



E-MOBILITY NSR
2012-10-25

Volvo Car Corporation

Towards Transnational E-mobility /Lindholmen 2012-10-25

Johan Konnberg, Business Development Electric Vehicles





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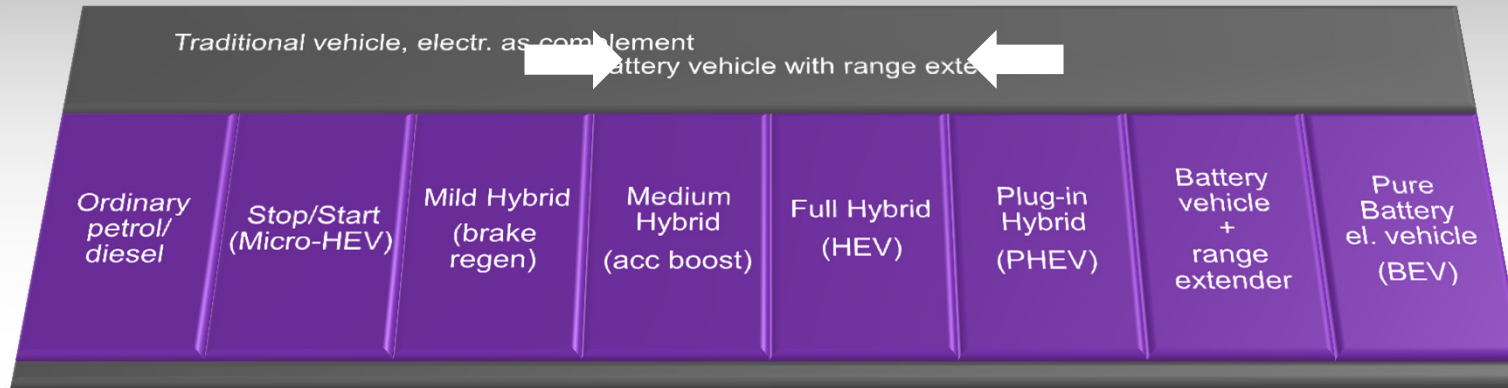


VOLVO CAR CORPORATION'S VIEW ON ELECTRIC VEHICLES

Choice of electrification level



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↑
Volvo focus

↑
Volvo focus

↑ ↑ ↑
Volvo focus



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A true safe Volvo with No compromises!
Safety – Driving experience – Comfort – Versatility
Vehicle with zero CO₂ emission



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Testfleet based upon Volvo C30

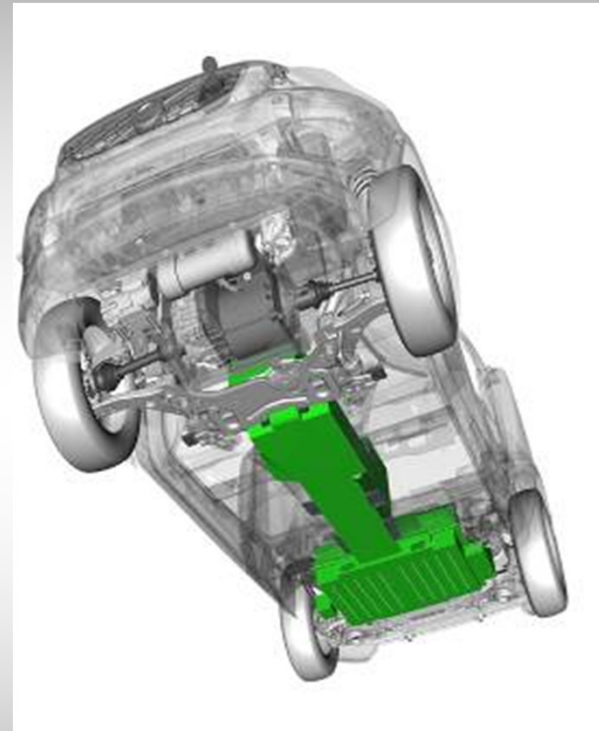
- Numerous full scale crash tests [with charged batteries]
- Integration of electronic active safety systems
- Testing in different climate
- Performance
- Driver behaviour
- Aging / development of battery performance over time

