The German passenger car industry consists of six major companies: Volkswagen, BMW, DaimlerChrysler, Porsche, Opel and Ford. I am sure that you are familiar with them. I will just mention a few important data.

Volkswagen was founded by the German state in 1937, but production of the “people’s car” designed by Ferdinand Porsche didn’t begin until after the Second World War. Today, the land Lower Saxonia still owns 20% of Volkswagen. Another 10% is owned by the state of Kuwait. The headquarters of Volkswagen are in Wolfsburg, a town which grew around the Volkswagen plant. Wolfsburg is one of the largest automobile production sites in the world. As a partly state-owned company, Volkswagen has a long tradition of social responsibility. It has good relations with the social-democratic government of Lower Saxonia (before he became chancellor for all of Germany, mr. Schroeder was prime minister of Lower Saxonia). It is the only major employer in the region. Volkswagen is the leading brand of the Volkswagen Group which includes also the brands of Audi, SEAT and Skoda as well as the luxury/sports brands Lamborghini, Bugatti, Bentley and Rolls Royce (until 2002).

BMW was founded in 1916 as an engine manufacturer (BMW stands for Bavarian Motor Works). Its headquarters are in Munich, the capital of the land Bavaria. It started to manufacture cars before the war, but these production facilities were located outside Bavaria, in the part of Germany that was occupied by the Soviet Union. BMW started manufacturing cars in Bavaria in 1952. Since 1959 the Quandt family has a controlling interest in BMW (and in several other major companies). The corporate culture is in line with the Bavarian roots of the company: relatively closed, with a preference for traditional values of the Bavarian countryside.

DaimlerChrysler is the result of a merger between Daimler-Benz and Chrysler in 1998. Daimler-Benz was itself the result of a merger between two of the oldest car manufacturers in the world in 1926. For the German part of DaimlerChrysler, the most important brand is Mercedes-Benz, but there is also the small car brand Smart and in 2002, the super luxury brand Maybach will be launched. The culture of the company is one of social conservativism, much in line with the social and political culture of the land Baden-Württemburg, in which its headquarters are located (in Stuttgart). Ownership of DaimlerChrysler is relatively widely distributed, with Americans currently owning approximately 10% of the shares.
Porsche is much smaller than the other manufacturers. It was founded by Ferdinand Porsche in the 1930s and is now owned by the families Porsche and Piëch. The present chairman of the Volkswagen Group, Ferdinand Piëch, is therefore one of the owners of Porsche. The company sells sports cars and engineering services. It is also located in Stuttgart, close to the Mercedes factories, but it has traditional links with Volkswagen.

Adam Opel founded his company in 1862 and his successors started to manufacture cars in 1898. In 1929, Opel was bought by General Motors. The company headquarters and major production facilities are located near Frankfurt, in the land Hessen.

Ford Werke was founded by Ford in 1925. Since 1931, its headquarters and major production facilities are located in Cologne, in the land Northrhine-Westfalia. In recent years, Ford’s European headquarters were also moved to Cologne.

Germany is a federal state. Many aspects of social, economic and educational policy are the decentralized responsibility of the governments of the different lands. With the exception of Porsche and DaimlerChrysler, each car manufacturer has its headquarters in a different land. To some extent, therefore, each company has its own government to deal with and if necessary to represent its interests at the national level.

In my presentation I will concentrate on the four manufacturers, which are wholly or mainly German owned. Over the past 20 years, the share of these four manufacturers in total production of cars in Germany has slowly increased from 60% to about 70%. Their share in the West-European market has fluctuated between 32 and 37% (excluding Skoda and SEAT). I will not say much about the subsidiaries of Ford and General Motors, but it should be clear that they are also important players both as manufacturers and as parties on the European market. The fact that they are located in Germany is a reflection of the strength of the German automobile industry. Many Germans and many people working for these two companies consider them as German companies, probably more so in the case of Opel than in the case of Ford.

Let us now turn to the position of the German manufacturers on the European market. It should be noted that the European market for passenger cars is larger than the markets of North America and Japan put together (this is partly due to the very high share of light trucks on the North American market). In 1999, 15,045,000 passenger cars were sold in Western Europe (the 15 members of the European Union, Norway and Switzerland). If we add Central and Eastern Europe and Turkey, the market increases to 17,469,000 cars in 1999. The German market accounted for 3.8 million cars in 1999, or about 25% of the West European market.

