

# RENAULT EV STRATEGY

June 2009

**Z.E.** ZERO EMISSION VEHICLES

ELECTRIC VEHICLE  
PROGRAM

January 7, 2011



# ■ RENAULT EV STRATEGY

- Renault chooses the Full Electric for All
  - Full electric :
    - 100% Electric Vehicle with high density charging network
  - For All :
    - Not a « niche » strategy
    - Retail price equivalent to ICE, benefit in usage cost from a minimum mileage
- Accordingly, Renault will propose from 2011 a complete **line-up** of Electric Vehicles

# WHY THE ELECTRIC VEHICLE TODAY?

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# ■ WHY THE ELECTRIC VEHICLE TODAY?

**1** Environmental positive impact

**2** Technical breakthrough

**3** Growing urbanization

**4** Economical benefit for customer

# ■ WHY THE ELECTRIC VEHICLE TODAY?

**1** Environmental positive impact

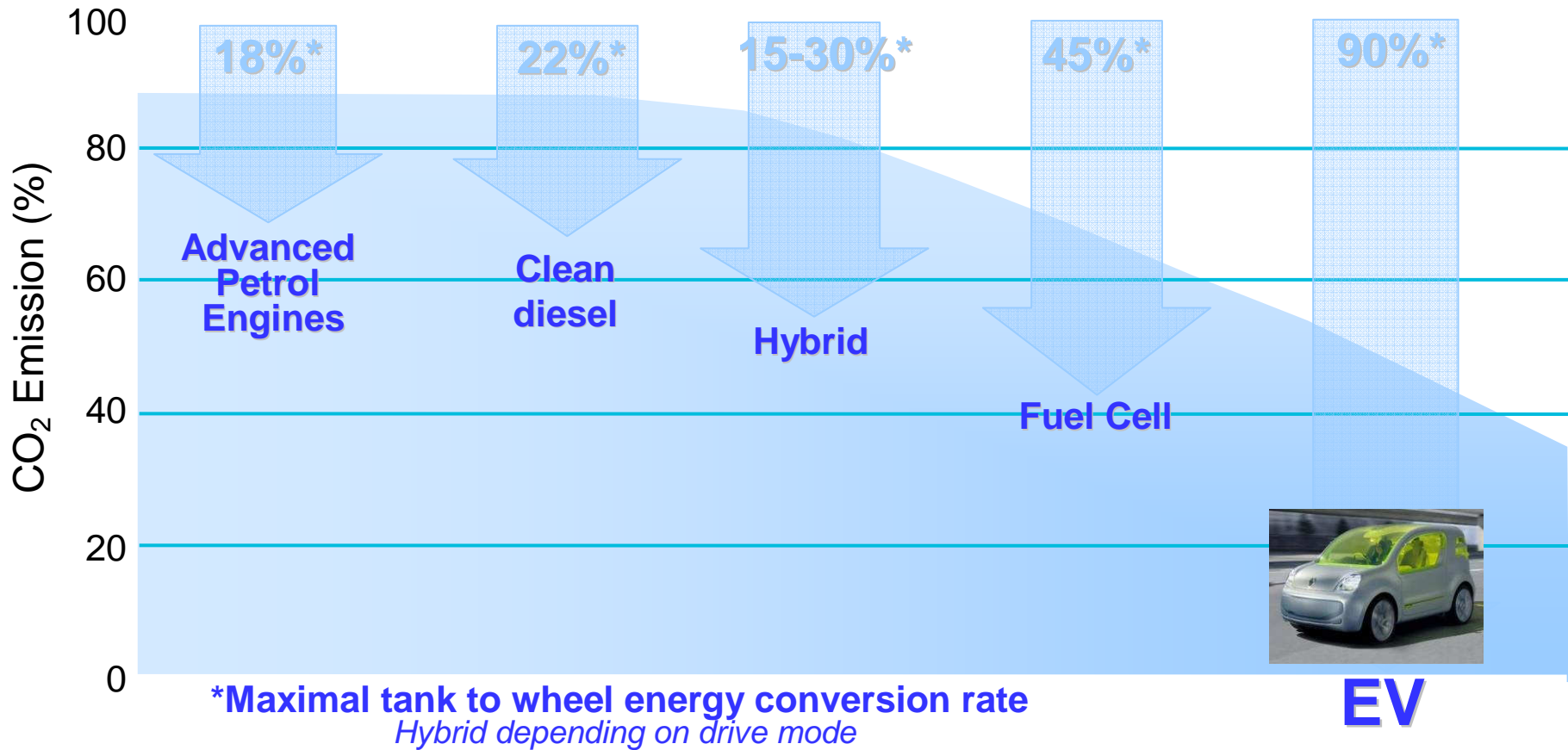
2 Technical breakthrough

