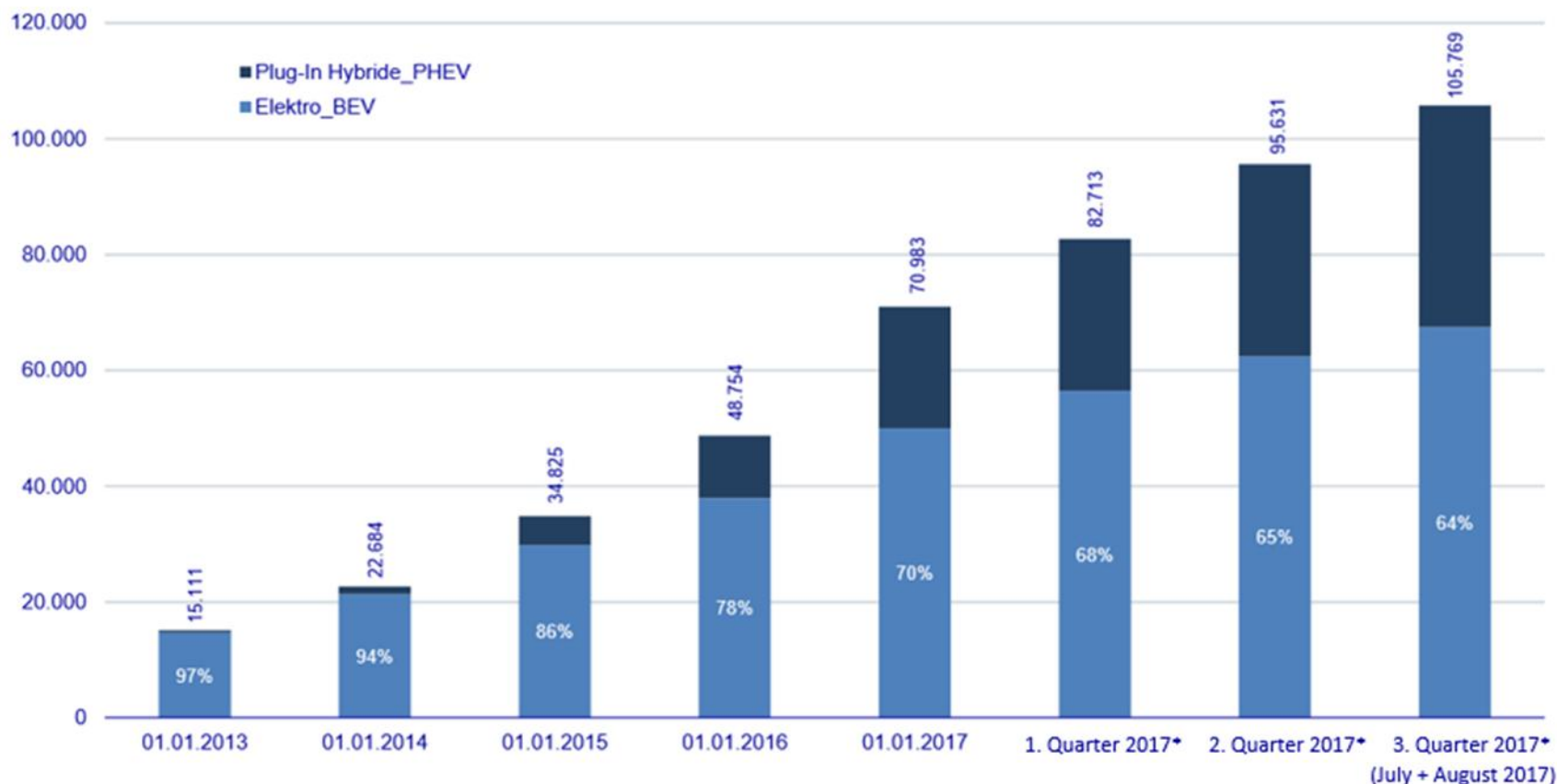


- The production and market launch of electric buses should be accelerated
- German OEMs should not leave the market gap in light electric utility vehicles to other players in the market
- Manufacturers should focus on fully electric vehicles
- Future research projects should focus more on the electrification of road freight transportation
- The state should adopt appropriate measures designed to simplify the use for goods traffic
- Existing legal regulations should be applied and regulations for CEP-services revised
- Linkage of electrification and digitisation:
A legal framework must be created for dealing with data arising from EVs and automated vehicles
- A made-to-measure market incentives programme may help convince people to change



