CASE 7

CASE 7 Continental: Liberating entrepreneurial energy

By Heike Bruch and Bernd Vogel[1]

At the beginning of the 1990's the Germany (Hanover) based company Continental AG was first and foremost active in the rubber industry. Car as well as truck tires and other technical products with a high rubber content were its core products with total sales amounting to €4,372.1 million in 1990 (see Table 1).

In 1991 Continental's serious decline started: While the company was market leader in Germany in the core-product area, tires, it ranked no. 2 in the European tire market. But in the world market the company controlled only 7% and occupied fourth-place, with a great gap behind the 'Big Three' – Michelin (20%), Goodyear (16.4%) and Bridgestone

TABLE 1 Continental AG 11-year statistics

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Fixed assets and investments	million €	1,458.9	1,747.0	1,817.3	1,949.8	1,843.3	1,781.9	1,797.3	1,797.7	3,999.3	4,220.6	4,381.6
Currents assets	million €	1,694.5	1,652.7	1,791.3	1,696.6	1,642.4	1,645.5	1,629.4	2,112.6	2,766.4	3,183.2	3,233.6
Balance sheet total	million €	3,153.4	3,399.7	3,608.6	3,646.4	3,485.7	3,427.4	3,426.7	3,910.3	6,765.7	7,403.8	7,615.2
Shareholders' equity	million €	842.6	725.1	765.3	780.2	756.6	764.2	816.7	1,232.3	1,329.1	1,760.6	1,844.1
Minority interests	million €	48.2	49.4	61.5	88.5	100.1	102.7	134.5	149.5	174.5	142.4	145.7
Long-term borrowed funds	million €	1,068.5	1,344.6	1,452.4	1,399.7	1,356.8	1,102.5	1,245.7	1,268.5	3,003.4	2,343.9	2,855.2
Spending on fixed assets	million €	352.5	424.0	362.7	319.1	263.2	302.3	282.0	282.6	416.3	581.5	682.8
Equity ratio	in %	26.7	21.3	21.2	21.4	21.7	22.3	23.8	31.5	19.6	23.8	24.2
Financing of fixed assets and investments & inventories with shareholders' equity and l-t borrowed funds	in %	89.6	89.0	90.0	86.3	90.1	79.4	85.1	104.6	93.1	83.4	91.5
Indebtedness	million €	790.4	1,100.8	1,235.7	1,170.6	1,089.3	1,016.8	836.9	283.4	1,919.0	1,712.8	2,017.9
Internal financing ratio	in %	68.1	52.1	133.8	86.4	113.5	122.9	132.9	173.7	117.1	135.3	112.5
Liquidity ratio	in %	77.1	74.6	76.5	68.3	76.6	61.3	68.7	107.1	82.5	69.3	79.8
Sales	million €	4,372.1	4,794.3	4,954.4	4,790.3	5,050.0	5,242.0	5,333.1	5,719.4	6,743.2	9,132.2	10,115.0
Share outside Germany	in %	61.8	62.8	63.9	65.4	67.6	66.5	66.1	67.4	66.4	68.6	68.9
Cost of sales[2]	in %	75.9	74.7	73.2	74.1	74.0	73.9	73.4	71.9	74.0	78.6	79.7
Selling expenses[2]	in %	14.7	14.8	15.0	16.7	16.3	15.6	15.8	16.0	14.4	11.6	11.1
Administrative expenses[2]	in %	5.9	6.5	6.7	6.2	6.2	5.7	5.5	5.3	4.7	3.9	3.8
EBIT	million €	152.8	171.2	239.4	151.8	154.2	198.2	268.0	320.4	380.3	511.3	432.4
Staff costs	million €	1,548.4	1,654.7	1,709.4	1,683.7	1,669.4	1,673.9	1,672.2	1,751.5	1,937.1	2,387.7	2,580.8
Depreciation[3]	million €	193.3	271.5	257.0	284.7	298.3	282.6	311.5	306.8	395.7	576.5	654.7
Cash flow	million €	260.8	269.0	358.6	296.0	320.0	378.2	416.5	490.9	567.0	849.7	866.3
Value added	million €	1,766.5	1,697.4	1,904.7	1,835.5	1,823.5	1,872.0	1,899.2	2,071.9	2,317.4	2,899.0	3,013.2
Net income for the year	million €	47.8	−65.5	68.0	33.3	36.2	79.4	98.4	164.5	138.2	234.7	204.7
Employees (average)	1.000	48.4	50.8	50.4	49.8	49.0	48.4	46.4	44.8	50.2	62.6	63.5

