



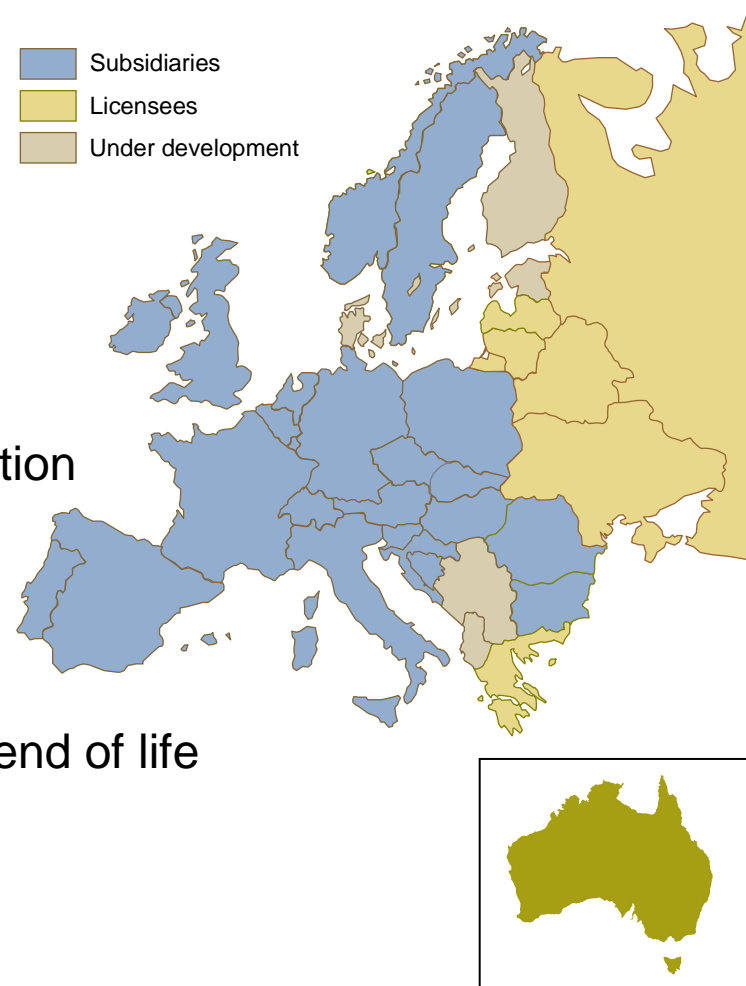
# Towards a sustainable automotive industry Meeting customer expectations