3 Growing urbanization

4 Economical benefit for customer

# WHY THE ELECTRIC VEHICLE TODAY?

## CO<sub>2</sub> Efficiency

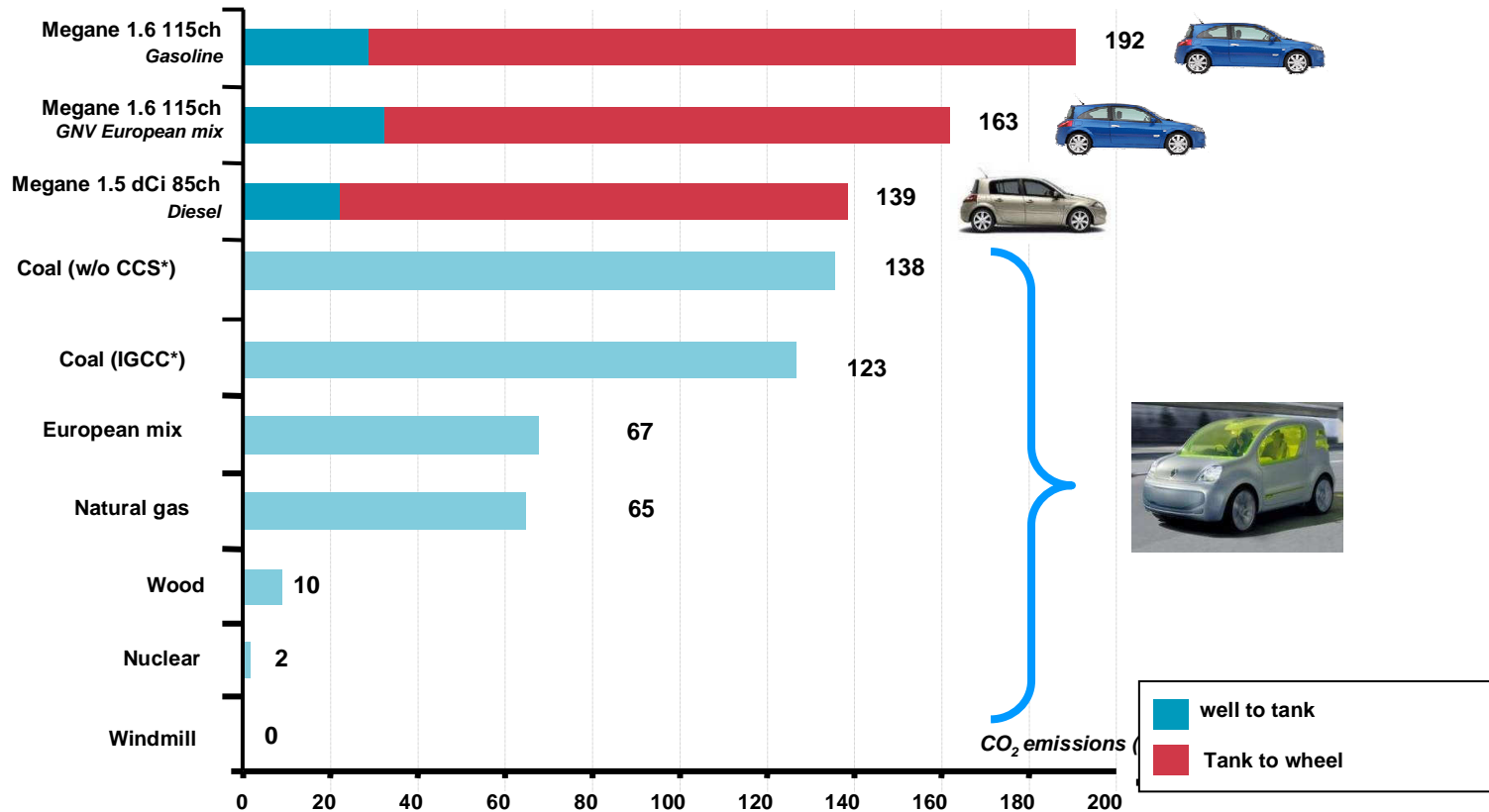


The EV has the highest on-board fuel efficiency

# WHY THE ELECTRIC VEHICLE TODAY?

## Environmental positive impact

- The CO<sub>2</sub> global impact is positive



\* CCS = capture & sequestration of CO<sub>2</sub>  
 \* IGCC = Integrated gasification on a combined cycle

# ■ WHY THE ELECTRIC VEHICLE TODAY?

1 Environmental positive impact

2 Technical breakthrough

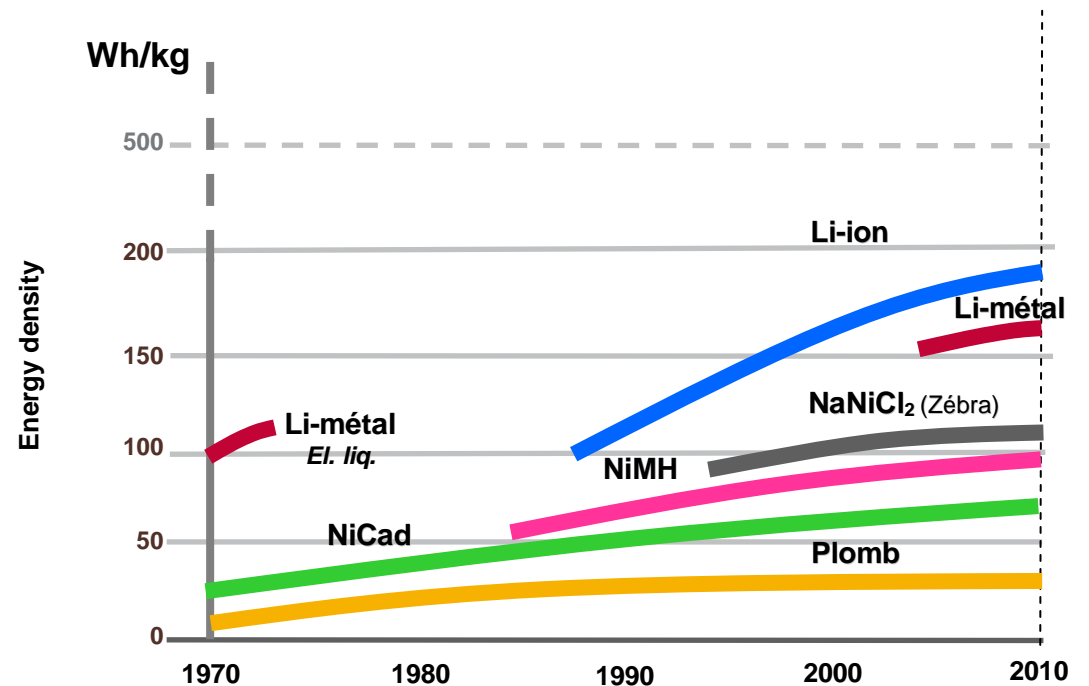
3 Growing urbanization

4 Economical benefit for customer

# WHY THE ELECTRIC VEHICLE TODAY?

## The technical breakthrough : Lithium-ion Batteries

- New Lithium-ion batteries allowing :
  - More Autonomy (150km)
  - More Performance (similar to ICE vehicles)
  - Charging everytime you need