The consolidated financial statements as of 1998 are drawn up in accordance with US GAAP. Prior to 1998 they were drawn up to the German Commercial Code. This explains the drop in the annual profit as of 1998, which – at DM413.9 million – would not have occurred if the profit for the year had been calculated to HGB.

[1] without minority interests [2] of sales [3] without depreciation on financial assets

[1]Source: This case was written by Dr Heike Bruch, Assistant Professor at the University of St Gallen, Switzerland and Dipl. Ök. Bernd Vogel, Lecturer at the University of Hanover, Germany. It is intended to be used as a basis of discussion rather than to illustrate either effective or ineffective handling of a business situation. Reprinted with permission of Heike Bruch and Bernd Vogel.

(16.2%) (see Table 2). Moreover the demand for tires was flat and the innovative potential of the core product tires seemed to be nearly exhausted. Internally Continental was a monolithic, unprofitable company driven by managers that tended to administrative activities rather than taking initiatives in the areas for which they were accountable. Finally, in 1991 Continental suffered from a record loss of €65.5 million.

Ten years later, in 2000, Continental has fundamentally altered its core target market; it was a highly innovative supplier of automotive chassis aspiring to become a leading global provider of automotive systems. During the years 1991–2000, Continental had undergone some radical changes that reversed the record loss of €65.5 million in 1991 to a record profit of €204.7 million in 2000. Its development from a manufacturer of rubber products to a specialist for automotive chassis was the result of a fundamental transformation. It implied company-wide liberating of entrepreneurial energy of Continental's managers and employees. In 2001, this process was not fully completed. In fact, maintaining the entrepreneurial spirit was seen as the key challenge.

Setting the agenda for strategic change

At the beginning of the 90's the world tire industry was in the midst of a serious recession marked by considerable overcapacities and a decline in vehicle registrations. Despite this, Continental and other tire industry producers pursued growth strategies in their traditional markets to achieve economies of scale. The result was a fierce price war.

As a consequence Continental slipped into the red in just two years. Its earnings plummeted from a profit of €116.6 million in 1989 to a mere €47.8 million in 1990, followed by losses of €65.5 million in 1991. At the same time, sales grew by about €42.2 million. Acquisitions in this time period led to a ballooning of net indebtedness to €1.2 billion.