K D Gaskell, President EurotaxGlass's International, 29/1/2008



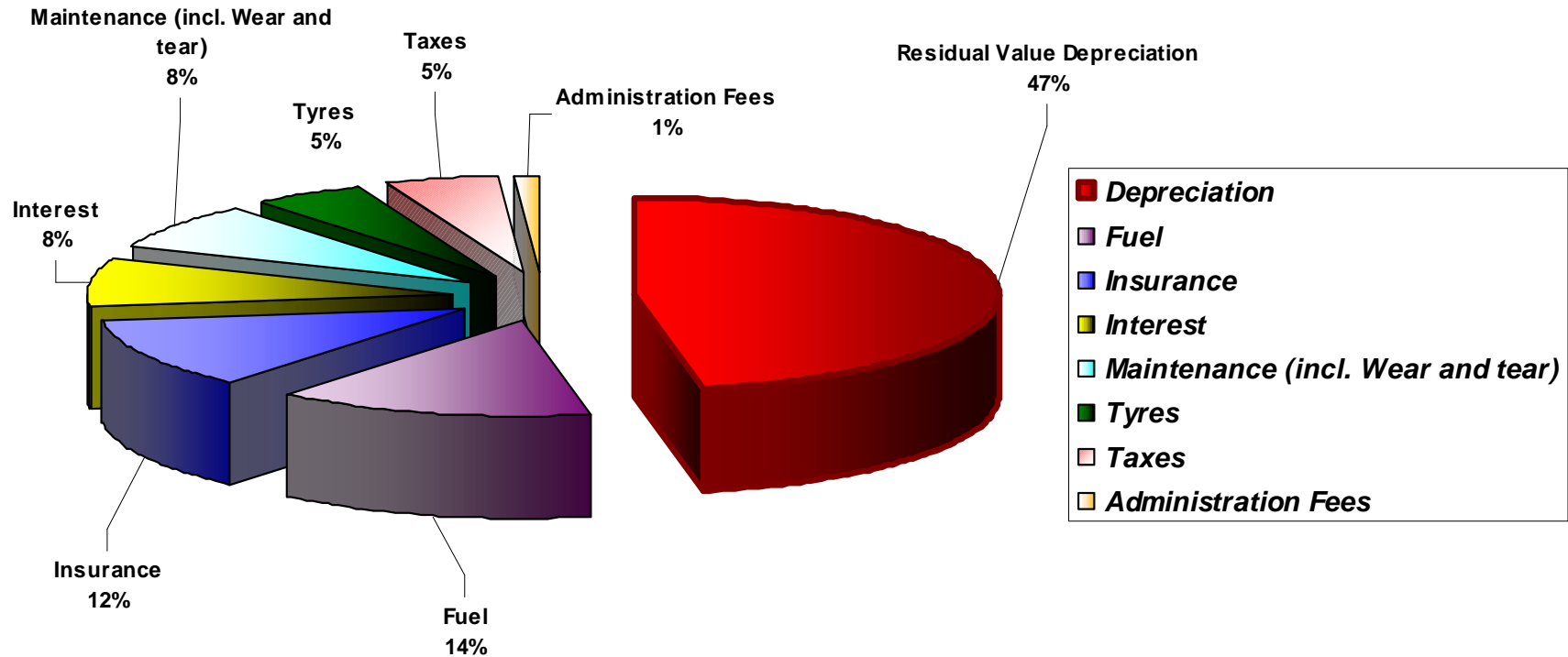
# Europe's leading automotive data company

- Established 70 years
- 30 European countries, plus Australia
- 95% revenues from No1 or No2 market position
- Provide data across entire vehicle lifecycle
- 150,000 customers from vehicle concept to end of life



When selecting a car, total cost of ownership is now a key factor...

### Total Cost of Ownership Breakdown\*



*Residual value management is fundamental to long term commercial success of each model series*

\* Specific values may vary between different customer groups (Leasing; Outright purchase; private buyers)

## Residual value is determined by a number of factors...

- Supply & demand
- Distribution strategy , marketing, pricing & discount policy
- Configuration strategy & policy, standard & optional equipment
- Brand Image, design, communication of values
- Life cycle position
- Fulfilment of customer expectations, including technical capability

