



Alternative Motor Technology II

AUTO BILD Advertising Department

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1. The Idea and the Instrument
2. The Eco 2.0 Trend – What has become of it?
3. Focussing on CO²
4. Strengths and Weaknesses of Gas & Hybrid Technology
5. Summary

1. The Idea and the Instrument

The Idea and the Instrument

- **The Idea:** The AUTO BILD brand is synonymous with rapid and relevant reporting on automotive topics. AUTO BILD is also able to provide relevant, up-to-date market research, with the AUTO BILD market barometer.
- **The Instrument:** The AUTO BILD market barometer is a representative online survey. Each phase is based upon at least 1,000 interviews with German motorists. The AUTO BILD market barometer regularly deals with the subjects that are currently on the minds of Germany's motorists.



Research Profile

- **The Population:** Men and women, online users. Aged between 18 and 59, with a car in the household they drive themselves.
- **The Institute:** For the market barometer AUTO BILD has engaged the services of the online panel of the prestigious **Infratest** market research institute.
- **The Research:** Representative sample with n=1,315 respondents, consisting of 1,005 men and 310 women.

Field time from 10th to 30th August 2007.



The Subject

In 2006, the subject of “alternative motor technology” was still a peripheral phenomenon in the communications put out by the automotive manufacturers. Only the Japanese were an exception in this respect and placed hybrids at the focus of their marketing strategies.

In 2007, the subject of alternative motor technologies was the primary theme of the IAA. Due to the political debate, at the moment it is unthinkable that it could disappear from communications.

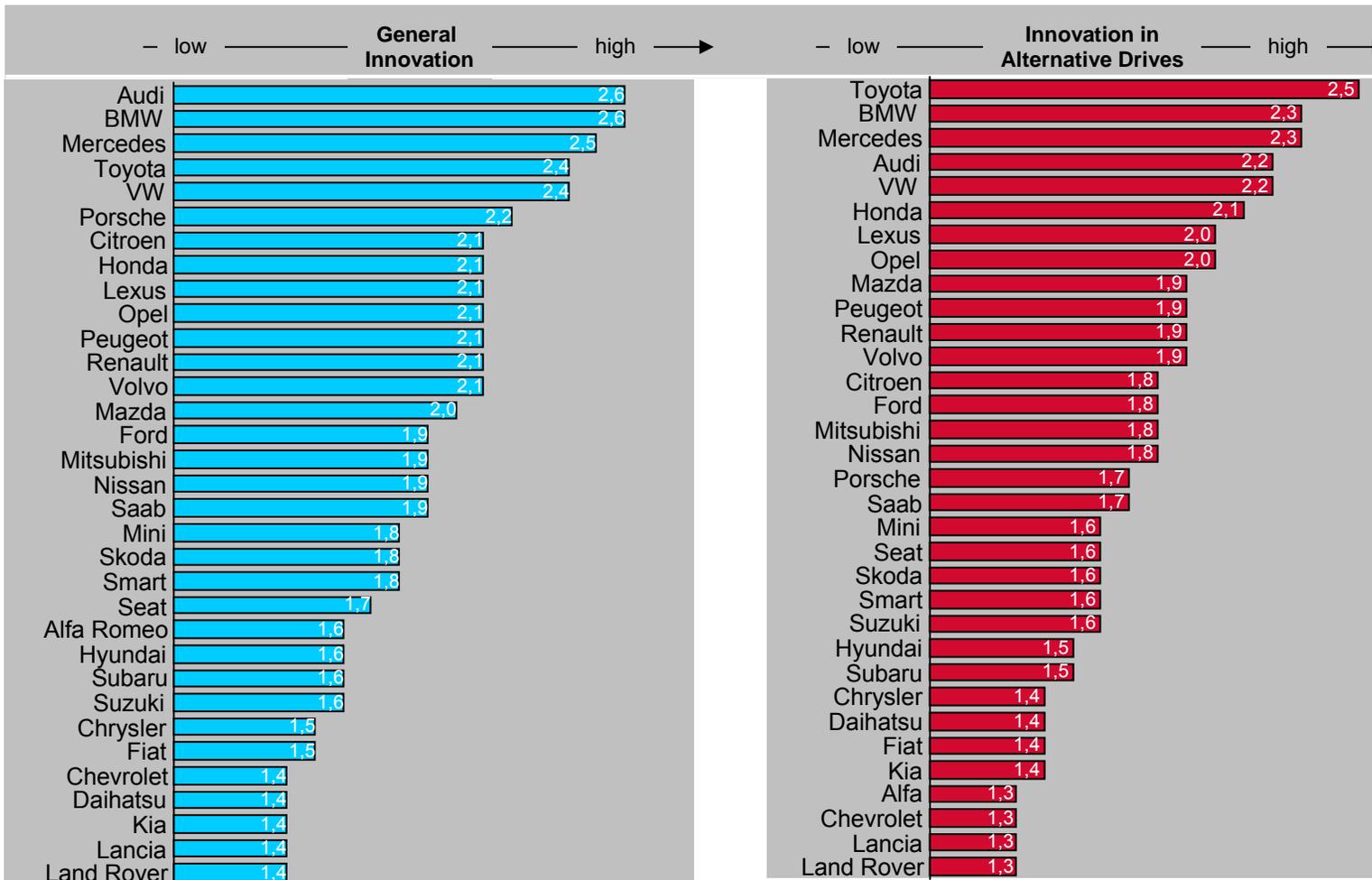
Our first study showed that the subject of alternative motor technology was of surprisingly high relevance. But was lip service simply being paid? In the second, extended phase, we posed critical questions.

Is Eco 2.0 simply a theory, or are consequences which will result in action already emerging?

2. The Eco 2.0 Trend – What has become of it?

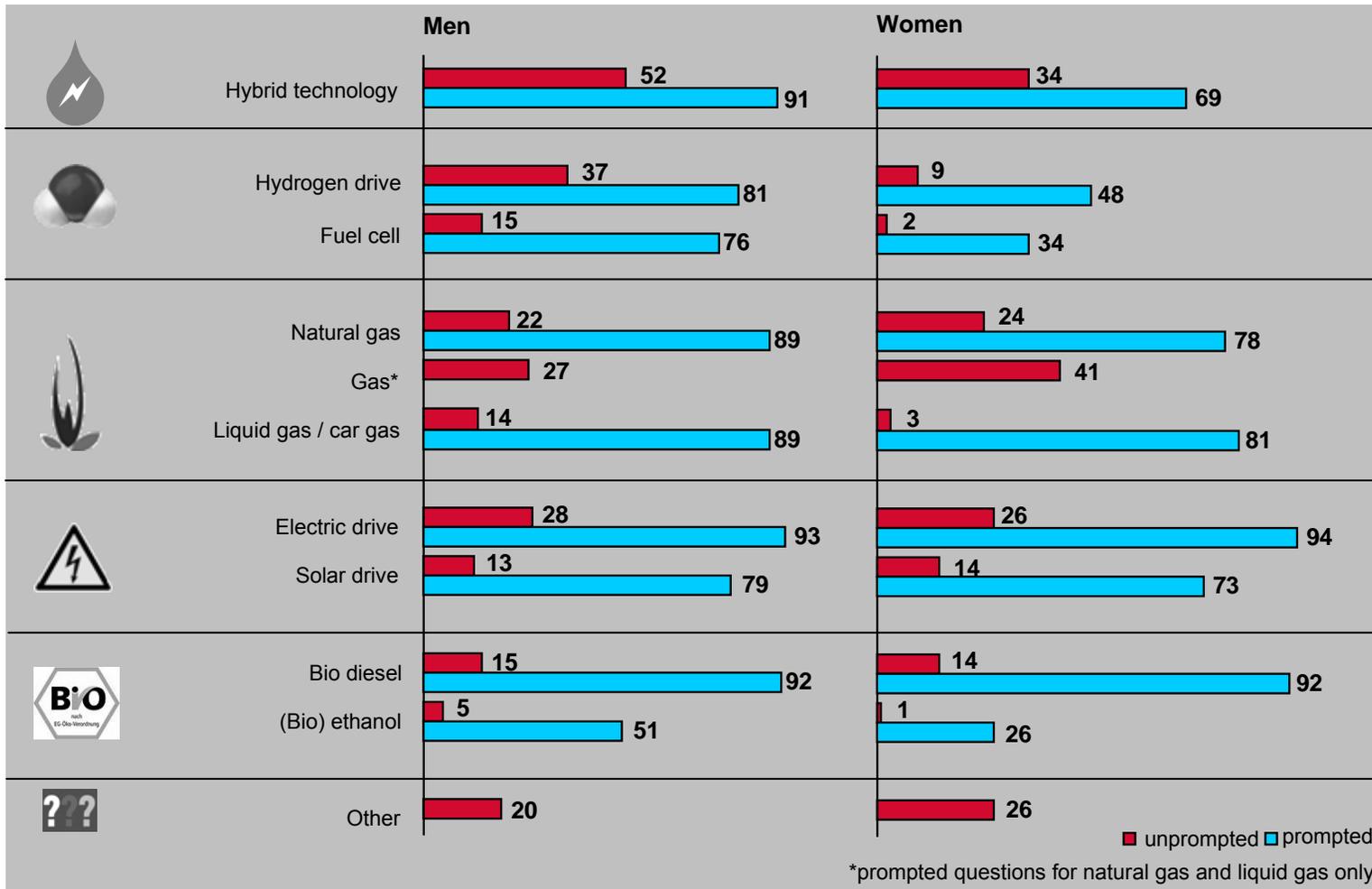
How Innovative are the Automotive Manufacturers?