Technical Specification



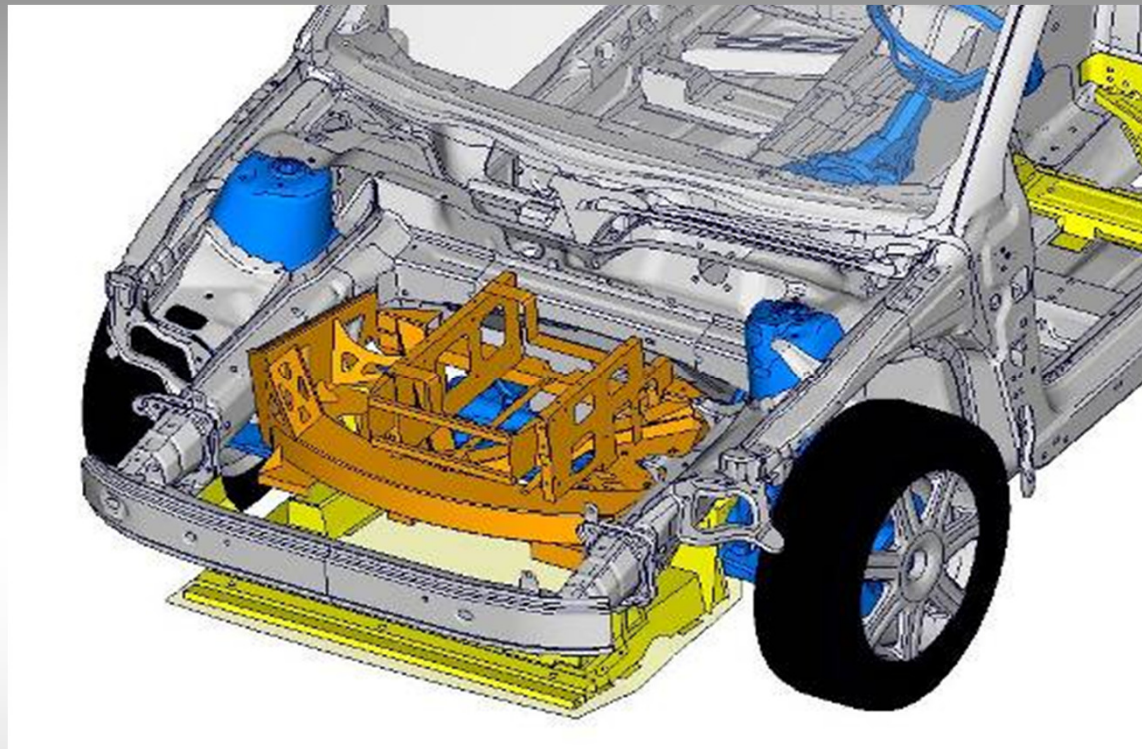
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- Battery weight 280 kg
- Total weight: 1.660 kg
- Li-Ion / Capacity 24 kWh
- [7h @ 230V/16A]
- Electric motor 82 kW (111 hk)
- Torque 220Nm
- Acceleration 0-70 km/h 6.0 s
- Top speed 130 km/h
- Practical driving range up to 150 km [NEDC 163 km]
- Pure Electric, 0g CO₂ tail pipe emissions





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Designed a new frontal structure

Better pedestrian protection than standard C30



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The *Volvo C30 Electric* has two options on heating system

- To use the energy stored in the **battery**
- To use an **external** E85 ethanol powered system



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- 250 [350] vehicles / start of production Q3 2011
- Markets: Sweden, Belgium, Netherlands, Germany, France, Austria, Switzerland, US, China
- Research program / investigation of:
 - Aging of batteries
 - Driver / driving behaviour
- Full service leasing contract
- Use of selected local dealer and service work shops



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Who are the customers?

- Authorities and official bodies
- Private companies

Could we have done this alone ?



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Electricity suppliers

- Renewable electricity
- Infrastructure
- Pricing



Society

- Incentives
- Legislations
- Consumer driving pattern

Car manufacturers/suppliers

- Attractive products
- Attractive prices incl. batteries
- Business/Ownership model

250 C30 Electric – Status/Result/Feedback



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- 250 vehicles on 9 different markets
- Total range of about 60 times around the globe
- Rides like an ordinary vehicle
- Easy to use
- Fun and quick
- Fulfill my needs
- Silent and smooth
- Family's first choice
- Perfect commuter