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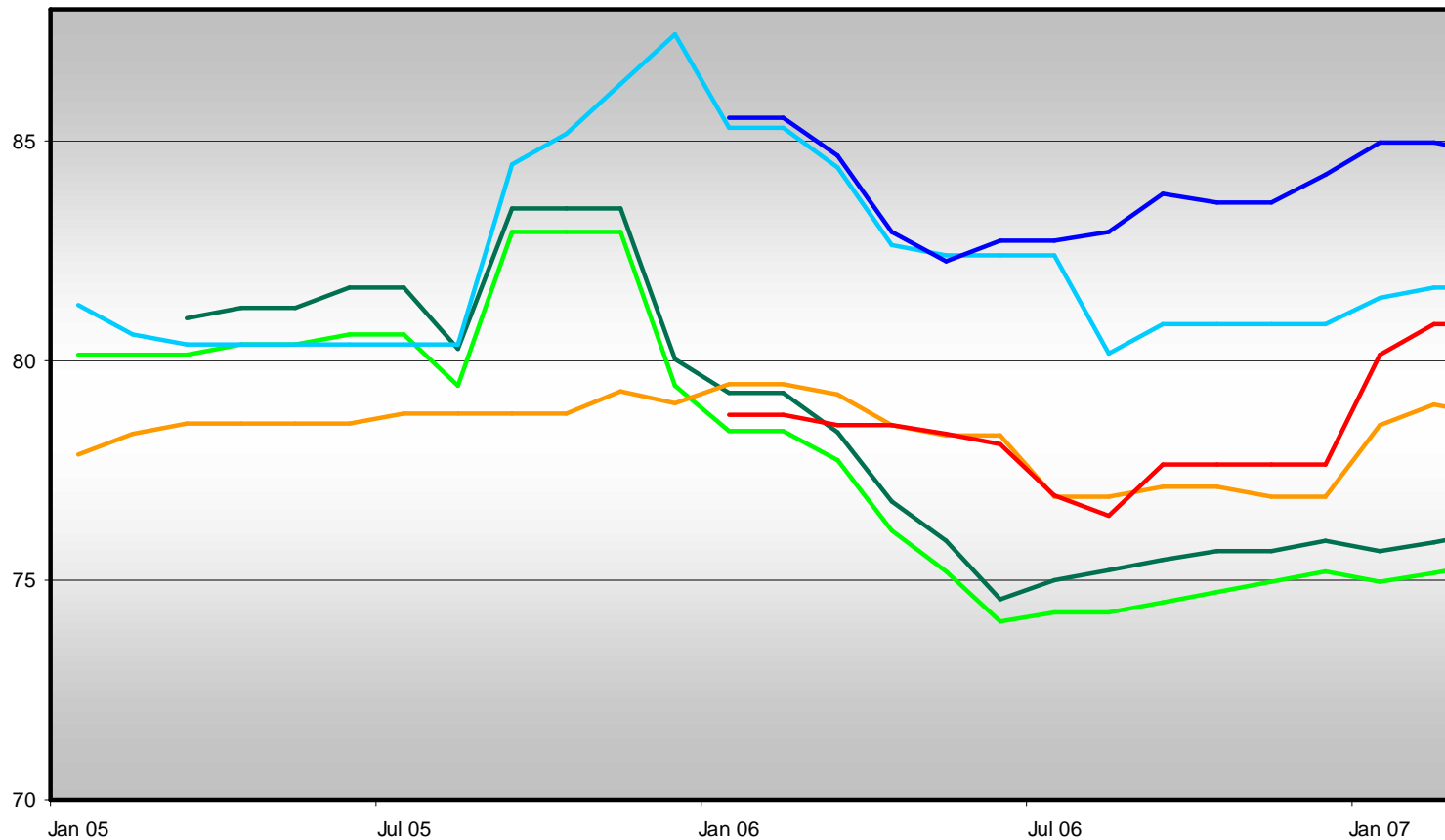
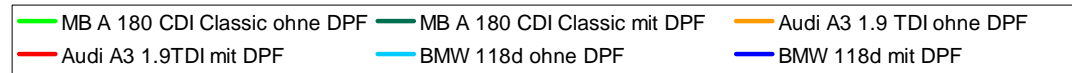
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# Example - Diesel particulate filter influence, small premium cars

