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# Veřejná rychlonabíjecí infrastruktura Současnost a budoucnost

ABB Product Group Electric Vehicle Charging Infrastructure

# Současnost

## CCS / Multi-standard chargers (50kW)



Available



Available



Available



Available



Available



Available



Available



**Terra 53 C  
DC  
Highway Charger**

**Terra 53 CT  
DC+AC  
Highway Charger**

**Terra 53 CG  
DC+AC  
Highway Charger**

**Terra 53 CJ  
DC  
Highway Charger**

**Terra 53 CJG  
DC + AC  
Highway Charger**

**Terra 53 CJG  
DC + AC  
Highway Charger**

**Terra 53 CJT  
DC+AC  
Highway Charger**

50kW DC CCS-2

50kW DC CCS-2

50kW DC CCS-2

50kW DC CCS-2

50kW DC CCS-2

50kW DC CCS-2

50kW DC CCS-2

50kW DC CHAdeMO

50kW DC CHAdeMO

50kW DC CHAdeMO

50kW DC CHAdeMO

22kW AC

43kW AC

43kW AC

22kW AC

22kW AC

15-30 min.

15-30 min.

15-30 min.

15-30 min.

15-30 min.

15-30 min.

15-30 min.

Input: 3x 400V



# Současnost

## CCS / Multi-standard chargers (20kW)



Available



**Terra 23 CT**  
DC  
Commercial Charger

- 20kW DC CCS-2
- 22kW AC
- 30-60 min.

Available



**Terra 23 CJ**  
DC  
Commercial Charger

- 20kW DC CCS-2
- 20kW DC CHAdeMO
- 30-60 min.

Input: 3x 400V

Available



**Terra 23 CJG**  
DC + AC  
Commercial Charger

- 20kW DC CCS-2
- 20kW DC CHAdeMO
- 22kW AC
- 30-60 min.

# Současnost

## Platební terminál (Europe)

### Main features

- Platba credit card a NFC
- Bez zadávání PIN code
- Podpora v 33 zemích (EU)
- Nízké provozní a transakční náklady
- Lze doplnit kdykoli do stávajících stanic T53/23
- Základní RFID funkcionalita zůstává



# Současnost

## Komplexní portfolio SW produktů

### Web tools

To quickly gain insight and manage a charger



#### Driver Care

Ideal solution to support a small sized charger network.

Supportive tool for customer driver care centers for large commercial networks

Used by CPO's

Can be combined with all other products\*

\* Access mngt of OCPP is leading

#### Payment

Web tool to manage the device settings, check transaction status and create the mandatory revenue overview

Required for the payment device

Only applicable for the payment device

#### Helios (Service)

Necessary tool for service engineers to provide support & maintenance

1<sup>st</sup> line service engineers (ABB or external company)

Can be combined with all other products.

### API

To integrate chargers with an IT system

#### OCPP API

The industry standard API for access management and charge details

To integrate chargers with a CPO's back-office system

Available via the Internet or as local interface

#### Service API

Providing technical status information of a charger

To integrate chargers with a CPO's back-office system

Available via the Internet.

#### D/R API

Demand/Response API for controlling the input power of the charger

To integrate chargers with an energy management system

Available via the Internet.

### Connection

Solutions to improve connection performance & security



#### Multi Network SIM

Mobile connection that can make use of different mobile networks to reach the highest possible uptime.

Available in EU on request

CPO's operating a commercial network

Can be combined with all other products.



#### VPN

To increase security of the connection to the customer/partner back-office

IT departments that require VPN

Available for Internet API's

Offering details available in the next slides

# Press Release on ABB-Microsoft

## ABB and Microsoft join forces to launch next-generation electric vehicle charging services platform

The cloud based e-mobility charging platform will combine ABB's leading fast-charging technologies with Microsoft's state-of-the-art cloud services.