The eco image of the brands remains stable. Toyota and Honda are building their expertise.



Question: In terms of innovation and technologies fit for the future in the automotive sector, how would you estimate the degree of innovation of the individual automotive brands? Scale from 1 = low degree of innovation to 3 = high degree of innovation. Base: men, judged brand. Question: And how do you rate the competence of the individual car manufacturers in implementing alternative motor technology concepts? Scale from 1 = low level of competence to 3 = high level of competence. Base: men, judged brand.

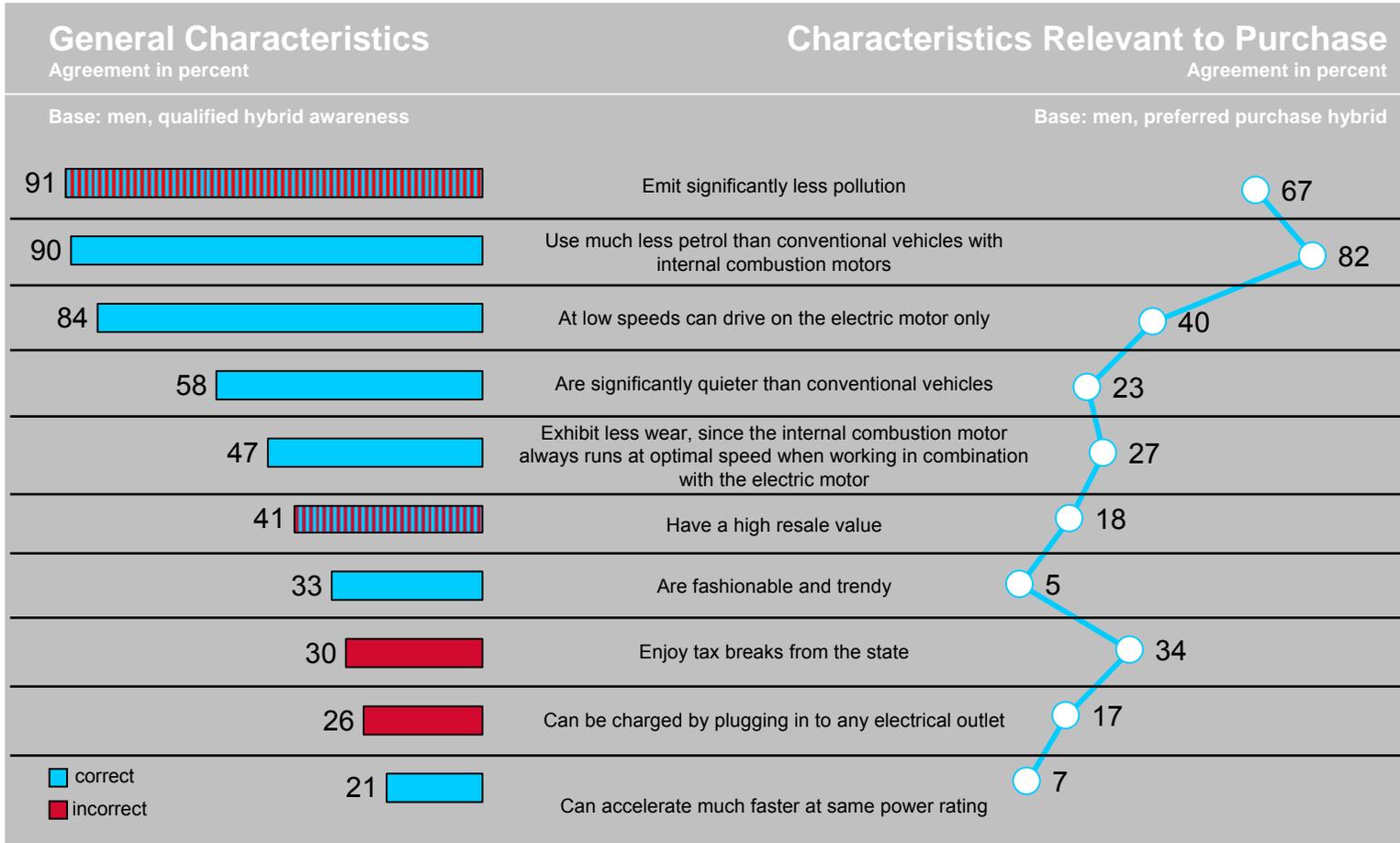
Which Alternative Motor Technologies Are Drivers Familiar With?



Hybrid remains at the front of people's minds. What are the decisive benefits?

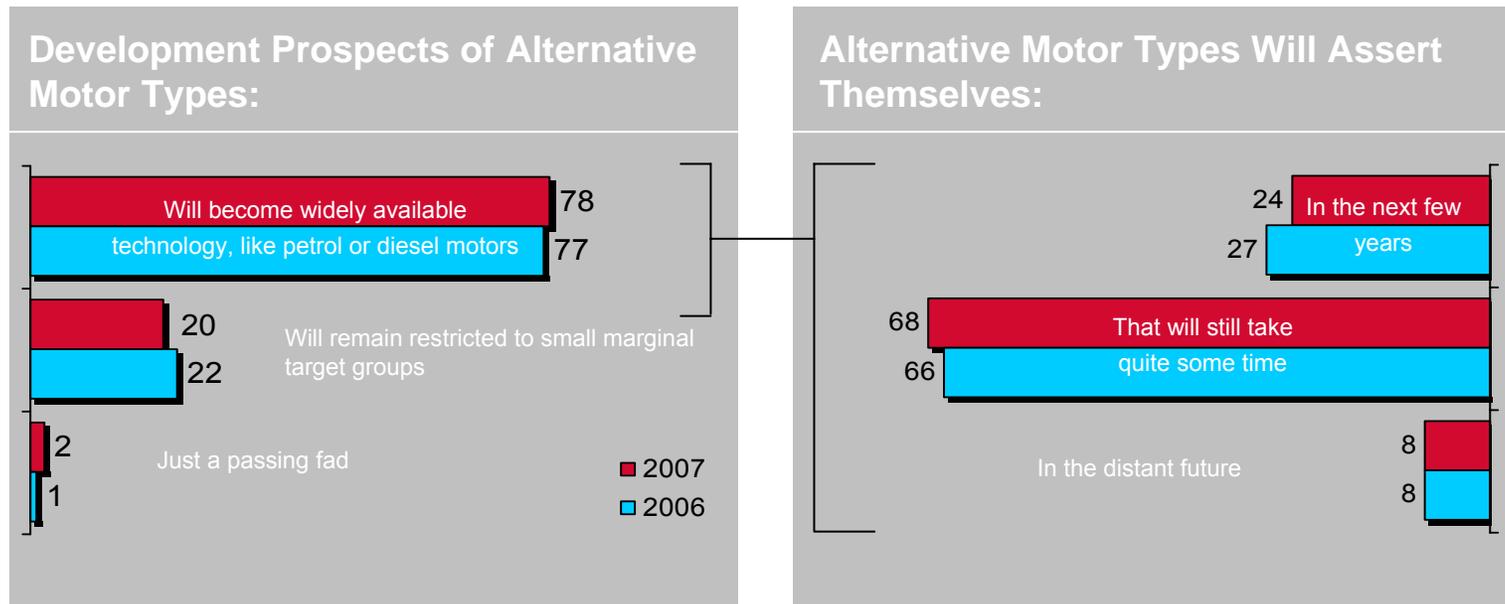
Question: In addition to conventional motor technologies such as petrol and diesel motors, alternative types of motor and fuel are increasingly coming to the attention of the public. Which alternative forms of motor technology can you spontaneously think of? Multiple answers possible, base: men, numbers are percentages. Question: It is sometimes difficult to think of all of them straightaway. Which of these alternative forms of motor technology have you heard of, or read something about? Base: men, numbers are percentages.