# ■ WHY THE ELECTRIC VEHICLE TODAY?

1 Environmental positive impact

2 Technical breakthrough

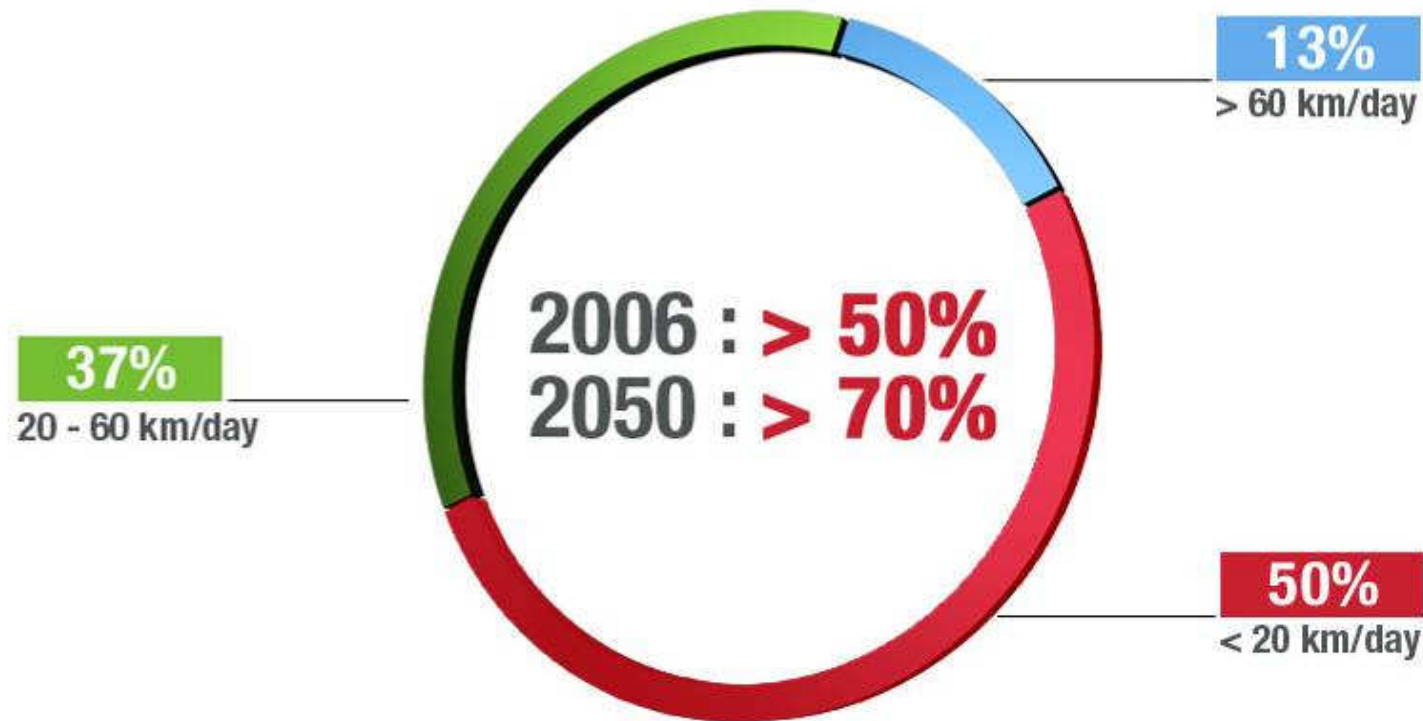
**3 Growing urbanization**

4 Economical benefit for customer

### 3 WHY THE ELECTRIC VEHICLE TODAY?

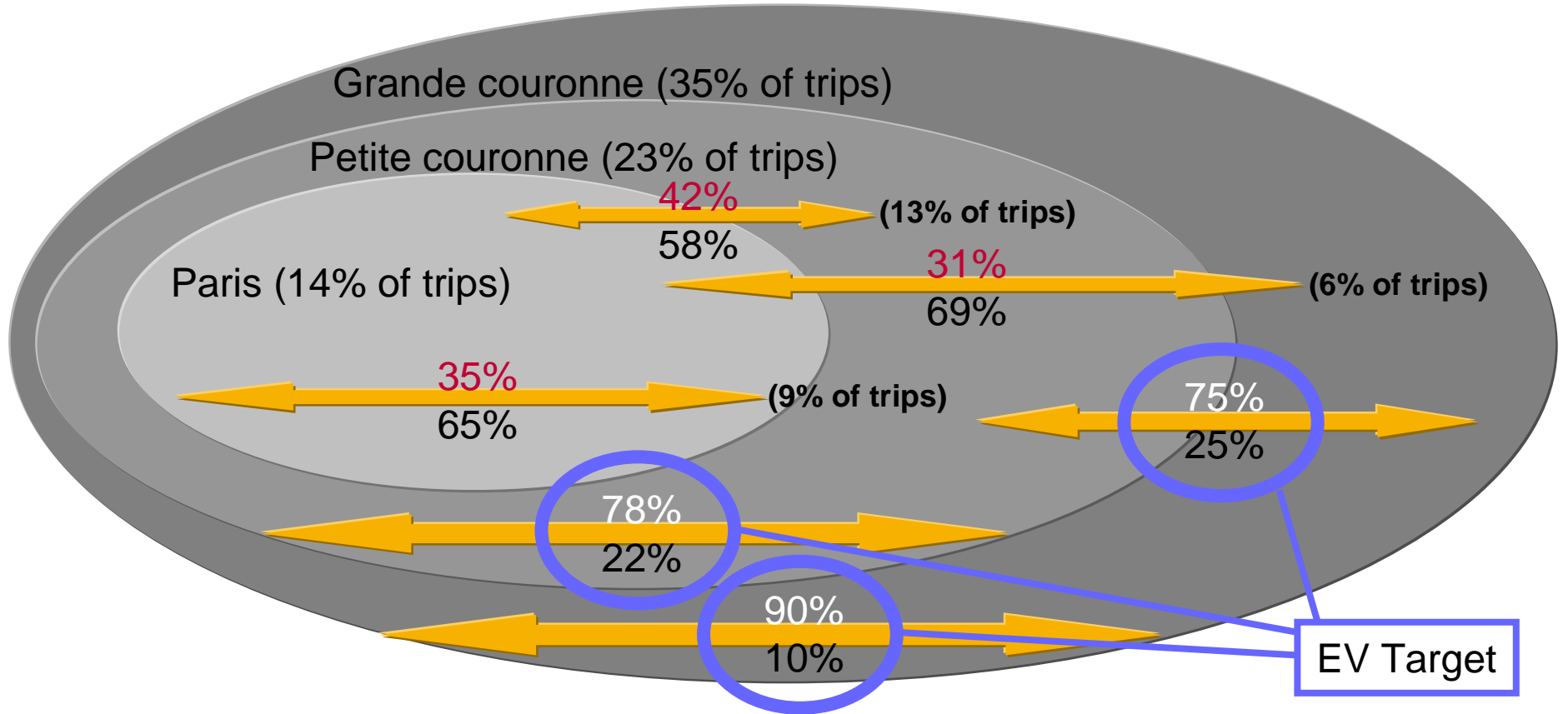
*Growing urbanization : EV fits a large share of mobility needs*

- Increasing proportion of people living in urban area
- 87% of trips less than 60km