ZÜRICH, Switzerland and REDMOND, WA, United States — October 20, 2015 — ABB and Microsoft Corp. announced today the worldwide availability of a new electric vehicle (EV) fast-charging services platform. Combining ABB's leading EV charging stations with Microsoft's Azure cloud-based services will ensure stability, global scalability and advanced management features for ABB customers. The collaboration will also take advantage of machine learning and predictive analytic capabilities to drive future innovations.



- Partnerství ABB a Microsoft v Cloud Based services:
  - Cloud Based services platforma slouží všem zákazníkům celosvětově včetně zemí se speciálními nároky jako např. Čína
  - Tato spolupráce je o inovacích, nové produkty jako např. predictive maintenance



# Budoucnost

## Posun všech segmentů v 2016-2020 na novou úroveň

**Home &  
office charging**



**Metropolitan  
infrastructure**



**Highway  
infrastructure**

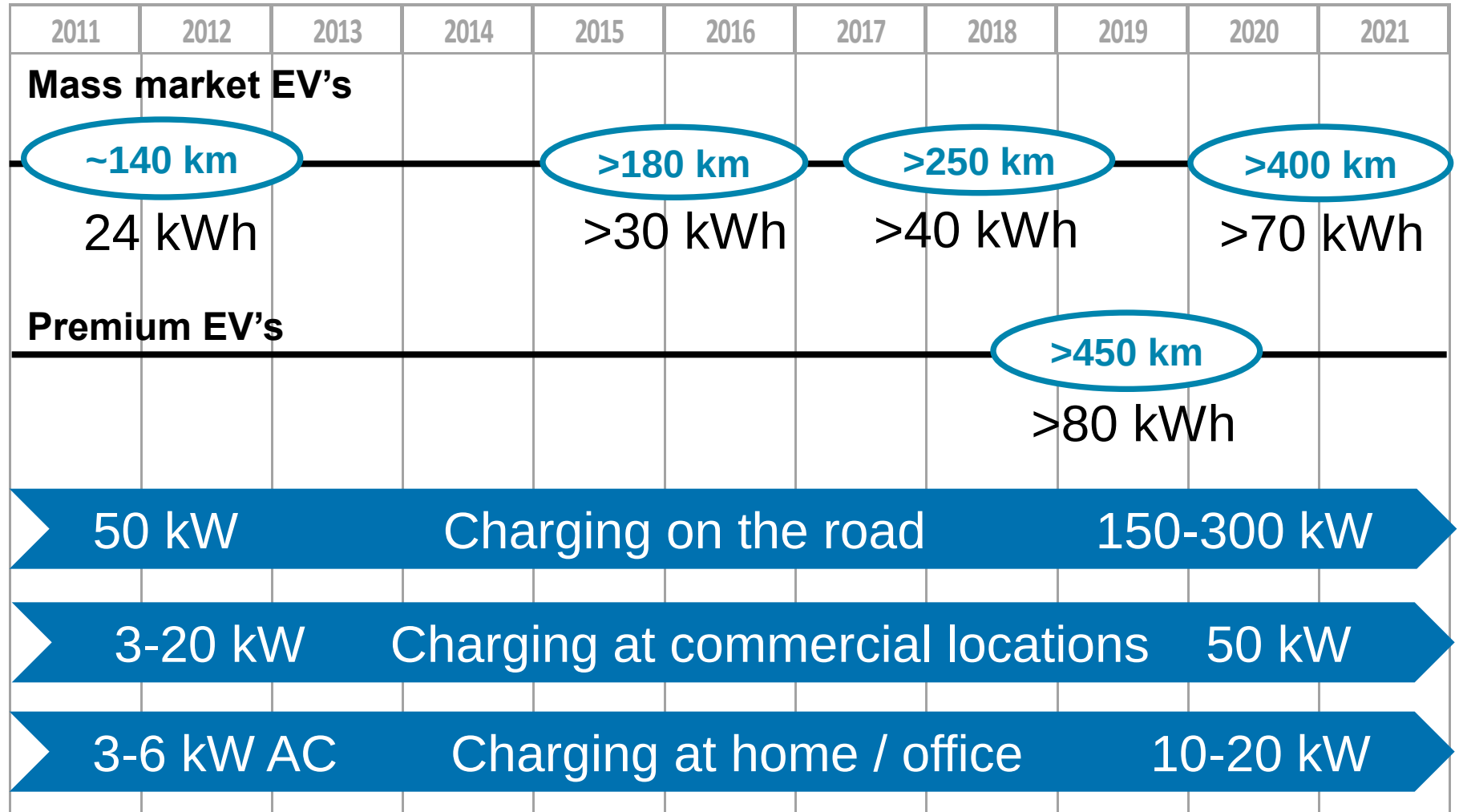


**E-bus  
infrastructure**



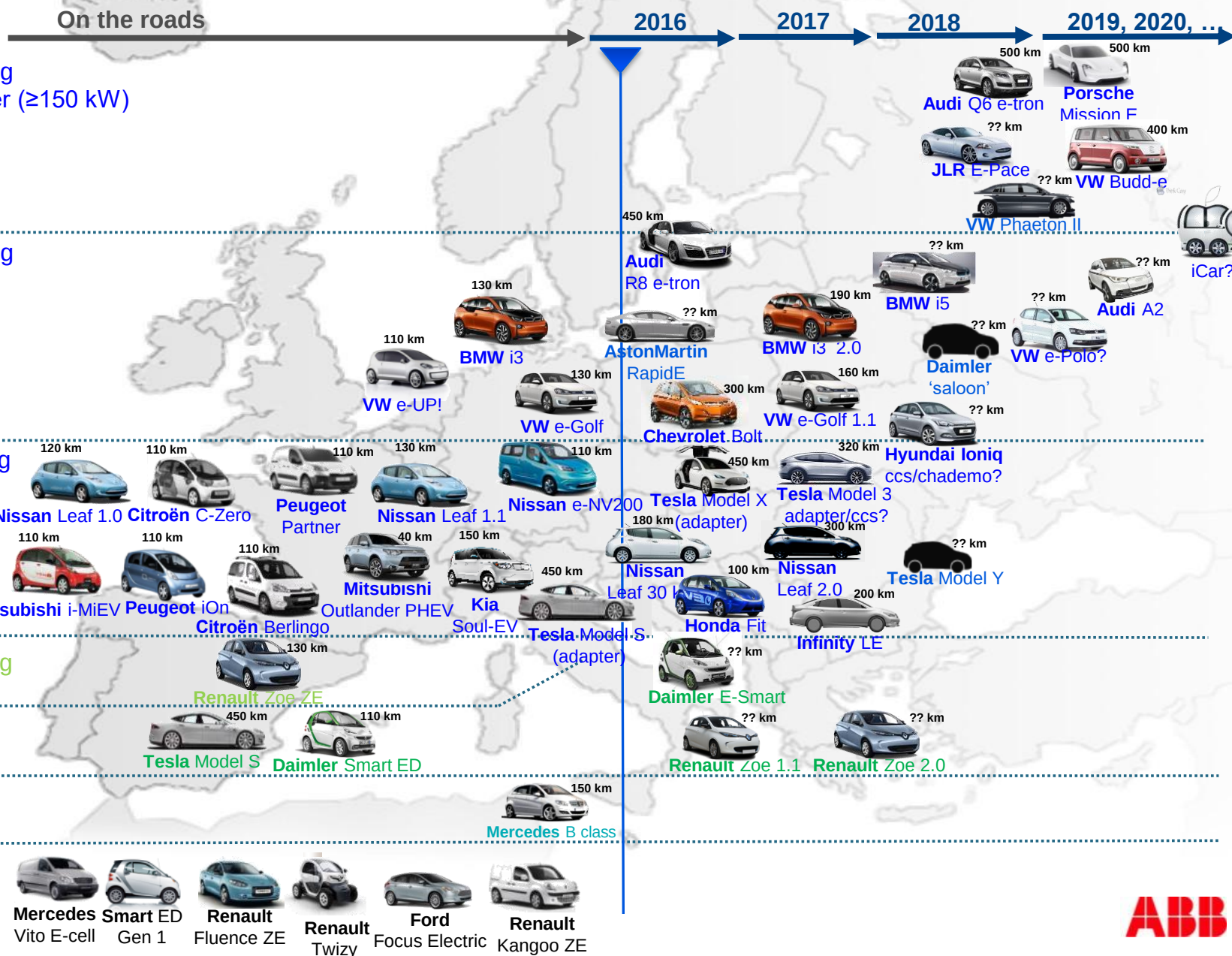
# Elektromobily

Větší baterie, větší dojezd a větší nabíjecí výkony





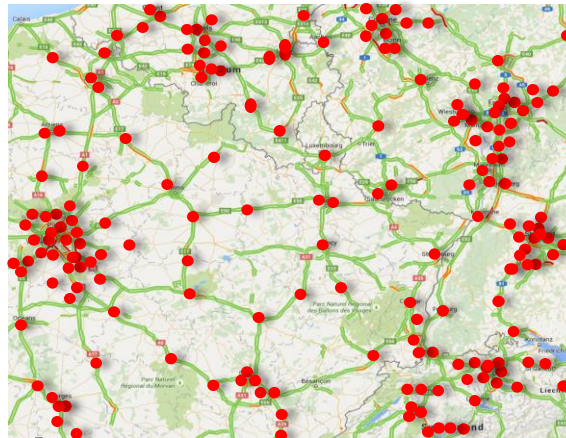
# Elektromobily a nabíjení



# DC infrastruktura : celosvětový závod o lokality odstartován

## Location, location, location...

| 2011                                 | 2012 | 2013 | 2014 | 2015                                  | 2016 | 2017 | 2018                      | 2019 | 2020 | 2021 |
|--------------------------------------|------|------|------|---------------------------------------|------|------|---------------------------|------|------|------|
| <b>Veřejná infrastruktura</b>        |      |      |      |                                       |      |      |                           |      |      |      |
| Race for locations in early markets  |      |      |      | Race for locations in all key markets |      |      | Most locations are taken  |      |      |      |
| > 2.500 public DC chargers in Europe |      |      |      | > 10.000 public DC chargers in Europe |      |      | > Public DC is everywhere |      |      |      |