TABLE 2 Sales of major tire producers 1990–1999

		Bridgestone	*Michelin*	*Goodyear*	*Continental*	*Sumitomo*	*Pirelli*	*Yokohama*	*Cooper*	*Toyo*	*Kumho*
1999	Sales in millions of €	13,500.0	13,500.0	11,515.6	4,900.0	3,413.8	2,725.2	2,408.2	1,557.1	1,254.7	1,195.0
	Rank	1	2	3	4	5	6	7	8	9	10
	% of total sales	74	92	85	50	76	40	70	71	60	59
1998	Sales in millions of €	12,634.8	12,916.3	11,311.0	4,334.0	3,750.0	3,005.8	2,193.5	1,447.4	1,120.2	965.5
	Rank	2	1	3	4	5	6	7	8	9	10
	% of total sales	74	93	85	58	75	49	70	77	60	91
1997	Sales in millions of €	12,920.0	12,718.0	11,850.0	4,355.0	3,800.0	3,020.0	2,343.0	1,449.0	1,283.0	1,241.0
	Rank	1	2	3	4	5	6	7	8	9	10
	% of total sales	72	93	85	68	75	46	70	80	59	89
1996	Sales in millions of €	12,900.0	13,100.0	11,705.0	4,866.0	4,000.0	3,000.0	2,600.0	1,372.0	1,378.0	1,355.0
	Rank	2	1	3	4	5	6	7	9	8	10
	% of total sales	72	94	84	70	75	45	70	85	57	89
1995	Sales in millions of €	12,740.0	12,240.0	10,105.0	4,938.0	3,975.0	2,987.0	2,860.0	1,267.0	1,524.0	1,147.0
	Rank	1	2	3	4	5	6	7	9	8	10
	% of total sales	71	92	77	69	70	90	71	85	57	83
1994	Sales in millions of €	11,100.0	11,000.0	9,428.0	4,415.0	3,426.0	2,717.0	2,651.0	1,193.0	1,410.0	847.0
	Rank	1	2	3	4	5	6	7	9	8	10
	% of total sales	71	91	77	68	72	90	72	85	58	80
1993	Sales in millions of €	9,471.9	9,500.0	8,853.3	3,719.3	3,223.0	2,747.5	2,522.5	1,014.6	1,295.8	876.3
	Rank	2	1	76	4	5	6	7	9	8	10
	% of total sales	65	84	3	65	71	90	70	85	56	79
1992	Sales in millions of €	9,345.0	10,500.0	8,166.9	3,980.3	3,275.6	2,874.8	2,431.7	1,000.0	1,263.0	843.5
	Rank	2	1	3	4	5	6	7	9	8	10
	% of total sales	67	83	69	64	71	86	71	85	57	79
1991	Sales in millions of €	8,688.0	10,020.0	7,849.0	3,613.0	3,050.0	2,756.0	2,320.0	830.0	1,194.0	703.0
	Rank	2	1	3	4	5	6	7	9	8	10
	% of total sales	65	84	72	64	71	85	69	83	58	79

Source: European Rubber Journal

EXHIBIT 1 PIRELLI'S ATTEMPTED TAKEOVER

Alongside the challenges posed by regular business operations in these years, Continental's independence was threatened by a takeover attempt on the part of its competitor, Pirelli, at the time no. 5 on the worldwide tire market. Presentation of Pirelli's merger proposal on September 15, 1990 kicked off a protracted tug-of-war between the Executive Board, the Supervisory Board, banks, politicians and Pirelli representatives. Round-table talks were agreed to by the two companies for the purpose of investigating the situation. They led, in the end, to the departure of Executive Board chairman Horst W. Urban on May 10, 1991. The takeover endeavors were ultimately laid to rest in April 1993 with the transfer of the Pirelli-controlled block of shares to a bank consortium.

In addition to competitive influences, internal factors were particularly responsible for this development. Poor profits in a number of corporate divisions were one of the major factors. While the 'Tire Production' division did, in fact, report a profit, a segment of the division, the original equipment business with the automotive industry, reported a loss of €51 million on sales of €256 million.