Daten Version:- März 2007

Deutschland

Verkaufswerte in %  
Fahrzeugalter: 12 Monate, 20.000 km Laufleistung

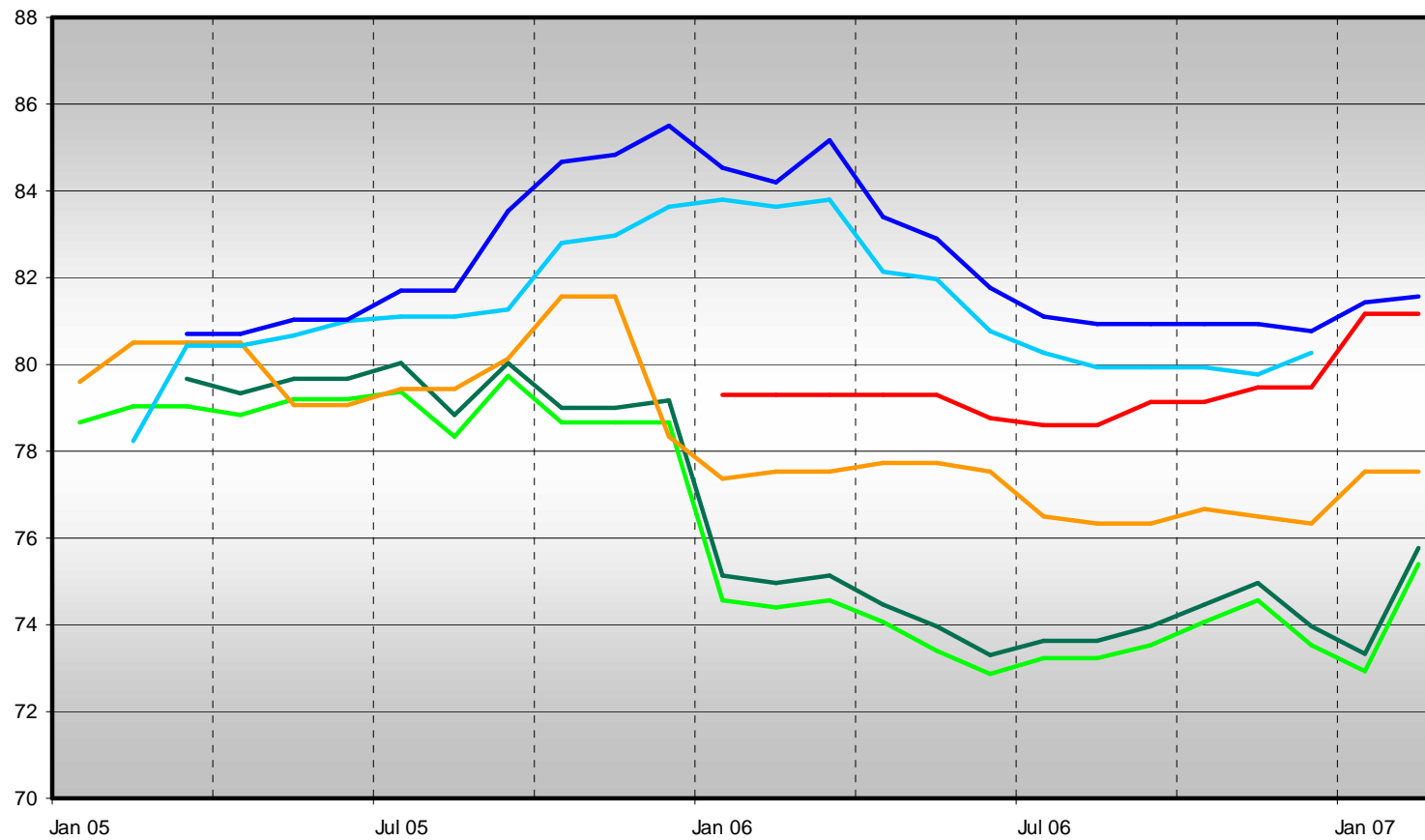
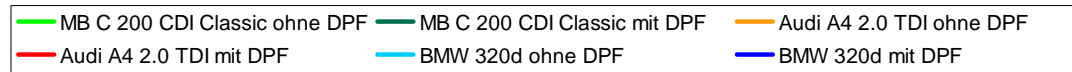