The share of the four German car manufacturers in the West-European market has slowly increased over the past 15 years. If we would include Skoda and SEAT, the share of Volkswagen would of course be considerably higher in the 1990s. The increasing market share in Europe cannot be explained by the market share on the home market, but on the contrary by increasing market shares in other countries. The European market consists of many national markets with quite distinct characteristics. In all of these countries, the share of the national manufacturers has been decreasing and the share of the German manufacturers...
has been increasing. These pictures also show how different the preferences in these national markets still are.

I think that it is safe to conclude that the German car manufacturers have done quite well over the past twenty years. They have been able to maintain or improve their position in the face of high and increasing competition.

**What explains the apparent success of the German car manufacturers?**

There are many explanations that point to the favorable influence of German national traditions and institutions. First, there is a strong system of vocational training, based on apprenticeship in companies (but the training is not company-specific) and co-managed by unions and employers. Secondly, workers through the freely elected workers’ councils have legal rights of co-determination on many policy issues in the company. Unions are also represented in the supervisory boards of the companies. Thirdly, there is a long tradition of engineers taking top management positions. There are no business schools in Germany, but at the technical universities, students can follow courses in business administration. These institutions have resulted in a high skill, high wage, high commitment economy with a relatively mobile workforce (with generally recognized training certificates), highly trained first line supervisors and engineering-dominated management.

If these factors can explain the success of the German manufacturers, why is it that the subsidiaries of Ford and GM have been less successful in the past decade? I would suggest that this depends on company strategies. The German traditions and institutions are only supportive of success, if a company makes use of them in an appropriate way. It is my hypothesis that during the past decade, the American headquarters of Ford and GM have imposed policies on their German subsidiaries, which did not make adequate use of the strong points offered by the German environment. The American manufacturers, and especially Ford, have concentrated too much on global economies of scale, instead of focusing on the high skill, high quality, high engineering traditions of the German industry.

I would suggest that most problems of strategic management in the passenger car industry can be understood in terms of scale and scope. Scale refers to the long-standing tradition of the industry to reap economies of scale by making large numbers of more or less the same product. Economies of scale are expected to result in low prices and therefore a high market share. Of course, since the days that General Motors took over Ford’s leading position on the American market in the 1920s, we know that scale is not the only thing that counts, but it cannot be denied that the car industry is still an industry governed by the logic of mass production. The logic of mass production is still one of the main forces behind the globalization of the industry. Behind such concepts as the “world car” is the idea that there are important savings in making one car for many different markets. Scope on the other hand refers to the ability to make many different and new products. Not one car for many different markets, but different cars for different markets. By making different products for different types of customers, a high market share can be achieved in spite of the fact that economies of scale are not or only partially realized. The willingness of customers to pay for the costs of product differentiation and innovation increases with rising incomes. The number of market segments and niches is constantly increasing. Of course, product differentiation cannot be an
excuse for a neglect of costs and productivity, but there is an important difference if a company looks for competitive advantage in scale and costs or if it competes on the basis of product differentiation and innovation.

In his famous study of the automobile industry, William Abernathy argued in 1978 that the American manufacturers had focused so much on productivity and costs that they had lost the ability for product innovation. He called this the "productivity dilemma". Abernathy warned that competition by innovation would become more and more important. Therefore, the Americans would have to find a way out of their productivity dilemma. In his view, the European manufacturers had been much stronger in product innovation, but they had not been able to achieve the levels of productivity of the American industry. An important reason for this difference in the development paths of the American and European industries was the difference in size of the markets. The European market was fragmented, whereas the North American market was a single and homogeneous market. The fact that the Americans were more productive than the European manufacturers did not have much impact on competition in Europe, because the American passenger cars were not sold in Europe. Ford and GM made European cars in Europe and American cars in the United States. Both companies found it very difficult to make small cars in the United States, when they wanted to (in the 1970s), in spite of the fact that they had this capability in house in Europe.