Hybrids: Image and Strengths



What are the future prospects for alternative motor technologies?

Future Prospects of Alternative Motor Technologies

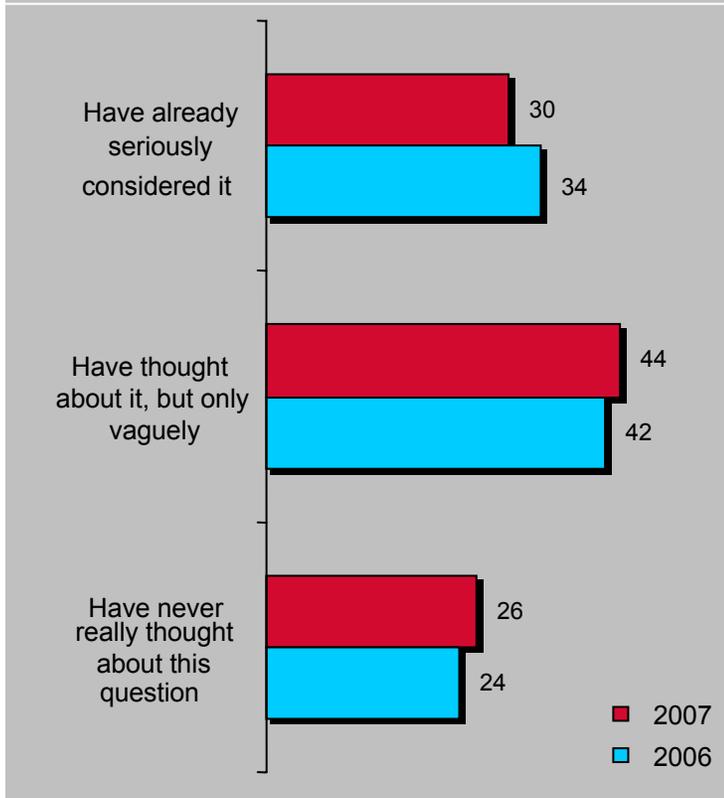


- Continuing positive future prospects for Hybrid & Co: more than three quarters of German motorists think that alternative motors types will assert themselves.
- However, in the respondents' view, this will still take some time.

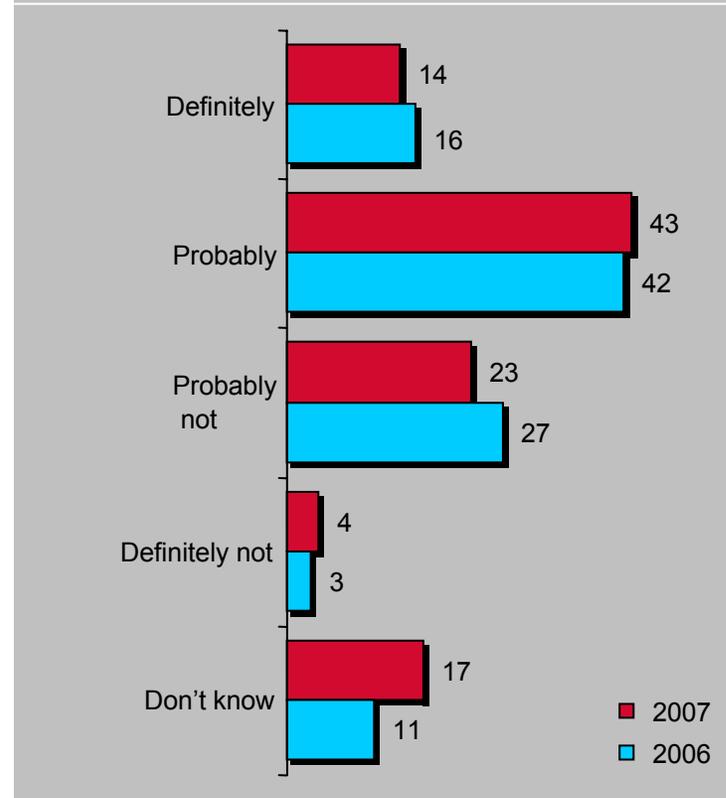
Is this simply a positive attitude, or is an intention to purchase already emerging?

Market Prospects of Alternative Motor Types

Driving a Car with Alternative Motor Technology Yourself:



Purchasing a Car with Alternative Motor Technology Next Time:



The market prospects for alternative models are stable.

Has the discussion on CO² made motorists unsure, or has the attitude towards alternative motor technologies changed?

What Do Motorists Think About Alternative Motor Technologies?

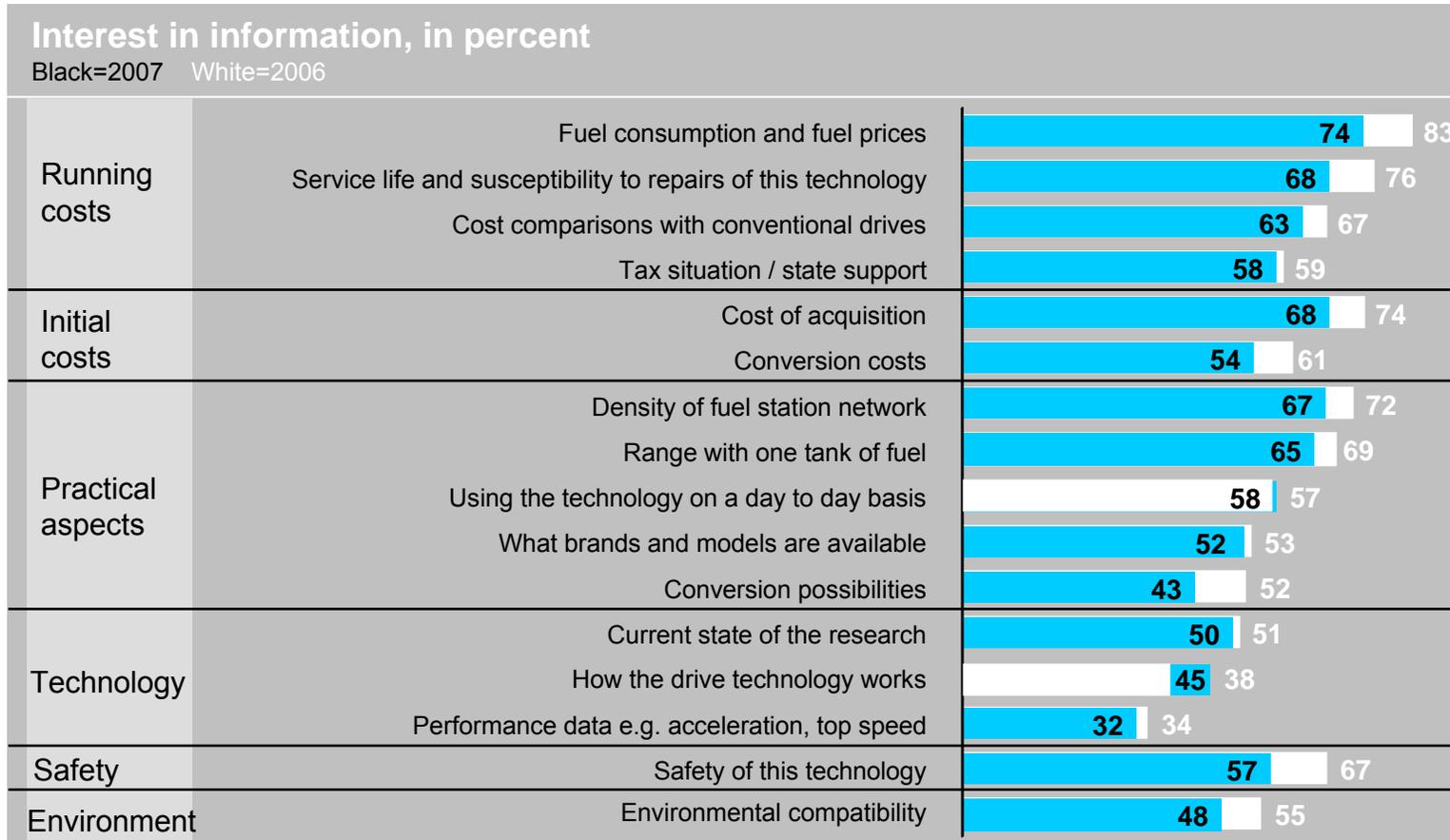
Agreement in percent		comparison with 2006
If we need to reduce our dependence on oil, we cannot get round developing alternative motor technologies.	97	
Alternative motor technologies are environmentally friendly.	93	-3%
The development of alternative motor technologies should be promoted by the state e.g. through tax breaks.	93	
You sometimes get the impression that car manufacturers are delaying getting into alternative motor technologies or are doing it only half heartedly.	92	-3%
The oil companies ought to be obliged to also offer alternative fuels at all of the larger petrol stations.	90	-3%
Someone with a car based on alternative technology can save a lot of money in running costs.	76	
Before I change to alternative motor technology, I will wait and see which technology asserts itself in the market.	76	
If this protects the environment, I would be willing to spend a little more money on alternative motor technologies.	67	
The environmentally friendly effect of alternative motor technologies is often overstated.	39	+6%
I drive used cars only. That is why car models based on alternative motor technologies are not yet so relevant for me.	36	
The latest diesel technology is just as good as alternative motor technologies.	32	
I prefer fast cars. Cars based on alternative motor technologies are not zippy enough.	22	
As far as I am concerned, cars based on alternative motor technologies are not proper cars.	9	

