



paradigma:

**é fácil electrificar
um carro ?
(intelligent já é,
bastante)**



**Benz Motorwagen
1889**



AVERE

Chetan Maini REVA



REVA



The new zero emission era

Nissan will launch the world's first affordable EV
in Japan, US and Europe in late 2010.



Leaf will be mass marketed globally by 2012





paradigm:

**utilities and other
(new) players**

AVERE





Can the Grid Cope ?

António Vidigal – EDP - Portugal

Origin: SmartGarage Report



Öffentliche Ladesäulen und Batterietauschkonzepte sind wirtschaftlich relativ unattraktiv

Wirtschaftlichkeit von verschiedenen Ladeinfrastrukturkonzepten

ABSCHÄTZUNG

Ladeinfrastruktur	Ladeleistung	Abrechnung	Kosten pro Ladeinheit (in €, ohne Wiederbeschaffung)	Infrastrukturkosten pro Fahrzeug (in €)	Auf Strom umgelegte Kosten (in c€/kWh)
Privater Anschluss	3,7 kW	Nein	200 - 300	200 - 300	1,0
	11 kW or 22 kW		600 - 750	600 - 750	3,0 - 3,8
Halböffentlicher Anschluss	11 kW or 22 kW	Ja	1.050 - 1.250	1.050 - 1.250	5,3 - 6,4
		Nein	1.450 - 2.250	483 - 750	3,3 - 5,1
Öffentliche Ladesäule	11 kW or 22 kW	Ja	4.050 - 10.450	450 - 1.161	4,2 - 10,8
	63 kW		7.850 - 17.000	654 - 1.417	6,1 - 13,2
Batterietauschkonzept		Ja	~ 750.000 + 1.450.000 (Batterien)	~ 800€	~ 8,0



Fraunhofer Institut System- und Innovationsforschung





paradigma:

que tecnologías

**para os transportes
públicos colectivos ?**



LRT or TRAM ?

León (MST Almada)





BRT

TRANSMILENIO

Bogotá





2008 04 24+25 BTR Madrid





paradigma:

the “London one”



MAYOR FO LONDON



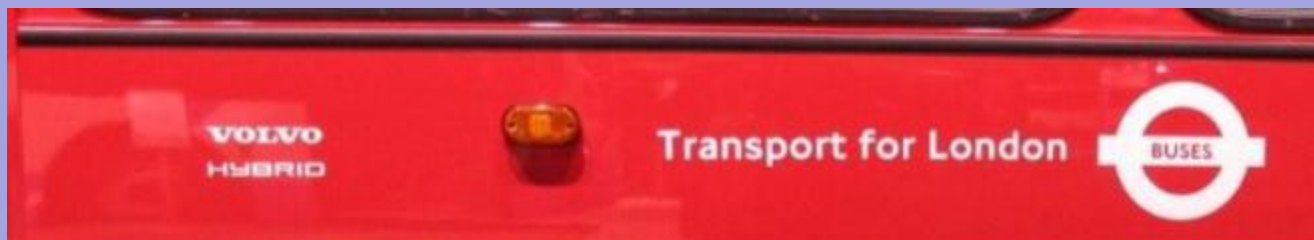


THE MESSAGE - branding





what OMG's what OPERATORS ?





however always.....

Transport for London



INTEGRATOR



pergunta:

**Quantas rodas tem
um veículo eléctrico ?**



O carro eléctrico



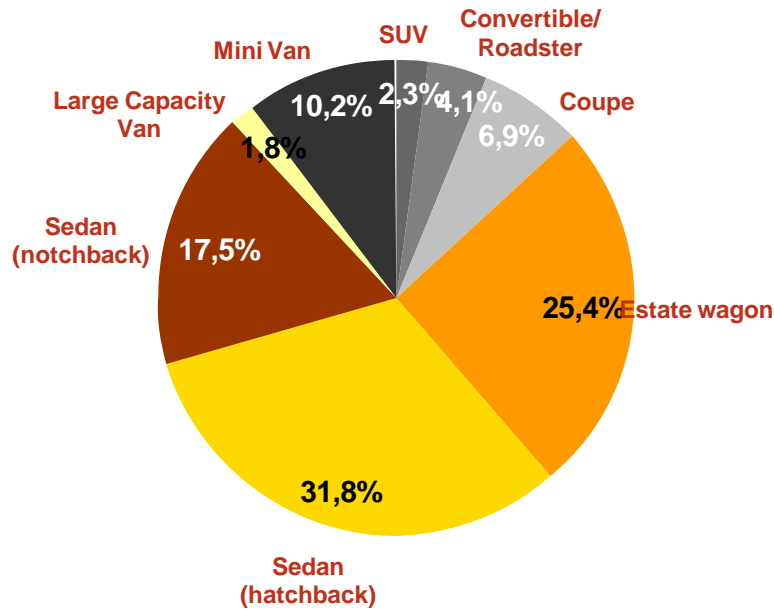
*é o segundo
automóvel ?*



Body Type

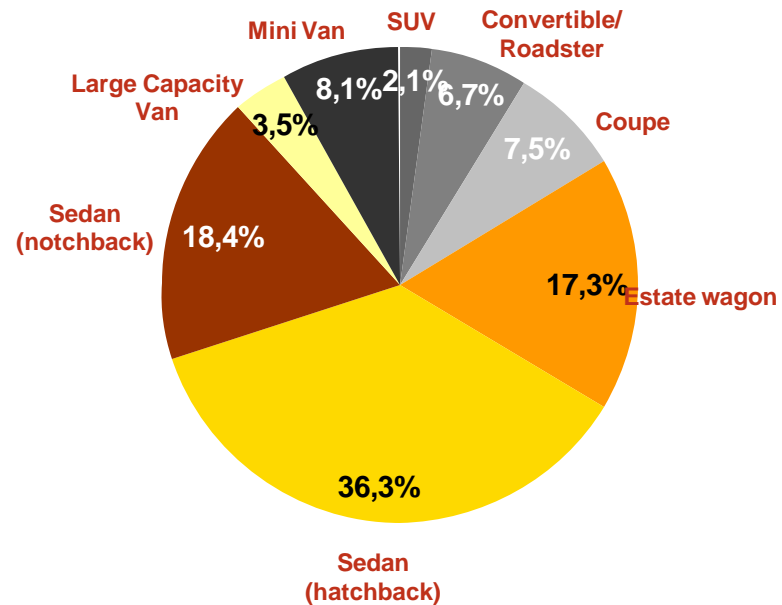
As details on models per segment show, sedan is the mostly sold body type in Germany, but also estate wagons are of importance.

First Car



(N=1042)

Second Car



(N=479)



*Car pooling
(auto partage)*



*Car sharing
(covoiturage)*



before
introducing clean cars...



after
introducing clean cars...



LAND USE CHOICES

developer's or citizen's choice?



LAND USE CHOICES

developer's or citizen's choice?



LAND USE CHOICES

politician's or citizen's choice?

Barcelona