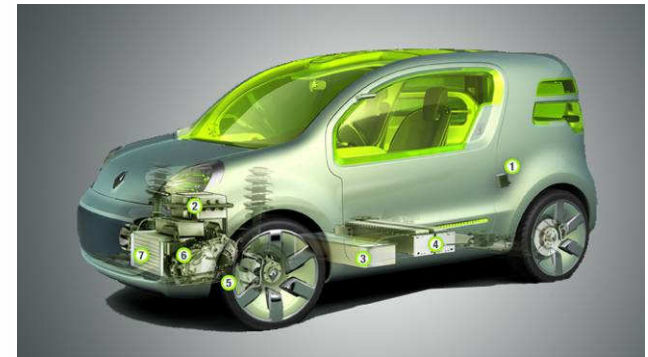
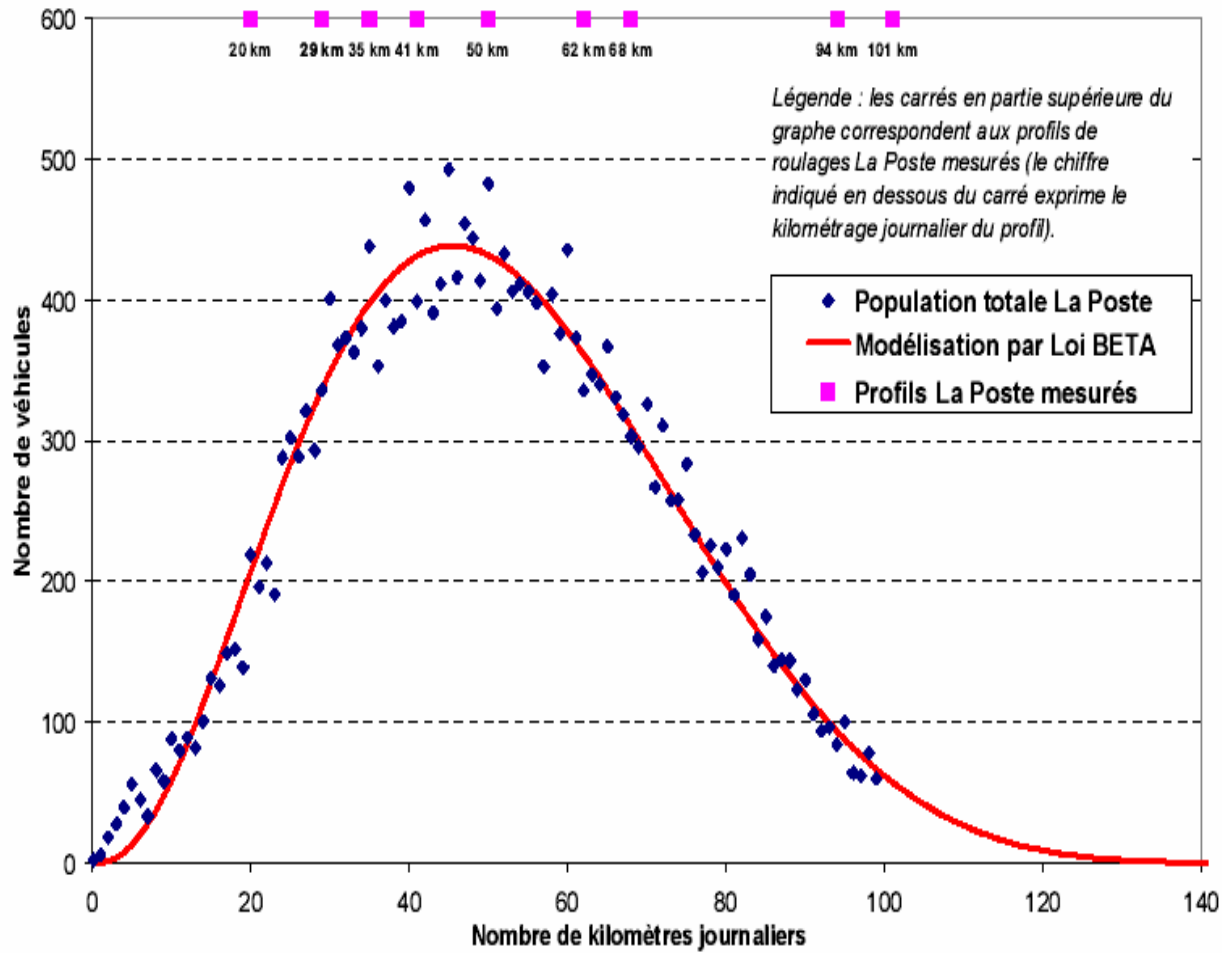