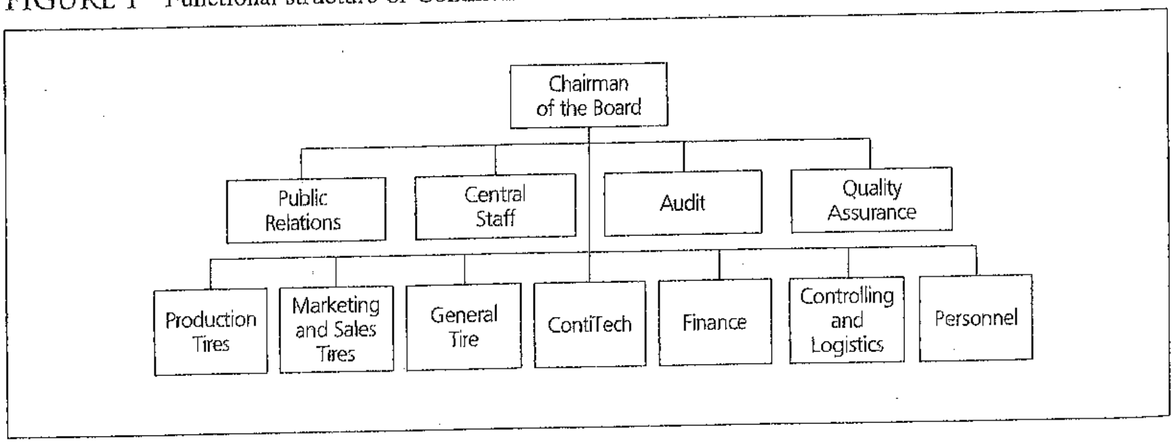
Moreover, Continental was running into trouble integrating the companies acquired as part of its growth strategy. These included, among others, Uniroyal 1979, Semperit 1985, General Tire 1987. The European tire brands such as Uniroyal and Semperit were positioned similarly to the parent brand in the replacement market and ended up competing for the same target customers. Thus both market areas – the original equipment business with the automotive industry and the replacement market – were in trouble through internal difficulties.

One of the causes of this was the company's generally bureaucratic and centralistic structure and culture. With areas like 'Tire production', 'Tire marketing/sales', 'Corporate finance, controlling and logistics' and 'Technical products', the corporate structure was tuned primarily to functional responsibilities and remained largely insensitive to markets or customers (see Figure 1). This structure was correspondingly reflected in the centralized control philosophy.

> *We saw ourselves subjected to a high degree of centralization as far as decision-making was concerned. The units enjoyed little autonomy. We were characterized by a strong finance and controlling orientation and were, bottom line, a control company.*
>
> (Wilhelm Schäfer, 1993–1995 Board member – Car Tires)

Thus major internal reasons for Continental's crisis were: a lack of awareness of the sources of the company's losses, poor management of internal competition, suppression of decentral innovative potential and the absence of entrepreneurial initiative on the part of managers and employees.

FIGURE 1 Functional structure of Continental AG in 1991



Giving priority to profit and innovation

When Dr. Hubertus von Grünberg left his post as president and CEO of the ITT Automotive Group to take over as Continental Executive Board chairman on July 20, 1991, the corporate situation was characterized by fierce predatory competition, a sharp drop in results, loss-making operations in the corporation and the threat of takeover by Pirelli (see Exhibit 1). Early on Dr. von Grünberg shifted the corporation's focus. At a press conference on August 30, 1991, he outlined the direction Continental would take in the future.

> *The main goal is that of stabilizing the corporation's profitability and of bringing about a sustained improvement. . . . There must not be any taboos in pursuit of these goals.*

To ensure the company's future survival, growth was no longer to be fueled by additional acquisitions but by successful innovations achieved by the company on its own strength and through its own entrepreneurial forces.

On December 2, 1991, Dr. von Grünberg reinforced his emphasis on profit and innovation presenting his 10-point program:

1. Growth through successful in-house developments and profitable production structures
2. Investments in sales revenues, not in size
3. Strategic alliances
4. Fewer acquisitions, with new focal points
5. Technological leadership and a wide range of systems
6. Expansion of market position in Eastern Europe
7. Pro-active environmental protection
8. Rescue operation for General Tire
9. Decentral responsibility: Fight losses and improve earnings
10. Figures well into the black in 1992

The program highlighted strategic topics and placed immediate demands on Continental's managers to intensify Continental's focus in the next years on two basic perspectives. First, the company and its managers had to follow a clear profit orientation marking a departure from its previous growth strategy, which instead had been aimed strictly as higher sales. Second, Dr. von Grünberg stressed the absolute importance of innovations for the corporation if it was to be able to claim technology leadership in the tire sector. Profitability became the corporate guideline for all direct and indirect areas. In figures this meant that after the drop in corporate profitability in 1993, he envisioned a sustained annual rate of return after taxes of 2.5% and a long-term target of 4%.