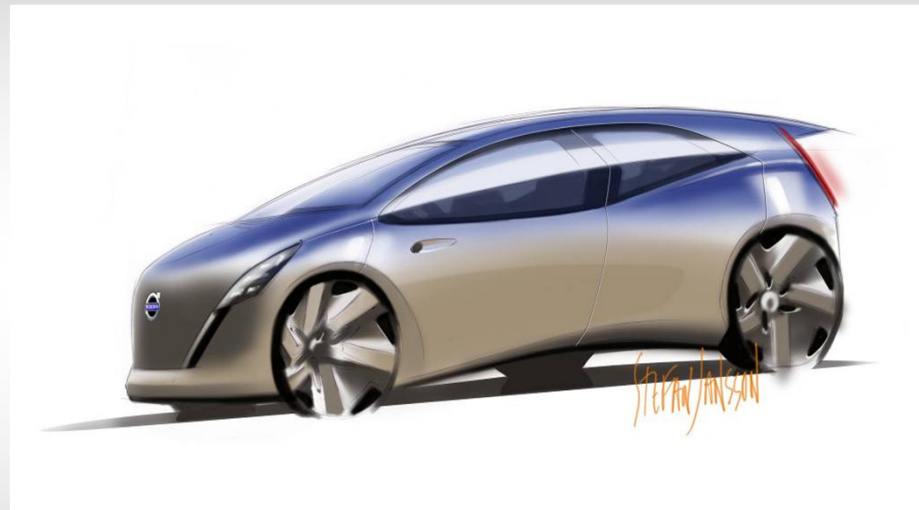




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EV Commercialization – Challenges

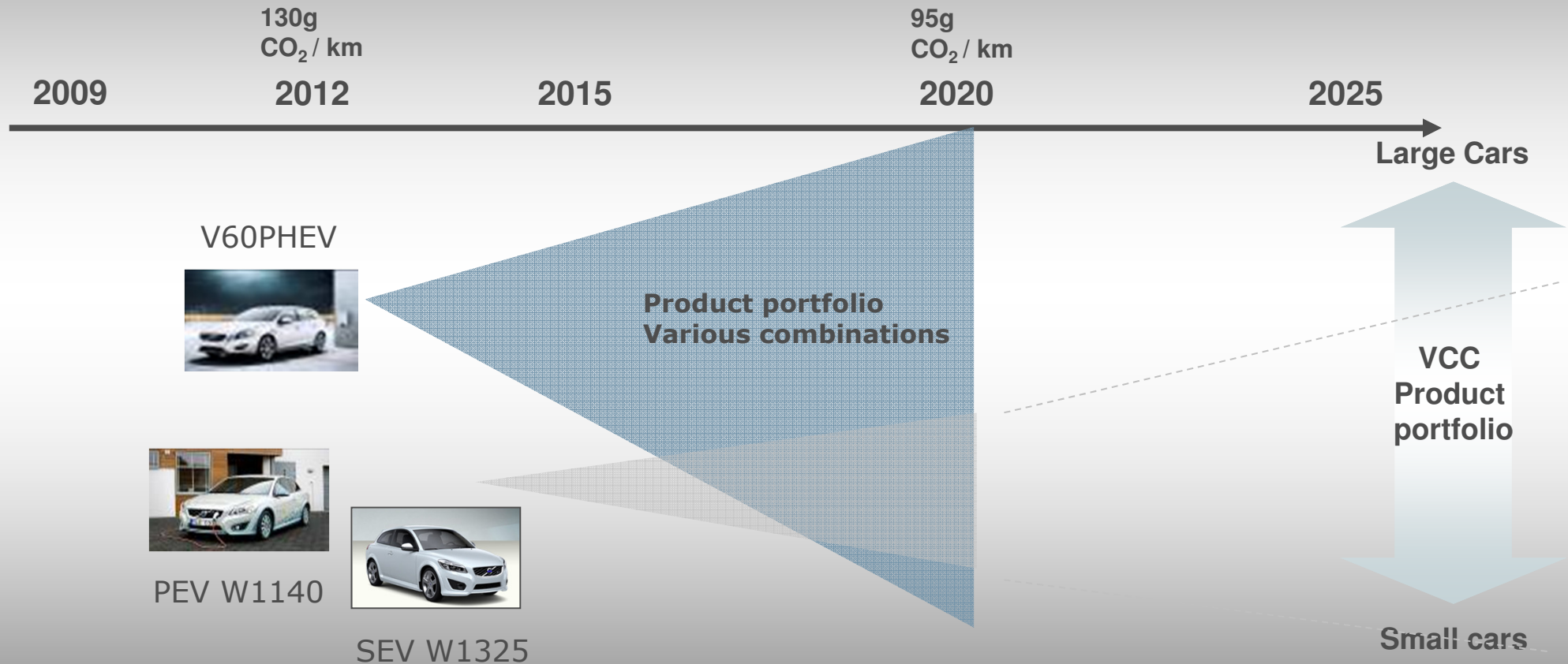
- Accessibility of charging infrastructure
- Range anxiety
- Charging standards
- Recharging time
- Component costs
- Recycling
- Incentives (varying from market to market)
- Knowing potential car customer preferences
- No compromises on base values & features



Volvo Car Corp – Electrification strategy



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***TECHNOLOGY AND FEATURES IS IN PLACE
BUSINESS MODEL IS NOT !***

THANK YOU FOR LISTENING