Vehicle Stock and new Registrations (all classes)

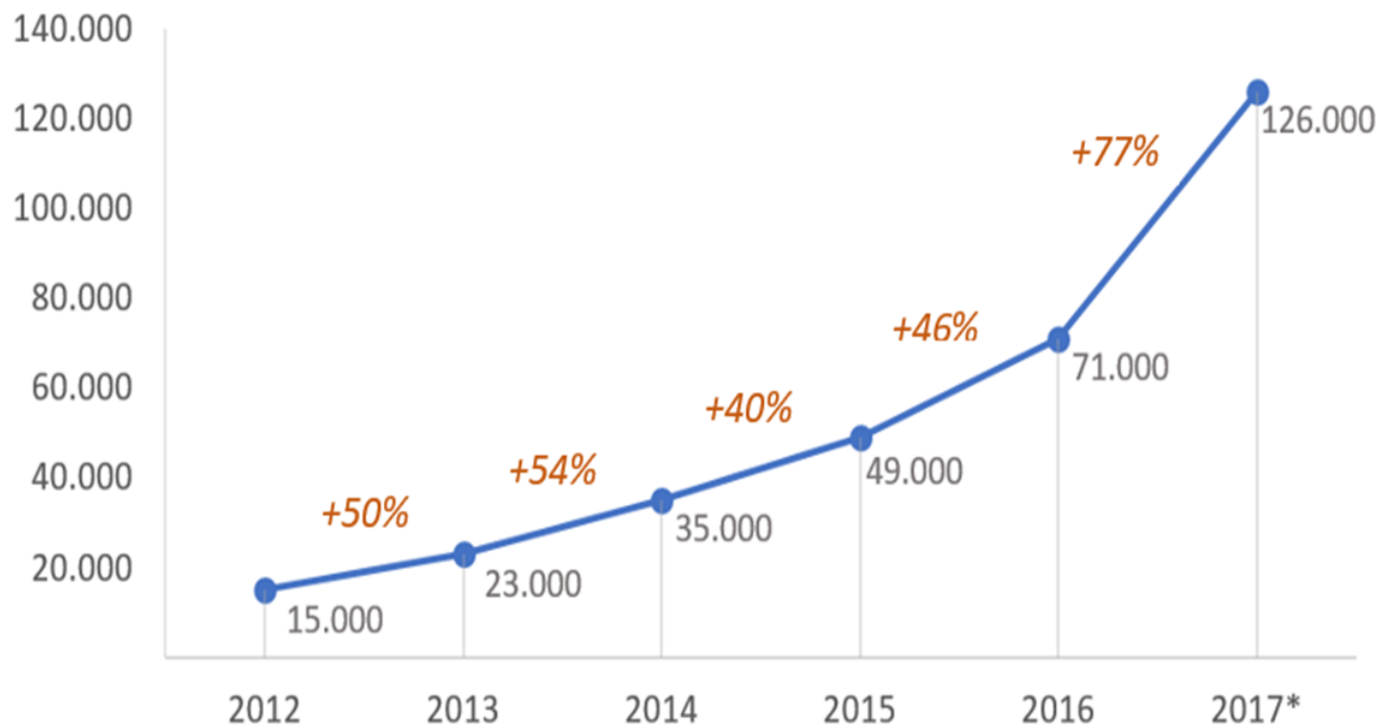
Number of vehicles



Source: Kraftfahrt-Bundesamt, Flensburg 2017

*Stock 2017 + new registrations

Predicted Market-Ramp-Up in Germany (all classes)



End of..

2018:	223.000
2019:	395.000
2020:	699.000
2021:	1.237.000

*estimated

Thank you for your attention!

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