Implanting profitability: Towards a new growth strategy

Connected with this was the demand, or compulsion, to achieve widespread productivity growth in all units, especially those operating at a loss.

> *When the changes got under way, the motto was 'Cut the losses!'. The basic assumption was that it was easier, and thus quicker, to do away with operations making losses than to raise those units doing well to an even higher level of profit. In so doing, the tense earnings situation in the corporation was turned inside out.*
>
> (Dr. Dieter von Herz, Head of Corporate Communications until 1998)

Continental was aware that a fundamental restructuring was necessary in order to make it clearer where profits were being generated, and where losses were being made. Transparency of profits and losses was seen as a central precondition for transferring responsibility to managers.

> *We broke everything down organizationally until we arrived at units that weren't earning anything. A young employee was then sent in to straighten out the unit.*
>
> (Dr. Hubertus von Grünberg, Chairman of the Supervisory Board of Continental AG; Chairman of the Executive Board of Continental AG from 1991 to 1999)

Here Dr. von Grünberg could take advantage of the experience gained in the successful decentralization of ContiTech. Back on January 1, 1991, the company had already pulled apart the tightly knit structure of the non tire operations. Eight legally independent companies had been set up. Each of them had a separate range of products and its own market segments and was run by managers who had to report on revenue matters. In this way it was possible to directly read off the market success or failure of each unit.

For the tire area, restructuring the previous functional orientation took off on February 1, 1992. The board areas 'Tire Production' on the one hand and 'Marketing/Sales' on the other, each of them responsible for both car and truck tires, were dissolved and replaced by two separate product-driven Board-level divisions – 'Passenger Tires' and 'Commercial Vehicle Tires/Environment/Research' (see Figure 2). Both divisions were given responsibility for the whole production and marketing process. Market success could be measured directly and the division managers themselves took on business responsibility for the products' market results. Furthermore, the greater degree of transparency made it possible to impose more explicitly formulated profit demands on top management in the tire divisions.

> *In the wake of this fundamental reorientation, decentralization worked its way deeper and deeper into the hierarchy of the organization. This did not occur all at once but in a series of steps. Small units with profit responsibility were created, which, despite their size, incorporated cross-functional processes. In this way, useless runaround in the hierarchy could be avoided.*
>
> (Axel Witt, Head of Corporate Human Resources, Development & Internal Consulting)

The organizational split-up of the passenger tire division into two business units at the beginning of 1996 provides an example of how loss-making areas were pinpointed and then changed. The highly profitable replacement business was separated organizationally from the loss-making original equipment business. Therefore the results of the latter area were no longer subsumed in the results for car tires as a whole but were clear for all to see.

Dr. Kessel took over at the helm of an independent original equipment business unit furnished with the requisite resources, e.g. four production plants assigned directly to it and full responsibility for running the business and for reducing the €51 million in losses. These entrepreneurial possibilities and the adoption of a strategic policy to no longer accept the automotive industry's pricing policy did the trick. The original equipment business succeeded in getting back in the black in 1997.