# Example - Diesel particulate filter influence, medium premium cars

Daten Version:- März 2007

Deutschland

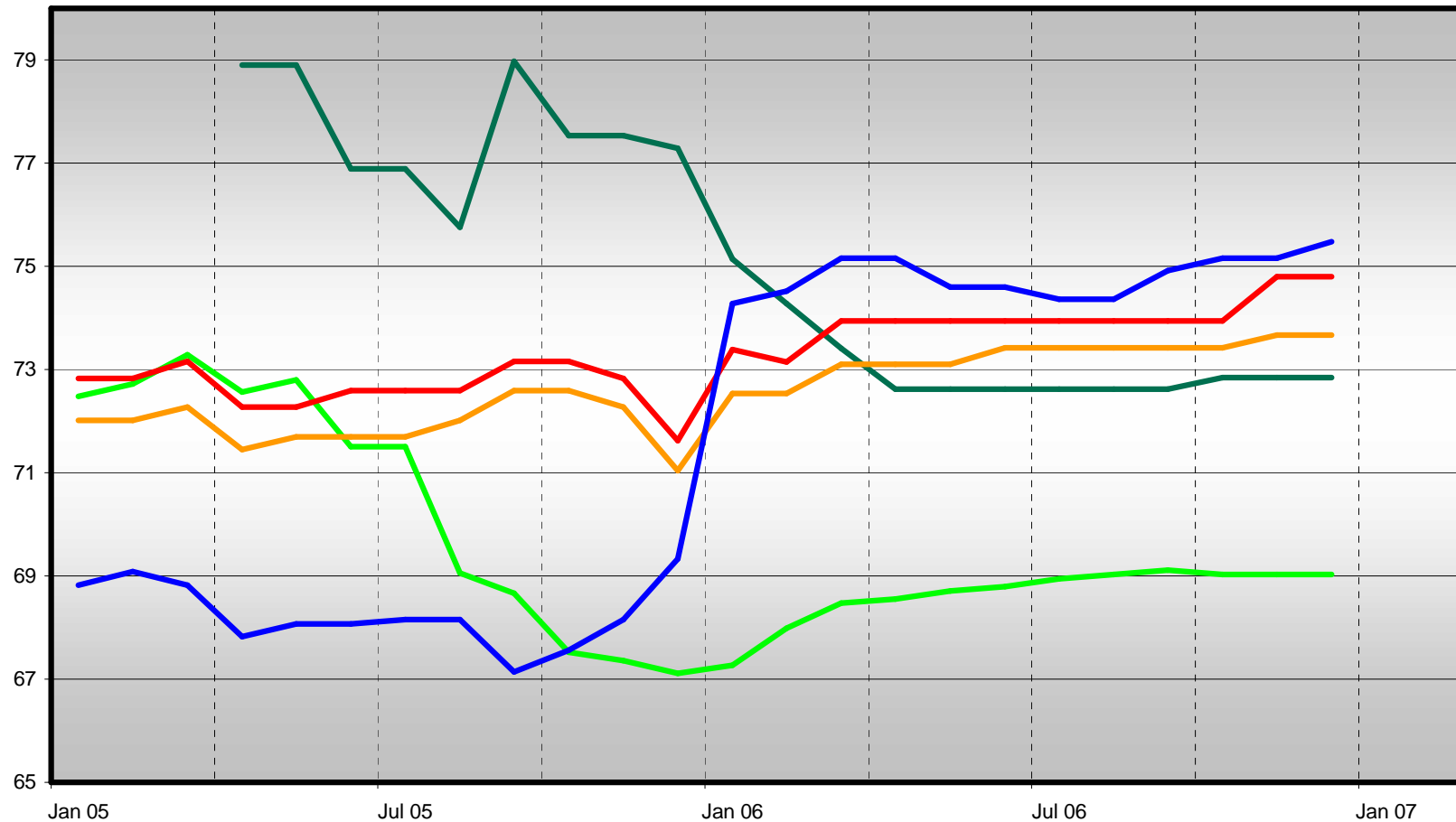
Verkaufswerte in %  
Fahrzeualter: 12 Monate, 20.000 km Laufleistung



# Example - Diesel particulate filter influence, large premium cars

Verkaufswerte in %  
Fahrzeualter: 12 Monate, 20.000 km Laufleistung

— MB S 320 ohne DPF — MB S 320 mit DPF — Audi A8 3.0 TDI quattro ohne DPF — Audi A8 3.0 TDI quattro mit DPF — BMW 730d mit DPF





## Residual value is determined by a number of factors...

- Supply & demand
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*A well understood environmental / technical benefit supports improved residual value*

## Buyer influenced by public policy – 1. Registration incentive

- During the 1990's Southern European Countries incentivised scrapping of older vehicles to refresh the overall car park with lower emission vehicles
  - **Spain** - used car imports slowed by 11.3%
  - **Italy** – €800 incentive supported 230,000 Euro4 car sales / year
  - **East Europe** – high import of Euro0/Euro1 used cars from Southern Europe!