Alternative motor technologies continue to enjoy a positive image – but in the meantime, evaluation is more differentiated.

Which criteria are becoming more interesting in the evaluation of motor concepts?

Question: Here is a list of statements on the subject of "alternative motor technologies". For each statement, please check the box to say whether you agree with it fully and completely, agree with it to a great extent, do not really agree with it, or do not agree with it at all. The highlighted differences are significant at the 90% level. Selection: agree fully and completely / to a great extent. Base: men.

What aspects of AMT are motorists interested in?



- The motorists' general requirement for information on alternative motor technologies is decreasing.
- The growing interest in technology is conspicuous.

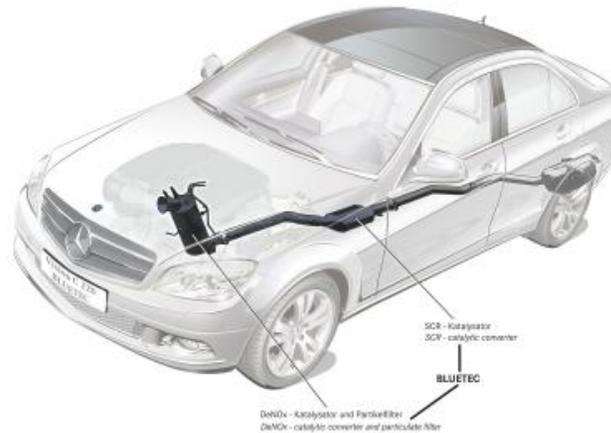
Interim Findings

- The positive attitude of Germany's motorists to alternative motor technologies has been confirmed.
- The level of knowledge is high, the awareness of alternatives is there.
- Hybrid technology is at the front of everyone's mind.
- Germany's motorists can see alternative motor technologies asserting themselves on a broad front, but the majority do not expect this to happen for several years to come.
- People continue to be convinced of the environmentally-friendly effect of alternative motor technologies, but are increasingly viewing this as exaggerated.
- As the discussion on CO² progresses, the alternatives are becoming more and more diverse. Willingness to purchase is stagnating. The general requirement for information seems to be increasingly satisfied. Equally, the motorists' interest in how the various motor technologies actually work is increasing.

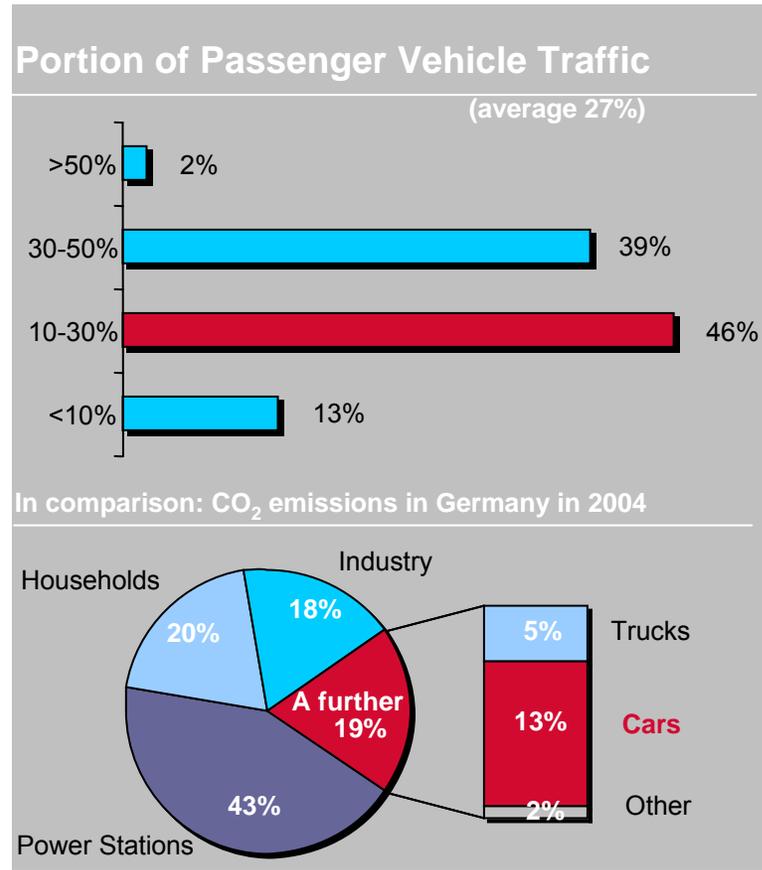
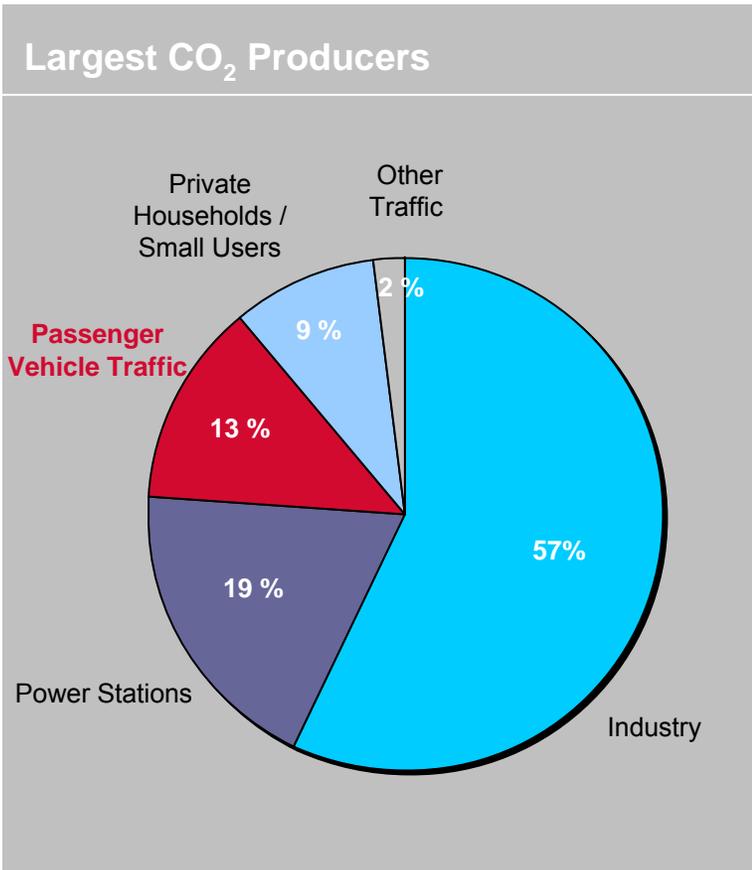
3. Focussing on CO²

The CO² Debate

- The environmental debate is changing: over the last few months, the automotive sector has focussed on CO².
- Now all of the alternative technologies can be compared with one another and with conventional motors.
- This has been recognised by the manufacturers and that is why CO² has become an essential element of every communication.