Abernathy’s emphasis on the need for innovation was certainly justified. Indeed, in the course of the 1980s it became clear that the micro-electronics revolution was re-inventing the automobile. Nevertheless, most public debate about the industry in the 1980s and early 1990s was concerned with issues of productivity. Competition by Japanese manufacturers and especially by Toyota showed that 1) high productivity could be achieved with lower numbers; 2) high productivity/low cost could be combined with high quality. The American study on “lean production” received a lot of attention in Europe. Looking back ten years later, however, we can see that the Americans again went much further in adopting “Japanese” concepts and focusing on productivity than the European manufacturers did. Productivity in European factories has certainly improved tremendously, but it probably still lags behind Japanese and American plants.

Inside Europe, the same differences that existed between the industries of Europe and the United States were reproduced at the level of individual corporations. In an OECD study published in 1984 for which I did some work, it was argued that especially in Europe, there were two major survival strategies for car manufacturers: the specialist strategy and the mass production (volume) strategy. On the one hand there were the volume manufacturers like Volkswagen. Fiat, Renault and Peugeot and on the other hand, there were the specialists which had survived successfully by focusing mainly on the top segments of the market. in Italy (Ferrari, Lancia, Maserati, Bugatti, Lamborghini, Alfa Romeo, etc.), in Britain (Rolls Royce, Bentley, MG), in Sweden (Volvo, Saab), in Germany (Daimler Benz, Porsche, BMW). The innovative potential of the European industry that Abernathy had talked about, was particularly apparent in these successful specialist manufacturers.

Now, twenty years later, we know that almost all the specialists have been absorbed by volume manufacturers, or they are trying to become volume manufacturers themselves. What happened and what are the strategic options today?
At the beginning of the 1980s, Volkswagen was finally coming out of a long and difficult period. For several decades after the Second World War, it had been a classical single product mass manufacturer, manufacturing only the Beetle. Its engineers had devoted a considerable part of their energy to achieving high levels of (inflexible, dedicated) automation. Between 1968 and 1980, it changed from a single product company to a modern volume manufacturer offering a range of vehicles for different sections of the market. In terms of our categories, however, the company was still mainly focused on scale and scale economies. This shows in several ways. First of all, Volkswagen continued to rely on automation, which is of course only interesting, if you produce large numbers. Building on its experience with the Beetle and using the strong German engineering environment, Volkswagen invested considerably in high levels of increasingly flexible automation. Secondly, Volkswagen invested in production activities in low-wage countries (Mexico, China, Brazil), not just to supply these markets, but also to export to other regions. The production facility in the United States, on the other hand, was closed in 1987. Thirdly, Volkswagen started to invest in non-automotive activities by taking over Triumph-Adler a manufacturer of typewriters and office equipment. All these strategic choices were based on the conviction that the automobile is a mature product, that competition will be based on price (Volkswagen had lost that competitor in the United States against the Japanese manufacturers) and that as a consequence demand will be strongly fluctuating, which makes diversification a stabilizing option.

In the second half of the 1980s, however, Volkswagen’s strategy started to shift away from scale and mere numbers, in the direction of scope and differentiation. This began with the incorporation of first SEAT (1986) and then Skoda (1991). Of course, these actions were also efforts to buy market share and increase scale, but the brands were maintained as separate entities, so that attention had to focus on product development, product differentiation and product innovation.

Volkswagen had almost overspent itself in these takeovers and when mr. Piëch became chairman, he had to hire mr. Lopez in order to save costs. However, Piëch’s main achievement is no doubt the creation of a huge gamma of carefully branded products. The current product range of the Volkswagen Group covers practically all market niches up to the very top niches with Bentley and Bugatti. These policies reflect different convictions compared to those of the 1970s and 1980s: 1. The Volkswagen Group will continue to manufacture for the European market in European plants. 2. Competition on price can and should be avoided. 3. Instead, competition should focus on quality and on having an appropriate car for every customer. Of course, that doesn’t mean that Volkswagen can neglect the issues of cost and productivity. Like all German car manufacturers, Volkswagen has tried to learn about the Japanese manufacturing methods. However, it is typical for the engineer Piëch, but also for the larger German environment, that savings were sought in a drastic reduction of the number of platforms rather than in labor productivity. Under Piëch, the idea of a platform strategy has been carried to new levels of sophistication. Today in the Volkswagen Group, the emphasis of strategy is clearly on scope, innovation and technology. Special care is undertaken to give the Volkswagen brand a “green” image.
Let us now turn to the strategies of BMW and Daimler Benz.