*Registration incentives provide only a short term benefit as the consumer anticipates the next level of support*

## Buyer influenced by public policy – 2. Carbon tax

- Since 2006 an array of carbon taxes introduced on new and used car sales
  - **France** – new/used, based on CO2, engine size, mileage, overall complex and regional (seems to favour national brands...)
  - **Norway** – new/used, based on weight, power, CO2.  
Major incentive for hydrogen power
  - **Germany** – announced intention to implement in 2008/9,  
current discussion centres on Norwegian model

## Example France - Carbon tax positive for local volume cars

Citroën						
Brand	Model	g/km	Previous Tax	New Tax	Change €	Change %
Citroën	C1 Hdi 54ch	109	1 130 €	436 €	-694 €	-61%
Citroën	C2 Hdi 70ch	113	1 130 €	452 €	-678 €	-60%
Citroën	C3 Hdi 70ch	109	1 130 €	436 €	-694 €	-61%
Citroën	C3 Hdi 92ch	118	1 130 €	472 €	-658 €	-58%
Citroën	C3 Hdi 110ch	120	1 130 €	480 €	-650 €	-58%
Citroën	C4 Hdi 92ch	125	1 130 €	625 €	-505 €	-45%
Citroën	C4 Hdi 110ch	125	1 130 €	625 €	-505 €	-45%
Citroën	C4 Hdi 138ch	142	1 130 €	1 420 €	290 €	26%
Citroën	Picasso Hdi 90ch	147	1 130 €	1 470 €	340 €	30%
Citroën	Picasso Hdi 110ch	131	1 130 €	655 €	-475 €	-42%
Citroën	C5 Hdi 110ch	142	1 130 €	1 420 €	290 €	26%
Citroën	C5 Hdi 129ch	158	1 130 €	1 580 €	450 €	40%
Citroën	C8 Hdi 110ch	186	1 130 €	2 790 €	1 660 €	147%
Citroën	C8 Hdi 130ch	199	2 440 €	2 985 €	545 €	22%

## Example France - Carbon tax negative for imported premium cars

Brand	Model	g/km	Previous Tax	New Tax*	Change €	Change %
<b>Mercedes</b>	E 230 (204hp)	238	2440	4046	1606	66%
<b>BMW</b>	523i (177hp) (before 03/07)	224	2440	3808	1368	56%
<b>BMW</b>	523i (177hp) (After 03/07)	174	2440	2610	170	7%
<b>Audi</b>	A6 2.4l (177hp)	233	2440	3961	1521	62%

- \*annual taxes for company car users
- Have encouraged the introduction of vehicles below tax thresholds