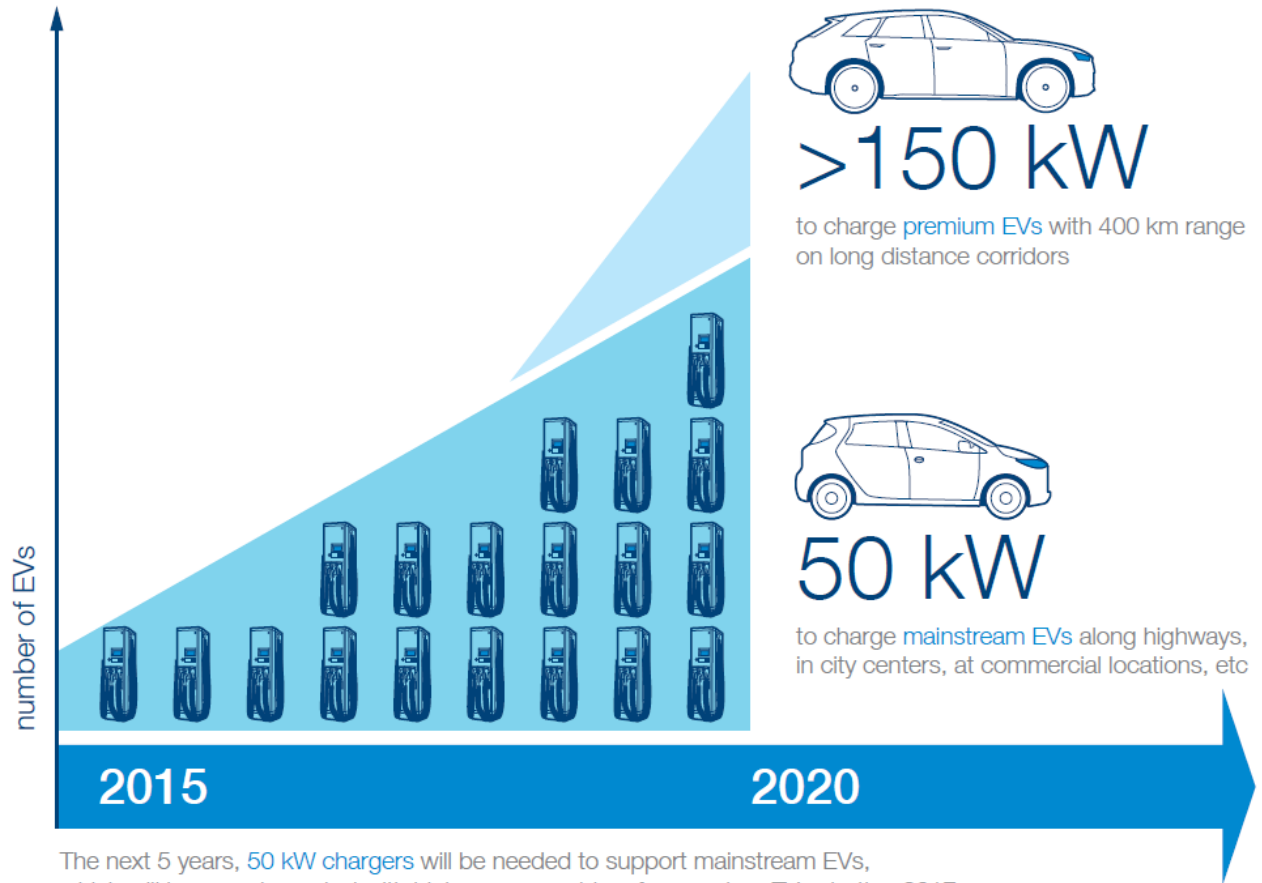
# Roadmapa v EU

## 2020 většina EV na silnicích s DC dojížením do 50kW

### 2015

Global trend

The year to secure the best locations  
for your charging network



The next 5 years, 50 kW chargers will be needed to support mainstream EVs, which will be complemented with high power corridors for premium EVs starting 2017