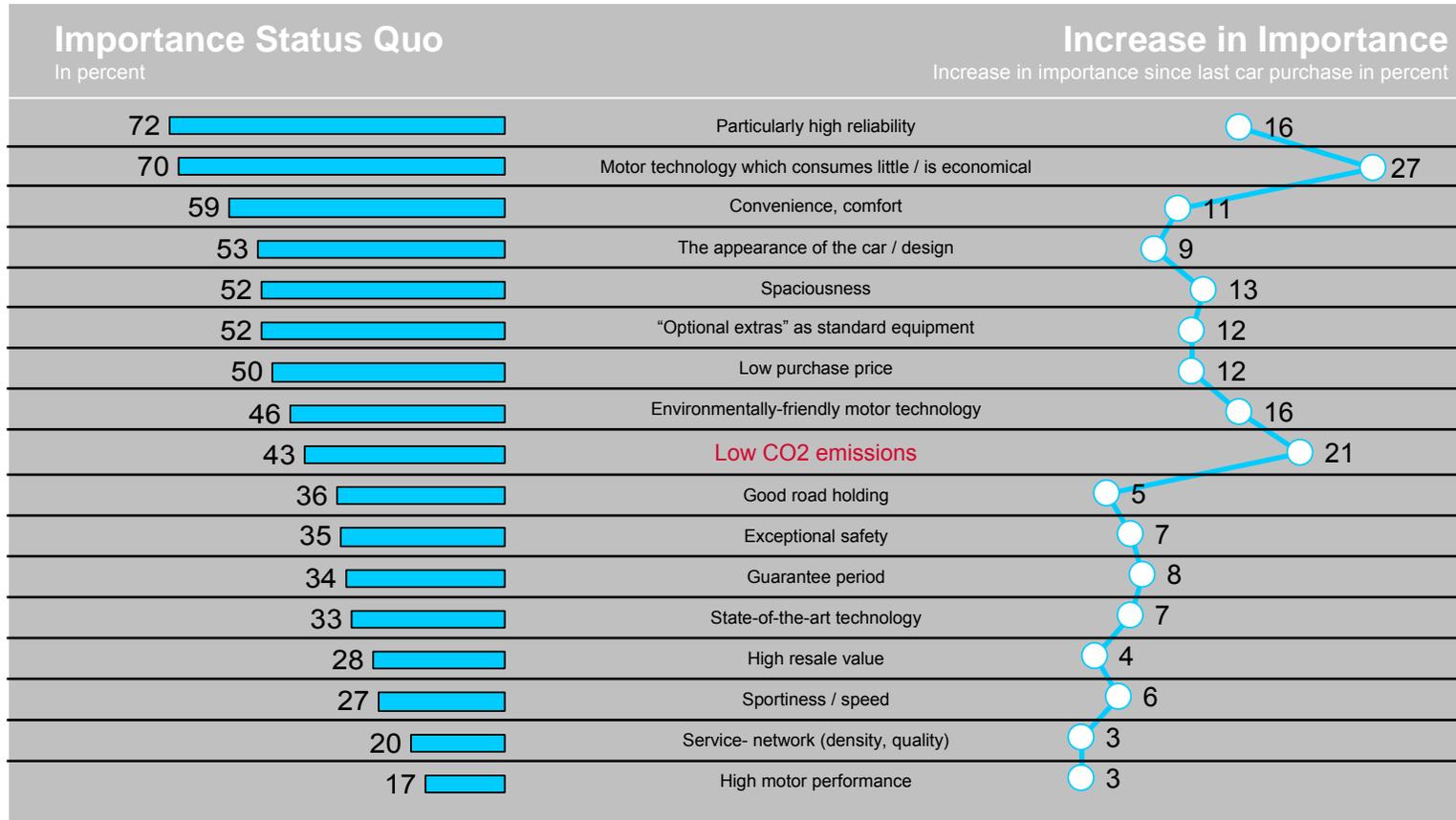
Who is the Largest CO₂ Producer of Them All?



- The role of the car as an environmental polluter is broadly overestimated.
- 13% see passenger vehicle traffic as one of the major producers of CO₂.

So what role do CO₂ emissions play in the process of purchasing a car?

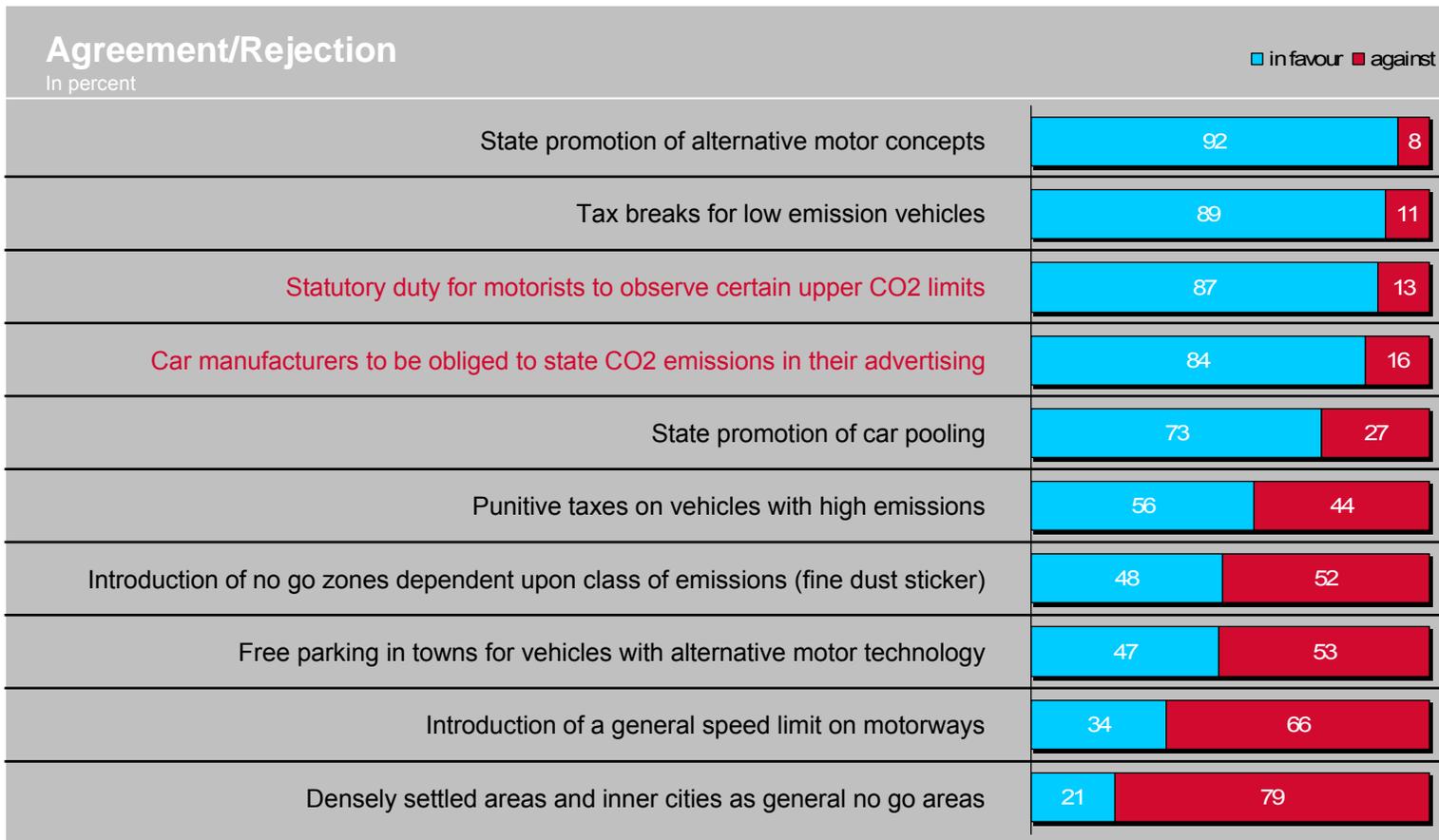
How Important is CO² in the Purchase Decision?