## Example Germany - Carbon tax effect with 'Norwegian' model

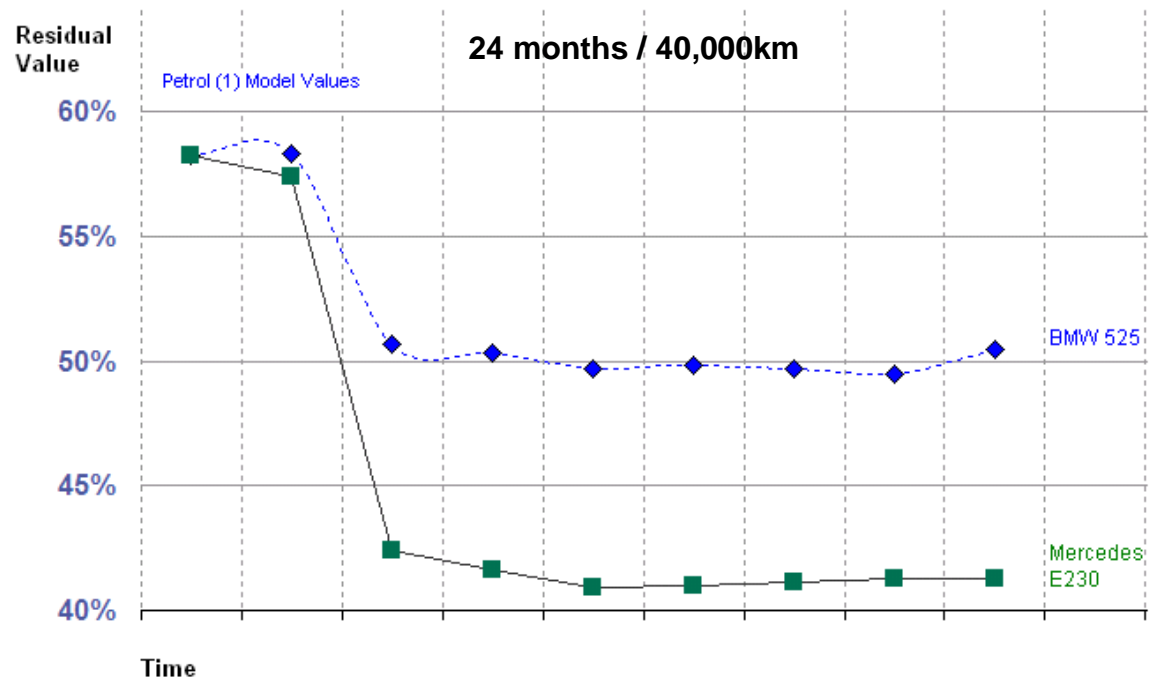
	Mercedes E 230 (204hp)			BMW 523i (177hp)			Audi A6 2.4l (177hp)		
	Spec.	2007 tax	2009 tax	Spec.	2007 tax	2009 tax	Spec.	2007 tax	2009 tax
Weight (kg)	1 620	11 288 €	11 117 €	1 545	9 778 €	9 574 €	1 600	10 885 €	10 705 €
kW	150	11 617 €	14 551 €	130	7 489 €	8 401 €	130	7 489 €	8 401 €
Capacity	2 496	9 597 €	0 €	2 497	9 607 €	0 €	2 393	8 585 €	0 €
CO2	238	0 €	13 505 €	174	0 €	3 149 €	233	0 €	12 644 €
<b>Total</b>		<b>32 502 €</b>	<b>39 172 €</b>		<b>26 874 €</b>	<b>21 123 €</b>		<b>26 959 €</b>	<b>31 750 €</b>
<b>% change</b>			<b>20,5%</b>			<b>-21,4%</b>			<b>17,8%</b>

- Expected effect of taxation on competitive products from 2009
- BMW lower CO2 engine provides substantial competitive advantage

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- Customers discount tax cost from used car residual value
- Potential development of residual values of BMW 525 and Mercedes E230

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*Carbon taxes must be uniform and predictable  
to encourage appropriate technical development and customer support*



# Influence of new drive train technology – example Lexus

## Lexus LS 600h



- Currently no strong presence on used car markets
- Disadvantages such as compromised boot space of some models (GS,LS) has brought some criticism
- Reduction of fuel consumption or CO2 emission only secondary within the Lexus model range