# Mobility in big european metropole

Paris example - Mobility 2030, WBCSD



# PROFESSIONAL USAGE



# ■ WHY THE ELECTRIC VEHICLE TODAY?

1 Environmental positive impact

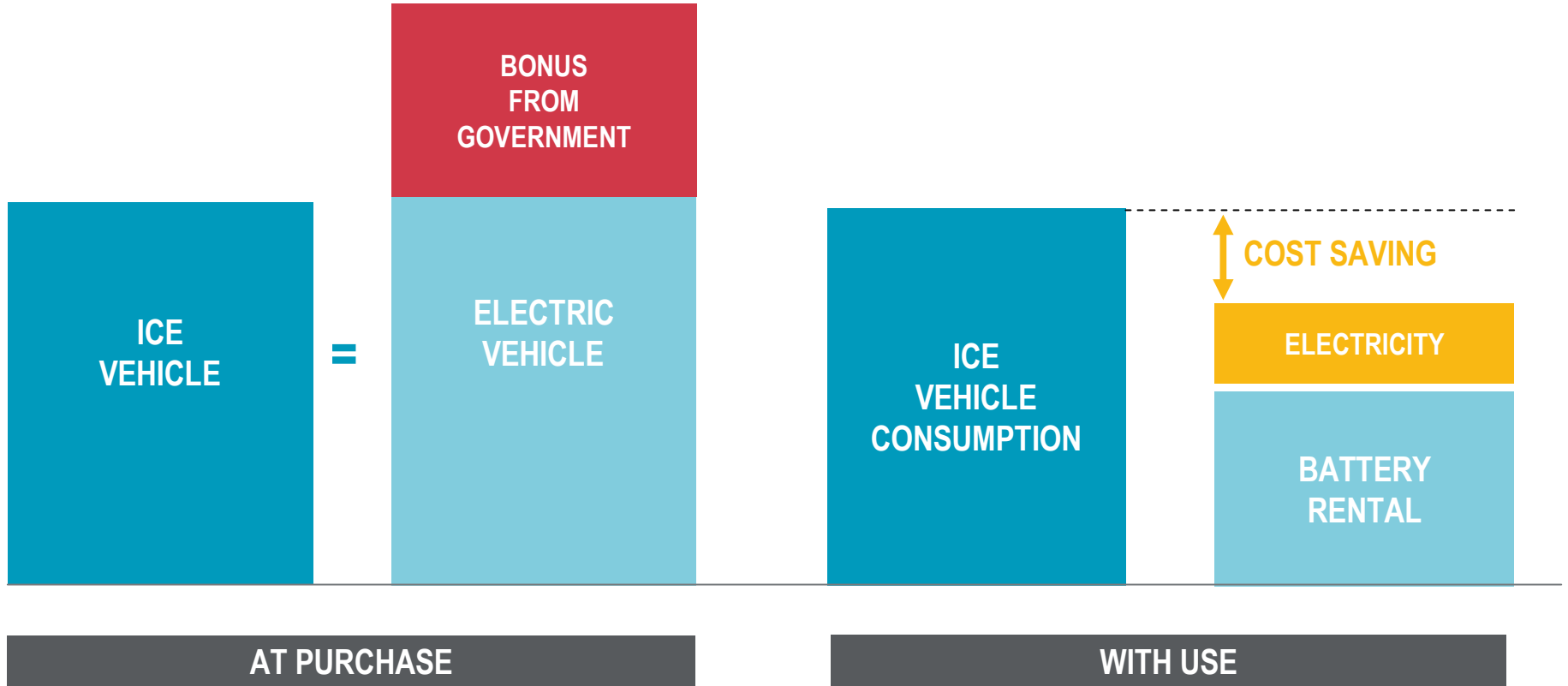
2 Technical breakthrough

3 Growing urbanization

4 Economical benefit for customer

# WHY THE ELECTRIC VEHICLE TODAY?

*Economical Benefit for the customer*



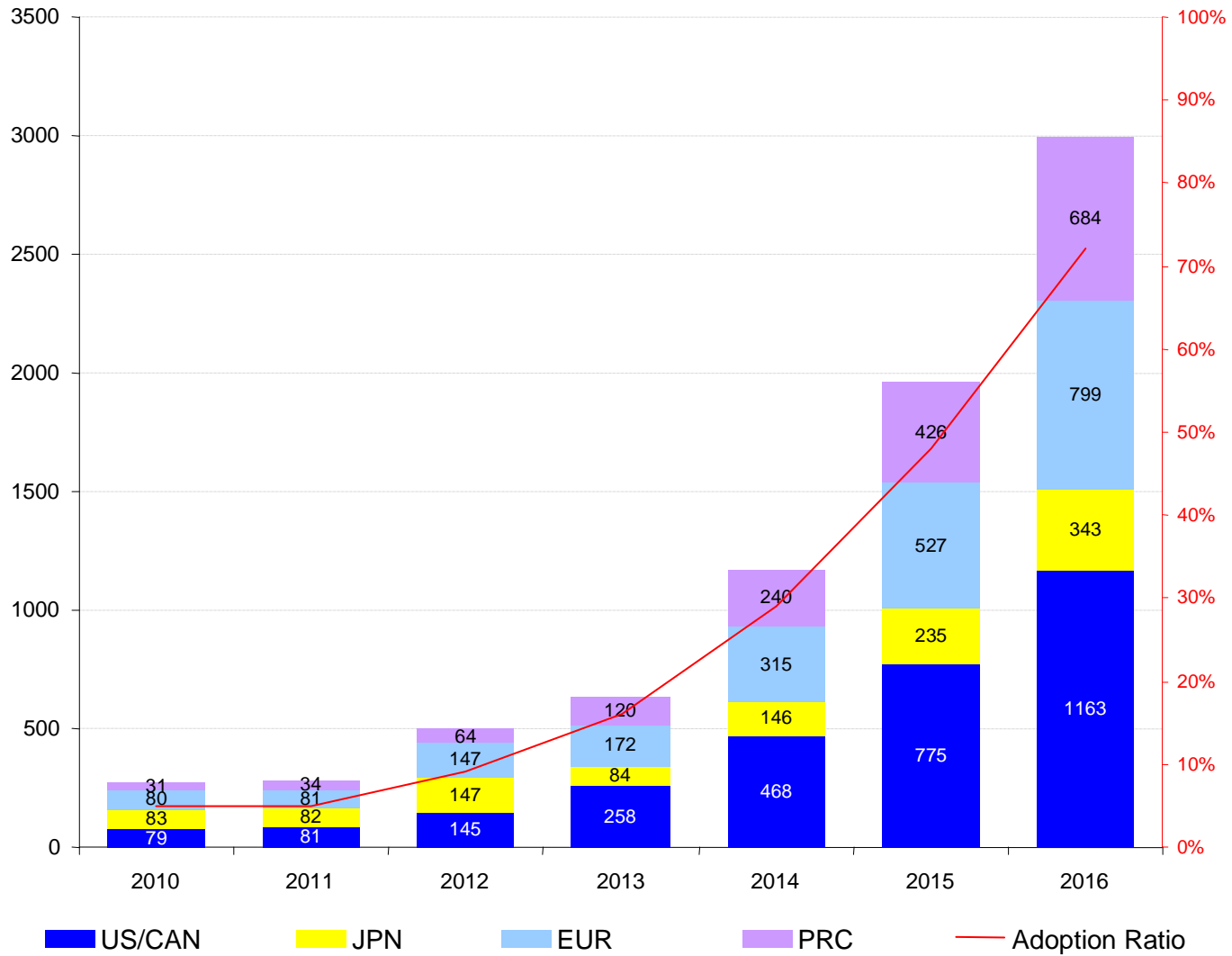
# WHICH MARKET FOR WHICH CUSTOMERS

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# ■ WHICH MARKET FOR WHICH CUSTOMERS

- **EV market is worldwide**
  
- **Main Customer Target :**
  - Private Customers, for local usages (& week end)
    - Customers looking for usage cost benefit
    - Customers looking for ecological/technological object
  - Professional customers (post office, taxis, collectivity)
  - Carsharing fleets
  