- CO² emissions and economical motor technology are becoming increasingly relevant.
- The economy of the motor technology is more important than environmental compatibility.

How willing are motorists to do something for the environment personally?

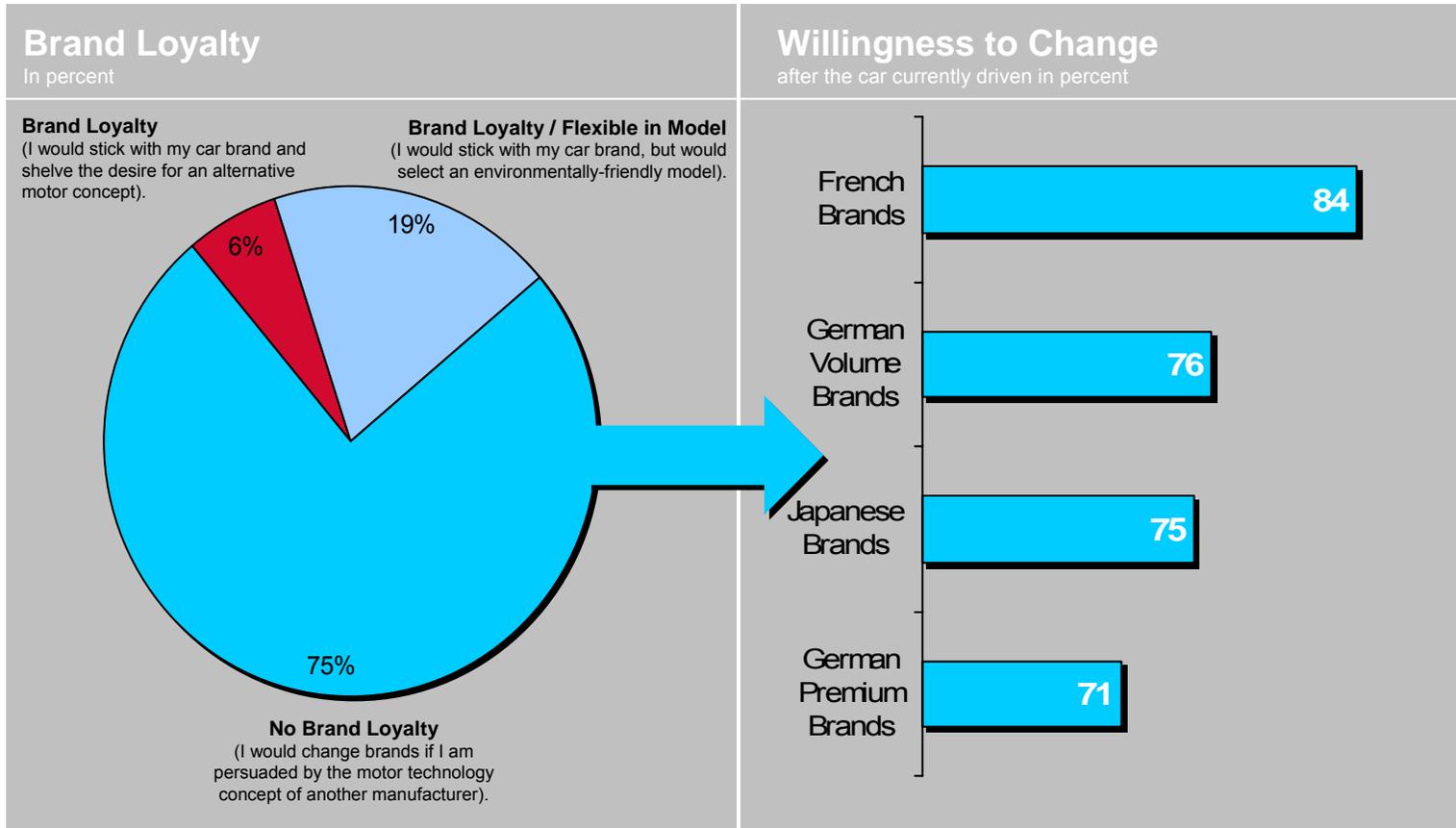
CO² - Who Should Do What?



Motorists view state regulation and prohibition with mixed feelings: they do not mind if industry is given responsibilities, as long as their own driving is not restricted!

Would German motorists abandon their own brand of vehicle for the environment?

What Part Does the Car Brand Play?



- Those who are seriously interested in alternative motor technology would also be willing to change brands.
- The most likely to remain loyal to their brands are those driving German premium brands.

Interim Findings

- The share of the CO² emissions produced by passenger vehicle traffic is broadly overestimated by German motorists.
- Over 20% of respondents pay more attention today to lower CO₂ emissions than at the time of their last car purchase. In addition, the relevance of economical motor concepts is increasing.
- Motorists primarily view the politicians as being responsible for concrete action. On the subject of restrictions to their own freedoms, they are more reserved.
- When alternative motor technology is under consideration, then three quarters of the respondents could imagine changing brands.



4. Strengths and Weaknesses of Gas & Hybrid Technology

Gas versus Hybrid

- The current range of alternative motor technologies is concentrated on gas and hybrids.
- As a first step, the car purchaser is confronted with the question of staying loyal to the conventional, tried and tested petrol and diesel motor concepts, or buying a vehicle with alternative motor technology.
- In a second step, he needs to decide whether the alternative is to be gas driven, or a hybrid.
What are the decisive criteria here?
- We asked potential buyers of alternative motor technologies what criteria are important when purchasing gas driven or hybrid vehicles. In addition, the influence on the buying preference was calculated.



Criteria

The following criteria form the basis of the strengths/weaknesses analysis:

Costs

- Low fuel costs
- Economical purchase price
- State promotion/tax breaks
- High resale price

Environment

- High degree of environmental friendliness

Practical Considerations

- A well established network of fuel stations
- A variety of models
- Simple operation
- Spaciousness/comfort
- Simple maintenance

Technology/Sportiness

- Sportiness/speed
- Driving pleasure
- Technology fit for the future
- Fully developed, tried and tested technology