**Market launch Germany:  
August 31st, 2007**

## Lexus GS 450h



**Share GS 450h on total GS  
volume 2006: ca. 29%**

## Lexus RX 400h



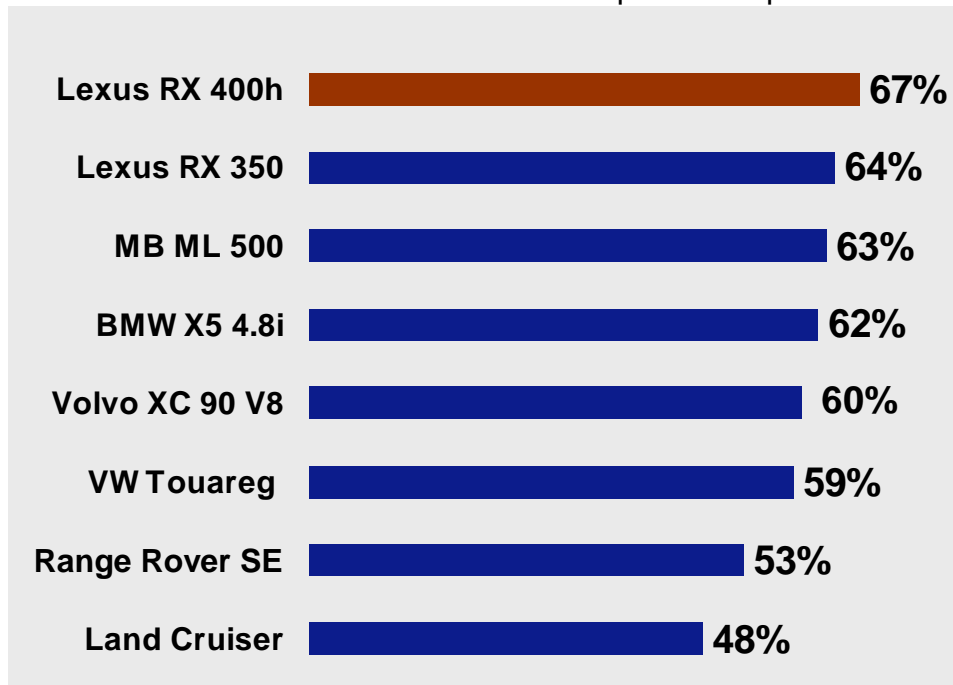
**Share RX 450h on total RX  
volume 2006: ca. 69%**

*Models appeal to early adopters with positive spill-over image effect on the rest of the Lexus model range*

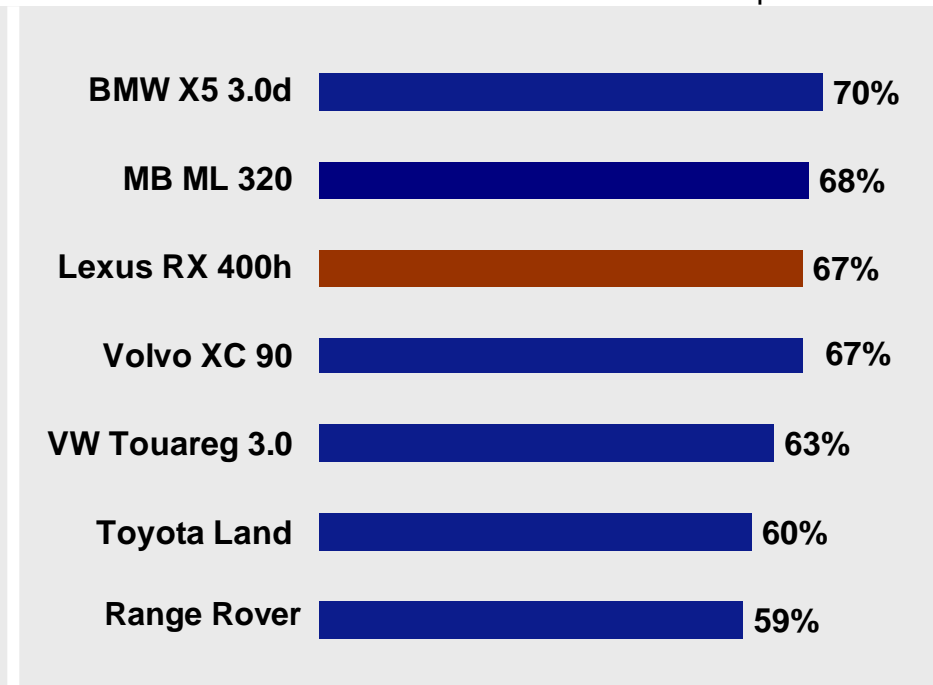
# Influence of new drive train technology – example Lexus

## RV prognosis Lexus RX400h in competitive environment (36 months / 60.000 km)

Lexus RX vs. petrol competitors



Lexus RX vs. diesel competitors



RV's of Lexus hybrid strong, especially compared to petrol competitors

## Conclusion

- Coordinated and predictable European tax framework is essential
- Must be developed with a long term perspective, encouraging innovation
- Customers will adopt, and pay for, clean technology which they understand
- Customers seek lowest total cost of ownership, more than ever
- Depreciation minimisation is critical, and a competitive advantage



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