- **Full-EV Market is estimated at 3 millions units in 2016**

# THE EV MARKET IN 2016



# A RECHARGE NETWORK TO BE INSTALLED

## 1 Standard Charge

4 to 8h charging at home,  
at work, on curbside

## 2 Fast Charge

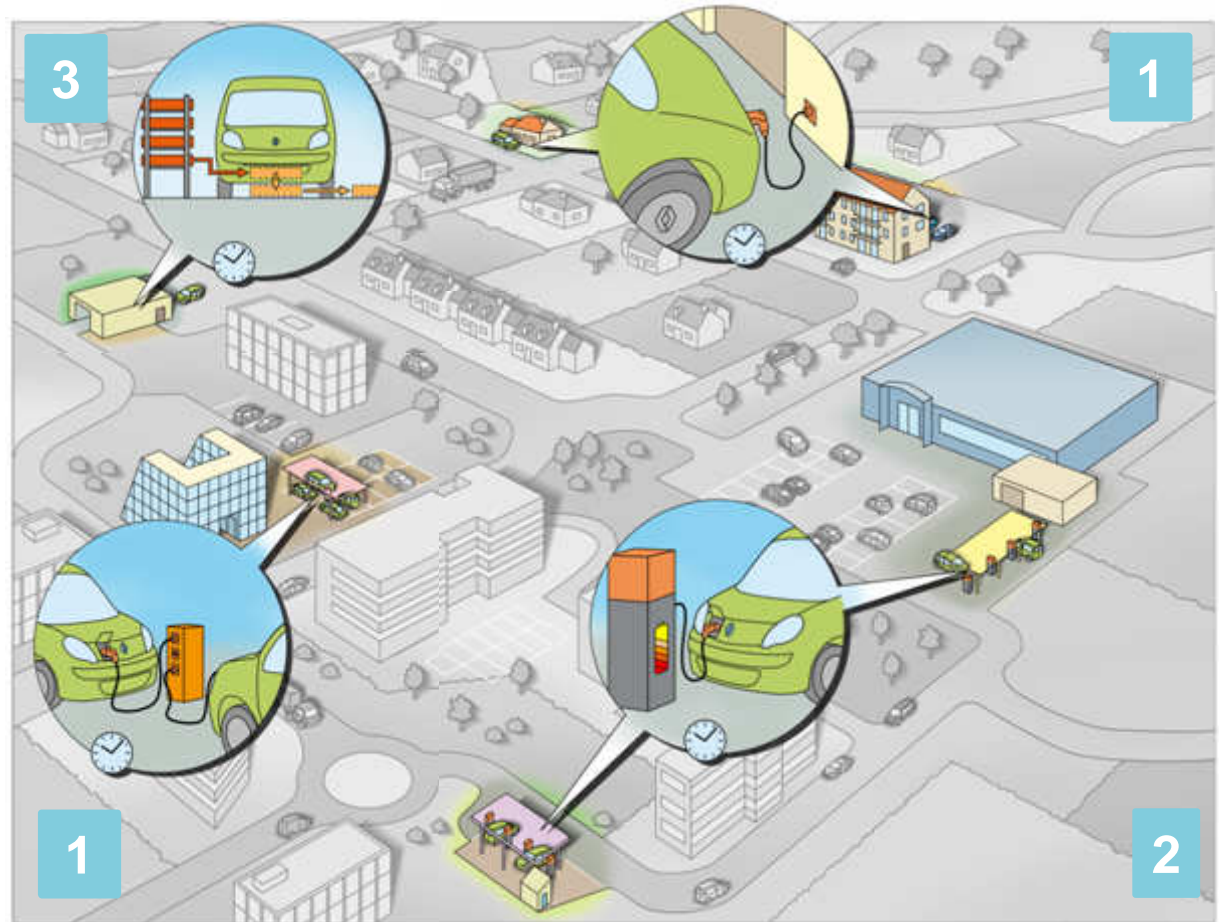
Full Charge in 20min