# Roadmapa v EU

## Priorita pro operátory

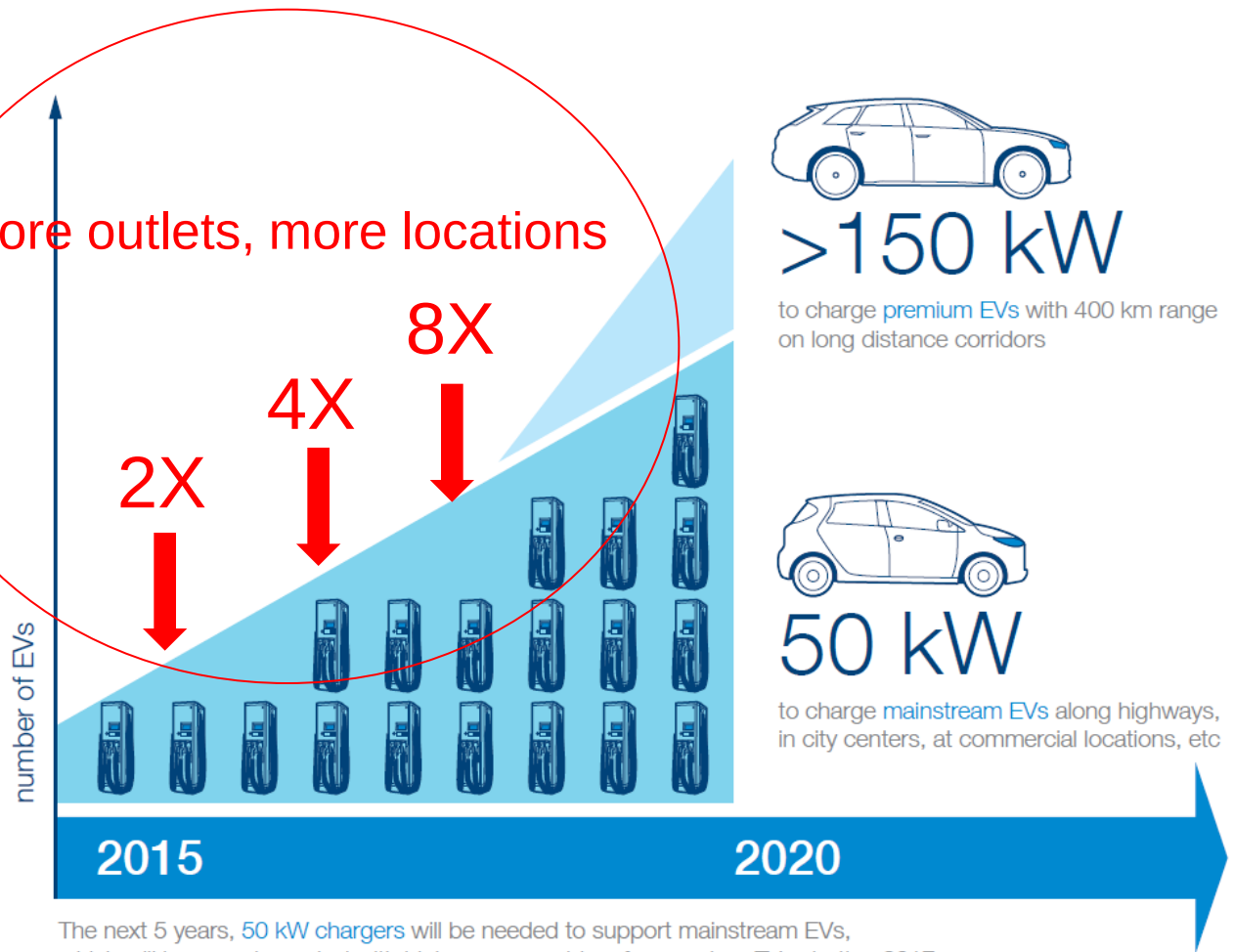
### 2015

Global trend

The year to secure the best locations  
for your charging network



more outlets, more locations



The next 5 years, 50 kW chargers will be needed to support mainstream EVs, which will be complemented with high power corridors for premium EVs starting 2017



# Premium long range EV's od roku 2018 reálný dojezd > 450 km, nabíjecí výkony 150-300 kW

Premium



## Long range EV's from 2018 / 2019

- Audi & Porsche long range premium EV's
- > 450 km “real” driving range
- 150-300 kW charging
- Charger must also supply 800V cars
- CCS standards change required

# ABB je leader v high power CCS standard



HOME

## CharIN e. V. welcomes member ABB

CharIN e. V. is happy to announce that ABB B.V. has been granted core membership in the association on 12th of November 2015. ABB B.V., which is based in the Netherlands, has joined CharIN e. V. as the first non-German member.

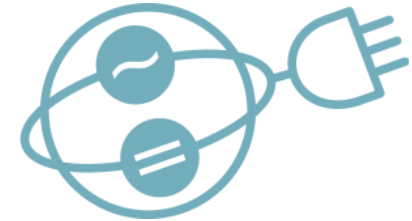


ABB is leading with Internet-based charging infrastructure, supporting all EV charging standards. ABB offers a total solution: specific charging solutions for any location type and connected services to enhance your business. The chargers easily connect to any service or payment application.

ABB's Internet connected chargers enable fast global service and pro-active maintenance. ABB has years of experience in creating, installing and maintaining charging infrastructure, including several nationwide charger networks.

ABB markets several charging stations which support the CCS standards.

We offer a warm welcome to our Dutch colleagues and look forward to shape the future of CCS together.



- CharIN je organizací vyvíjející nový high power CCS (150-300 kW) standard
- CharIN je podporována koalicí automobilek BMW, VW, Audi, Porsche, Ford, Opel/GM, Daimler
- ABB jeden ze zakládajících členů této organizace





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for a better world™