In the beginning of the 1980s, both companies were proceeding on the assumption that a specialist strategy was a viable strategy. By the end of the 1980s, however, things began to change. What happened was that the traditional volume manufacturers were beginning to offer cars that were competing with the luxury model. Volkswagen was doing that with Audi (in the 1980s under the leadership of Piëch), but the major impulse for BMW and Daimler Benz to rethink their strategic position came from the launch of the Lexus. It became clear that volume manufacturers had acquired the capability to manufacture high quality luxury cars, which could compete in the hitherto safe specialist sectors of the market. As a result, both Mercedes and BMW began to think of ways to increase the scale and scope of their operations.

Daimler Benz began to increase scale by setting up production in North America and then also expanded its product range (scope) to lower market segments by the introduction of the A-class and the launching of the new small car brand Smart. A major move towards becoming a volume manufacturer was made by the merger with Chrysler in 1998 and more recently by buying a third of Mitsubishi Motors and .. Hyundai. It is still too early to judge if this strategy will been successful. The current Chrysler product line-up (Jeep, Ram pick-up, Minivan) is beginning to age and facing increasing competition. The PT-Cruiser will not be enough to replace them. It will be a huge challenge in the coming years to come up with a convincing range of cars for the four main brands. In that sense, DaimlerChrysler is now in the position where Volkswagen was about ten years ago. However, the cultural differences between Volkswagen/Audi and Skoda and SEAT were in all likelihood much smaller than those in the new DaimlerChrysler Group, even if we take into consideration that Chrysler was more oriented towards research and product innovation than the other American car manufacturers.

BMW was relatively slow in reacting to the challenges presented by the upmarket movement of the volume manufacturers. Then it followed Daimler Benz in expanding scale by setting up production facilities in the United States. Its major move to increase scope was the takeover of Rover, which as you know became a complete failure. Cultural differences may have played a role here, but it appears that Rover has underestimated the problems and weaknesses of the British car manufacturer, which had been going downhill for several decades. BMW was afraid to intervene and impose itself. As a result, Rover remained too British. On top of this, economic developments also had a negative impact, especially the strength of the pound against the Euro. After the failure of the Rover experiment, BMW is saying that it wants to achieve its aims of higher volume by itself. The new Mini has been presented to the public at the Paris auto show. Also, a small BMW model has been announced and at the top of the market, Rolls Royce will become a BMW brand in 2002. Much will depend on the success of the Mini. If we look at the recent history of all the other specialist manufacturers, it seems highly doubtful that BMW will survive as an independent car manufacturer. This decision is in the hands of the Quandt family.

Porsche is really the only remaining independent specialist manufacturer. It has clearly chosen to remain a niche player, even though it is not a small company with over 8,000 employees and a turnover of almost 5 billion Deutschmark in 1998/99. Next to the 911 and
the Boxster, it is now developing a multi-purpose vehicle. It can remain an independent company, because the owners have no interest in selling it.

Let me conclude these observations on strategic developments in the German car industry with a brief discussion of problems and prospects.

➢ Volkswagen’s platform strategy is currently very successful and can be considered a model for the other German companies. Volkswagen is making good use of German technology, engineering, skills and industrial relations and has introduced some of these features in Skoda and SEAT. Some critics argue that the platform strategy is leading to cannibalism and to a loss of identity for the various brands. So far, it is difficult to prove that cannibalism is important, because the Volkswagen Group as a whole has gained market share. Many people are still prepared to pay a considerably higher price and buy a Volkswagen Golf or an Audi, even if important product features can also be found in a Skoda Octavia or a SEAT Toledo. Moreover, the four brands are still quite distinct in style and their products certainly still look different.

➢ The problems of integrating different corporate cultures are easily underestimated. Volkswagen has been quite successful, probably because it was clearly dominant in the relationship with Skoda and SEAT. BMW maybe failed because it was too respectful of the Rover culture. DaimlerChrysler may run into problems, because none of the partners can completely dominate the other.

➢ There is a natural tendency for every brand to try to move its models towards the top part of every market segment. This can be seen everywhere, because the profit margins are higher in the top of a segment. The result is continuous high pressure on the top brands to come up with new product features without pricing themselves out of a segment.

The German car manufacturers are all set on a strategic course which is emphasizing scope, more than scale: product innovation more than productivity. In view of the traditions and institutions of their home country, this is in all likelihood the best strategy for them to follow.