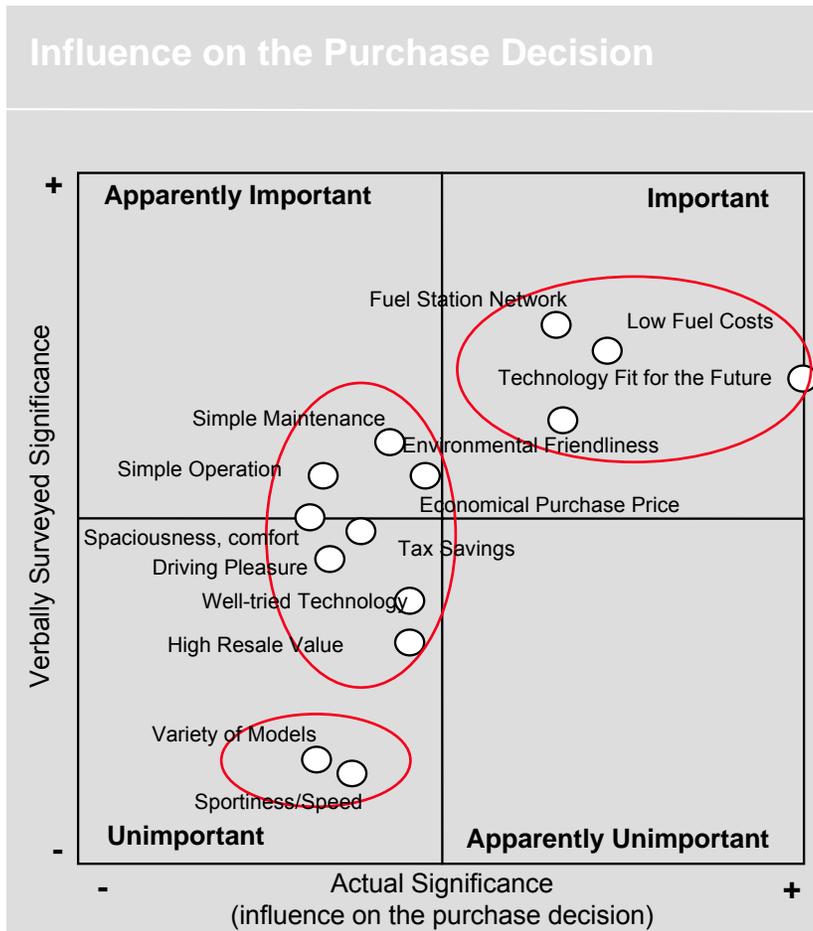
Strengths/Weaknesses Analysis: Theory

+ Verbally Surveyed Significance	Apparently Important	Important
	Judged to be important, but with little influence on the purchase preference. Thus high communication relevance, but with little actual influence on the purchase decision. No weakness allowed.	Customers are conscious that these are important and they actually are important: high relevance to strategy
-	Criteria are neither important in the customers' consciousness nor are they actually important.	The customers are not (yet) aware of the actual importance of the criteria. These are strategic but absolutely important.
-	Unimportant	Apparently Unimportant
	- Actual Significance (influence on the purchase decision) +	+

- The significance of the criteria was directly surveyed **verbally** (y axis).
- For the **actual** significance, the evaluation of the individual dimensions was placed in relation to the willingness to purchase gas/hybrid (x axis).
- This results in a **strategic 4 field portfolio**.
- The symbol of an item shows its performance and contributes to the strengths/weaknesses analysis:
 - above average
 - neutral
 - ▲ below average

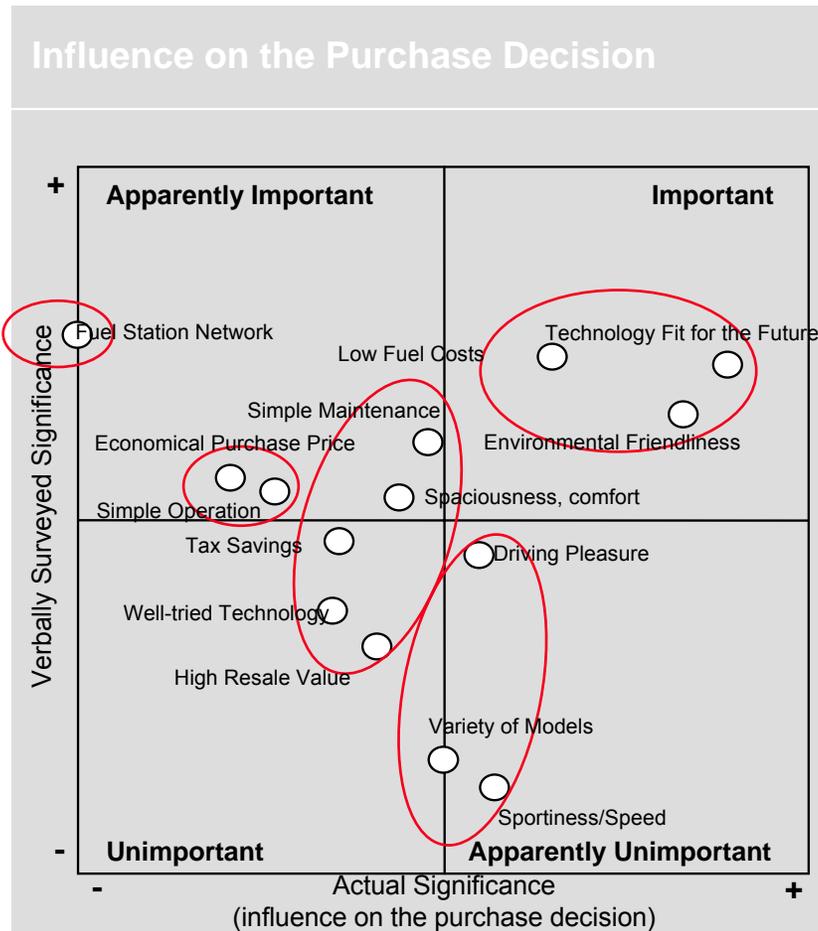


Strengths/Weaknesses Analysis of Gas Driven Vehicles



- Motorists take a realistic view: that which is important to them influences the purchase decision, that which is unimportant has no actual significance.
- The largest motivator is “technology fit for the future”. In addition, the questions of fuel and environmental friendliness are both highly relevant.
- Road performance and price aspects are of medium relevance.
- At first glance, the practical component appears important, but is of secondary importance for the purchase decision.
- The fascination of the automobile is furthest from the focus (variety of models and sportiness).

Strengths/Weaknesses Analysis of Hybrid Vehicles

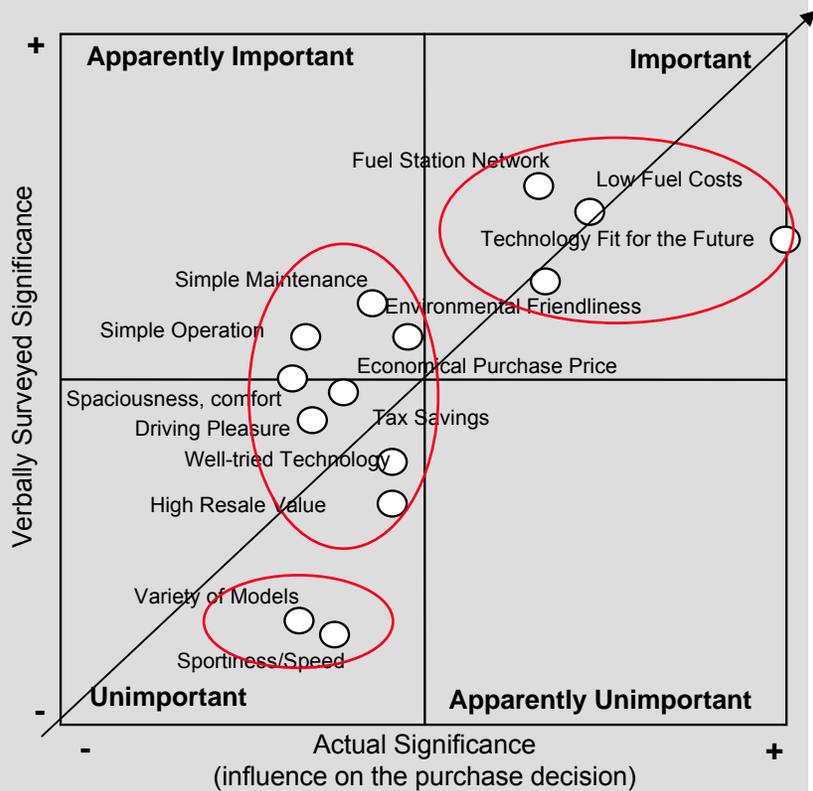


- The individual items are more widely spread. There are criteria which are only apparently important, as well as criteria whose actual influence on the purchase decision is greater than the questioned significance.
- When making a decision for the hybrid, environmental friendliness is even more in focus than with gas, and together with technology fit for the future is the major motivator. Low fuel costs are central to both motors.
- In contrast to gas, when making the decision on hybrids, lifestyle components such as driving pleasure, sportiness and variety of models are rather more decision relevant.