## 3 QuickDrop

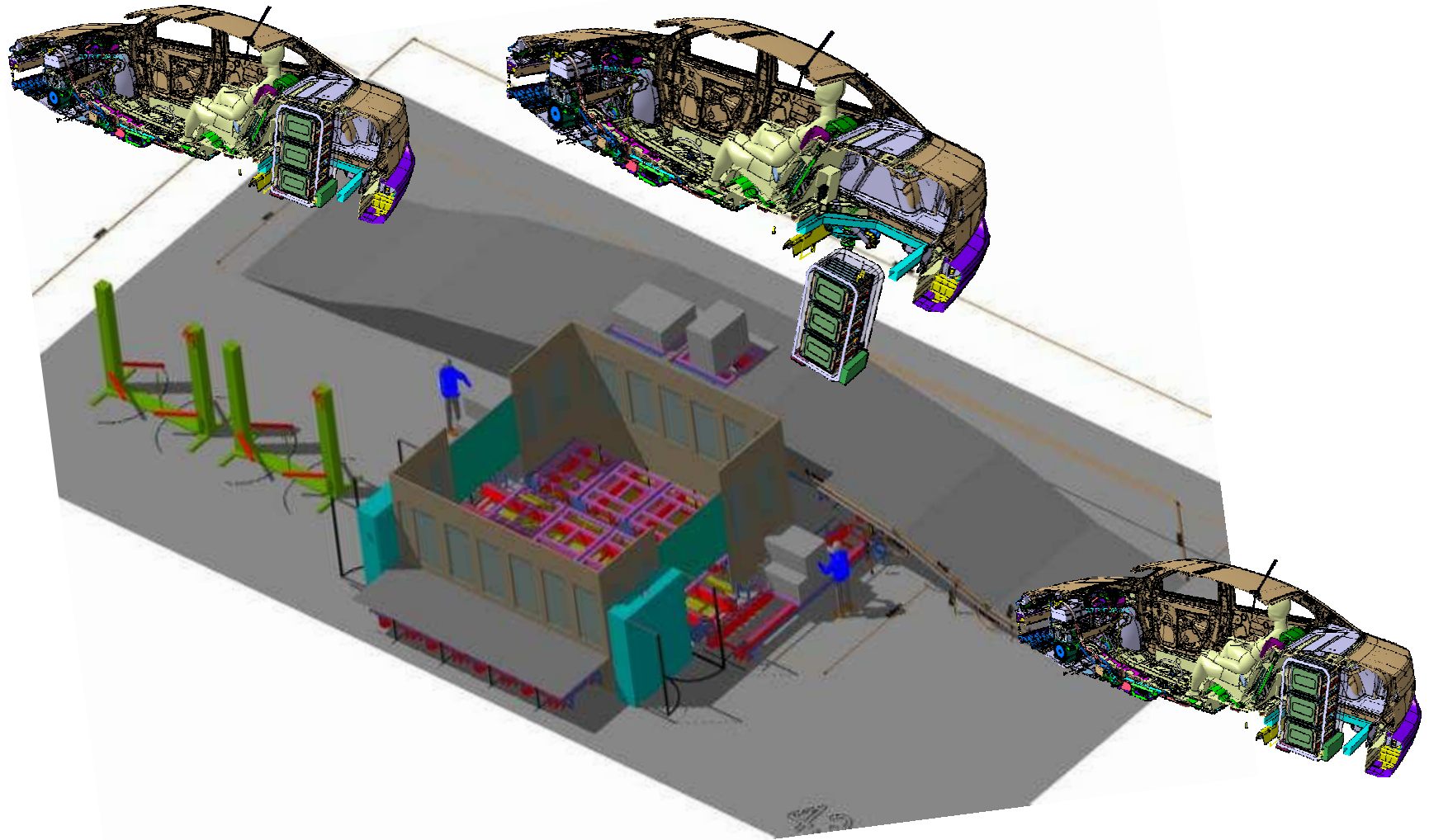
A new battery in 3min

## 4 Smart Navigation

Locate&Reserve charge spots  
Optimize Trips



# BATTERY EXCHANGE STATION

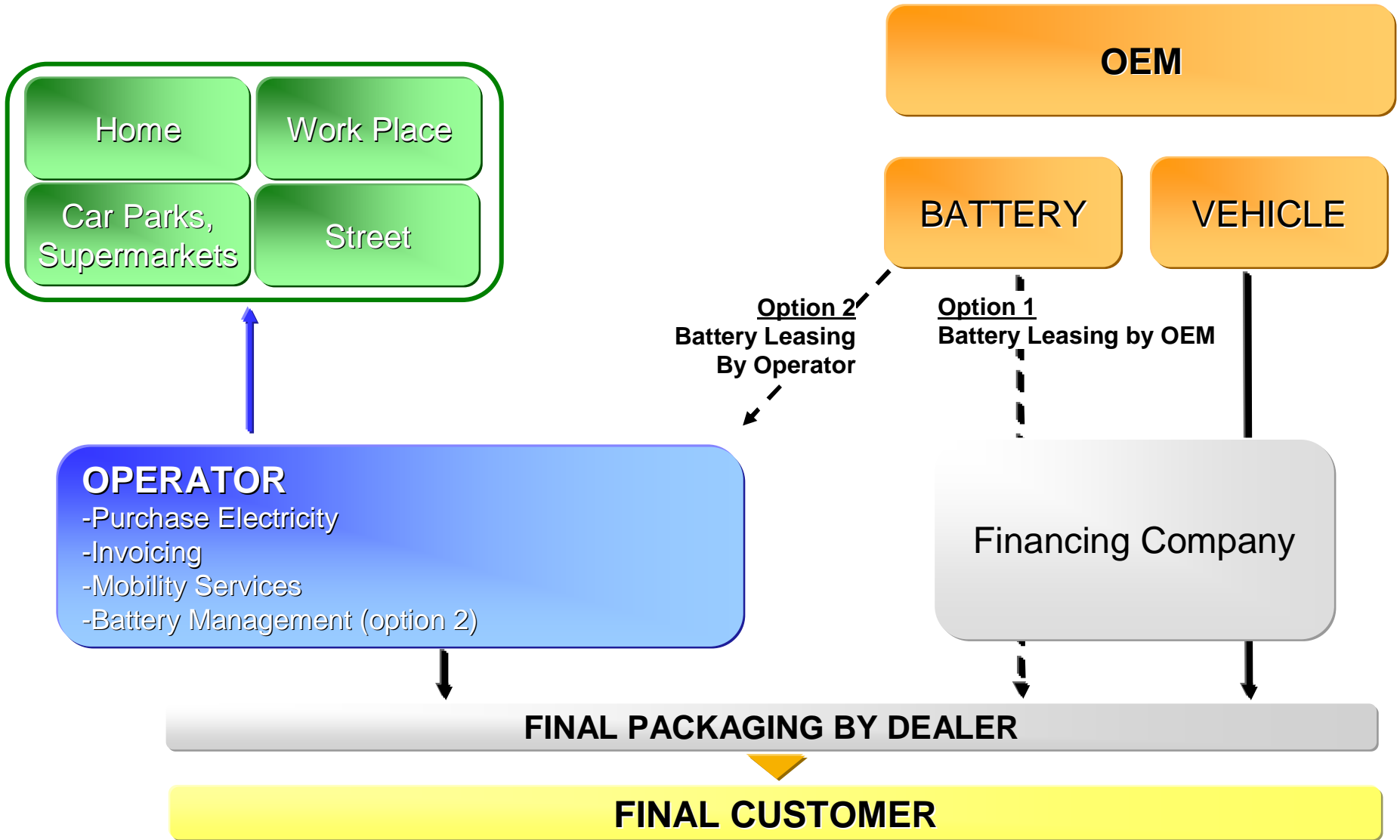


# BUSINESS MODEL

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# WHAT IS AN OPERATOR?