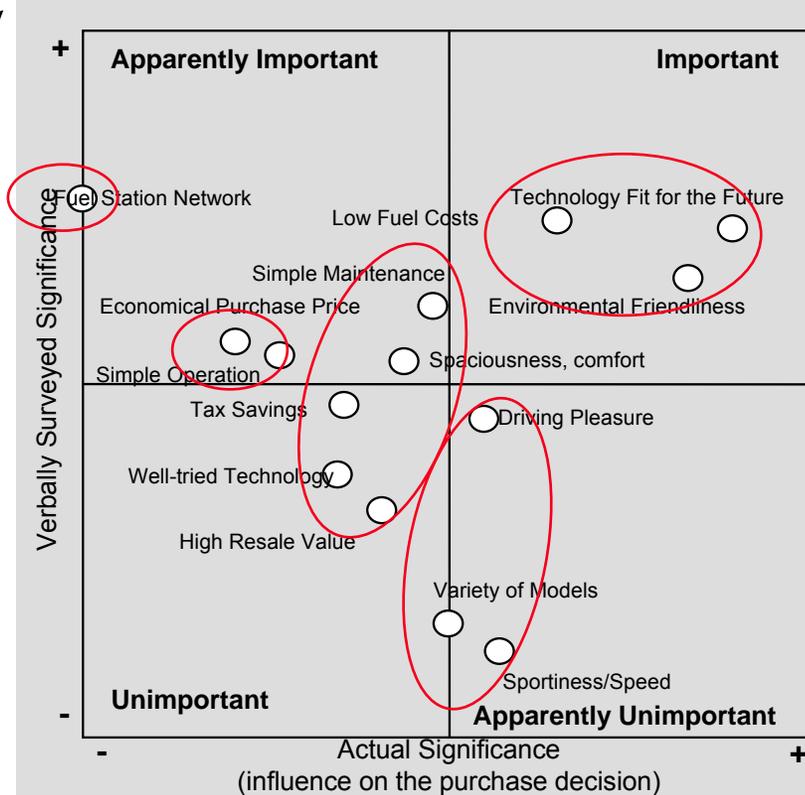
Y axis: question 35: Listed here are a number of criteria, which might play a part in the decision for a vehicle with alternative motor technology. Please tick the box to show how important these are to you. X axis: Correlation of the criteria with the willingness to purchase a vehicle with alternative motor technology. Symbols: Please evaluate to what extent the various motor types satisfy the aspects in question. Please give a mark from 1 to 6, where 1 is the best and 6 the worst. Base: men.

Strengths/Weaknesses Analysis of Gas vs. Hybrid

Gas: The Realists



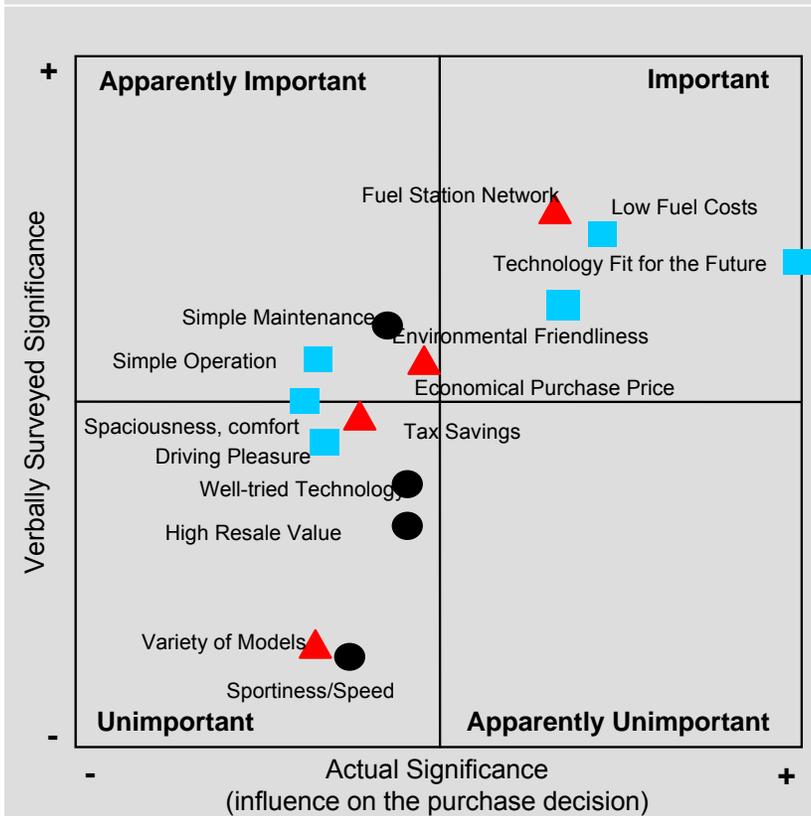
Hybrid: Die "LOHAS"



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Strengths/Weaknesses Analysis of Gas Driven Vehicles

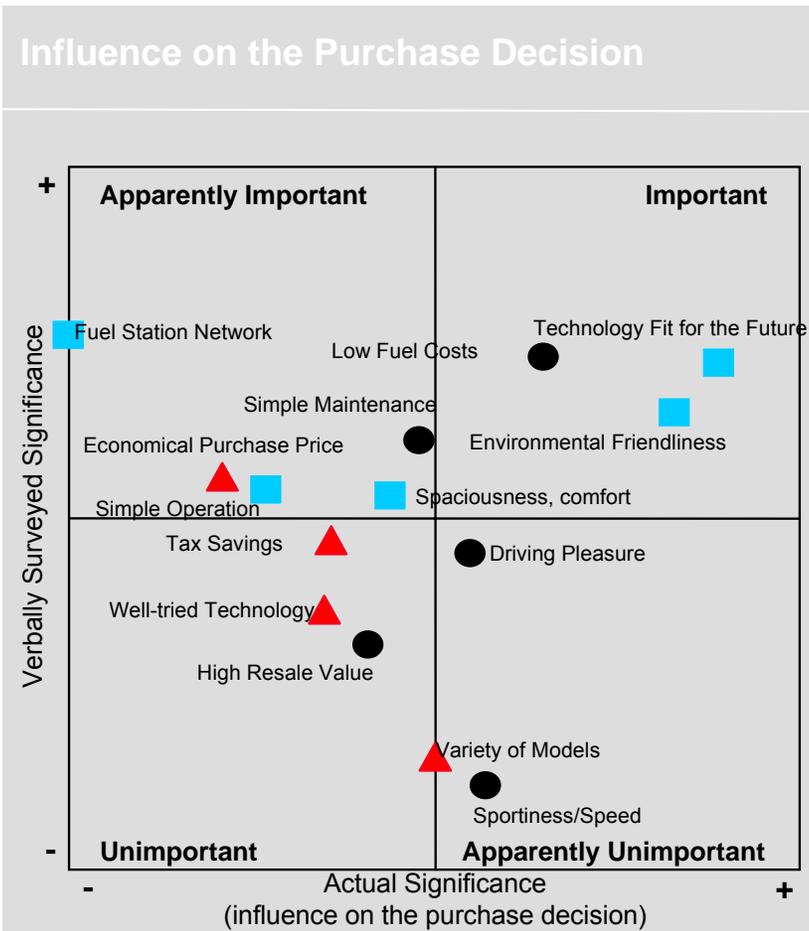
Influence on the Purchase Decision



- Overall a very positive picture emerges – most of the motivators were rated as above average.
- In the case of gas, only the fuel station network presents a problem. Action needs to be taken on this.
- Even though the purchase price is positioned with the apparently important criteria, the manufacturers should not rest on their laurels.

- above average
- ▲ below average
- neutral

Strengths/Weaknesses Analysis of Hybrid Vehicles



- The greatest strengths are “technology fit for the future” and environmental friendliness.
- There are not really any great weaknesses. The most negative criterion was considered to be the purchase price.
- In the case of hybrids, the preferences are strategically very well balanced. Action is required on the cost and lifestyle components.

- above average
- ▲ below average
- neutral

Interim Findings

- Similar motivators are valid for both the gas and hybrid alternative motor technologies. These motors are viewed as being technologies fit for the future and as being environmentally friendly.
- In the view of German motorists, the currently thinly spread fuel station network will be critical to the success of gas vehicles.
- By its very nature, the hybrid does not suffer from this problem. The potential of the hybrid is in driving pleasure and sportiness.



4. Summary

Summary

- The results from 2006 were confirmed. The image of the brands remains largely stable. The Japanese manufacturers Toyota and Honda are extending their lead in alternative motor technologies.
- The degree of knowledge remains at the same high level, the attitude towards alternative motor technologies is positive, as before. The requirement for general information is decreasing. From the great variety of eco concepts, now only concrete technology is called for.
- The CO² debate has left its mark. The relevance to purchase decisions has increased strongly.
- Similar motivators for the purchase decision are valid for the two alternative motor technologies which are marketed the most. In the case of gas, the infrastructure of gas filling stations needs to be improved. For hybrids on the other hand, the potential lies in the lifestyle components.



Appendix

Socio-Demographics of the Participants