# PARTNERSHIP WITH OPERATORS

- **First Alliance partnership, January 2008 in Israel**



- **Partnership in France with EDF, October 2008**

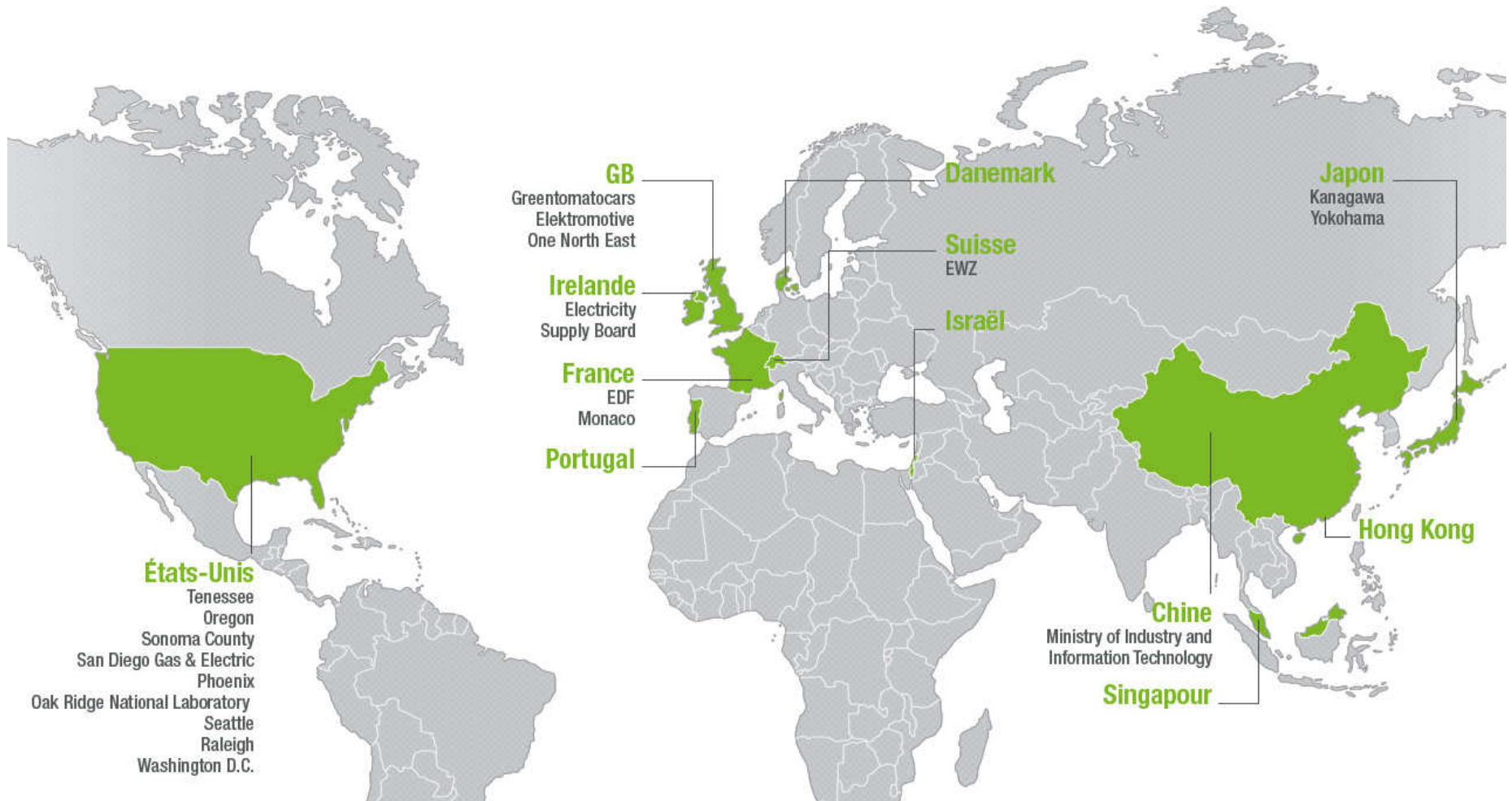


# WHERE DO WE STAND TODAY?

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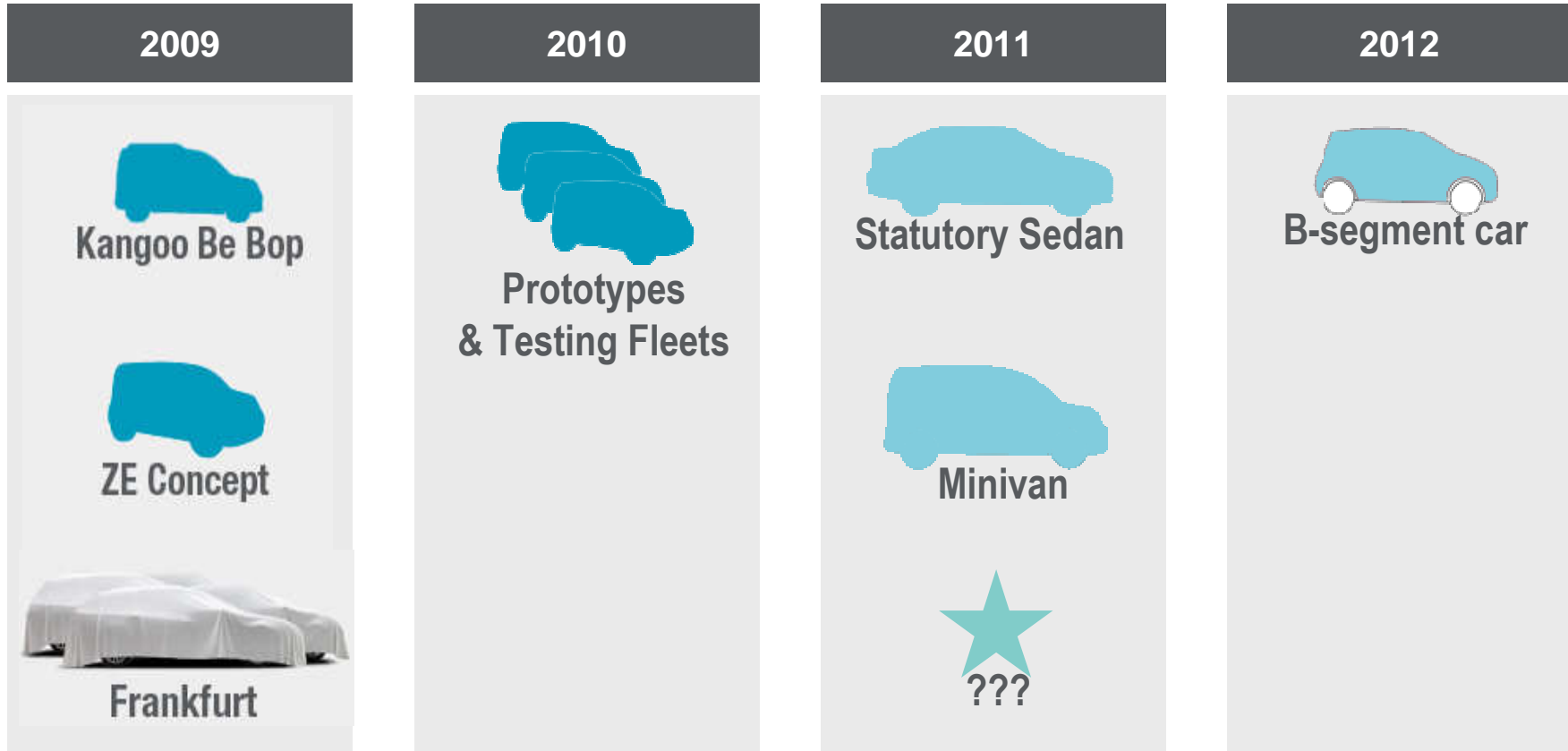
# WHERE DO WE STAND TODAY?

*More than 25 partnerships over the world*



# WHERE DO WE STAND TODAY?

*A full line-up in preparation*



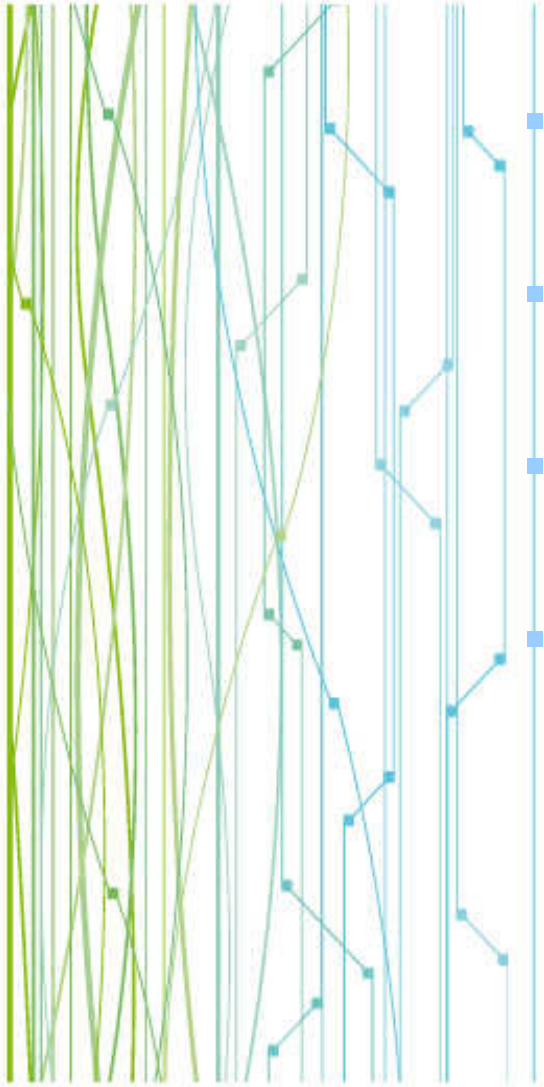
 Concept Cars & Prototypes

 Mass Production

# CONCLUSIONS

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# CONCLUSIONS



- A huge challenge for the automotive industry
- Renault and Nissan consider EV as a top priority
- Our vision : EV for all
- 4 models from 2011