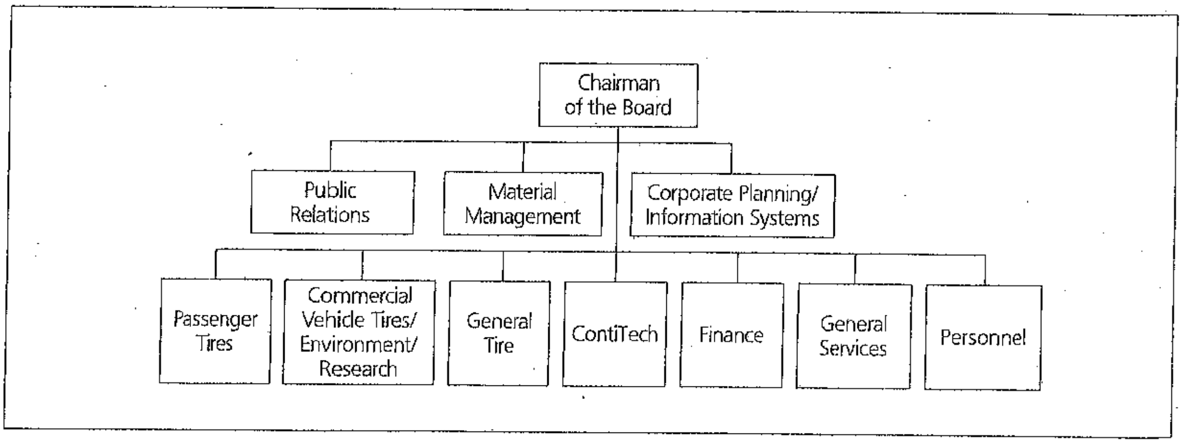
Profit-orientation of service functions

The demand for profitability and direct responsibility applied to indirect functions too. They were also expected to generate earnings and to reduce cost.

> *The now entrepreneurial orientation led to a fundamental questioning of the service functions. Each area was required to make a visible contribution for the benefit of the corporation.*
>
> (Klaus Friedland, Board member in charge of Finance, Controlling, Human Resources and Law)

As a consequence, IT operations, for example, were largely outsourced in 1996. About 370 employees were transferred to a company operated jointly by IBM and Continental. In 1995, a management buy-out transformed large parts of the previous human resources development department into an independent company, Contur GmbH.

FIGURE 2 Organizational structure of tire operations in 1992



New standards regarding the contribution made to improving earnings were applied to the corporation's purchasing processes, as well. By 1996, Continental's annual purchasing volume had risen to around €2.7 billion, corresponding to 50% of corporate sales. Procurement thus represented a significant field of action for achieving competitive advantages, yet one that had hardly been noticed until the early '90s. The example of steel cord procurements provides a clear illustration of the new thinking (Exhibit 2).

The new way of thinking was also evident in the marketing organization of the car tire division. The acquisitions in the '80s had given Continental a number of brands – Continental, Uniroyal, Semperit, General Tire, Gislaved, Mabor, Sava, Viking and Barum. Each of these had a separate management accountable for the respective brand's profitability. However, the brands overlapped somewhat in terms of positioning and target groups and tended to turn down one another's market shares.

To put customers and markets at the center of attention, a switch from brand orientation to market orientation was adopted at the end of 1993. General market managers were made accountable for the results in regional business segments on a mix of all brands. The managers were thus given much more latitude in dealing with the customers in their territory. These increased opportunities arose because the brands were no longer in direct competition with one another. The multibrand strategy attempted, instead, to create a clear distinction among the brands, with each of them focusing on specific target groups. And so, for example even in 2001 'Continental' was for all practical purposes the premium brand and 'Barum' the budget brand. The target groups were defined, however, not only on the basis of quality but also on the basis of the type of application they were best suited for. Uniroyal, for example, was positioned as the rain tire and Semperit as the winter tire.

Central coordination of decentral activities

As a means of guarding against inefficient decentralization and to prevent the decentral units from drifting apart, certain functions – controlling, finance, technology or purchasing – were retained as central units.

> *Corporate headquarters started and continues to define targets that serve as a framework and pose a challenge. Rigorous adherence and pursuit of these targets is expected from those in charge of the autonomous divisions and units.*
>
> (Axel Witt, Head of Corporate Human Resources, Development & Internal Consulting)

Despite the extensive decentralization, Dr. von Grünberg continued to exert direct influence, particularly on investment activity.

> *Under certain circumstances – for example, if it did not appear plausible that the anticipated return could actually be realized – he was known to reject investment requests that had already gotten the go-ahead from those*

EXHIBIT 2 THE EXAMPLE OF STEEL CORD PROCUREMENT

In 1995 tire makers were very much at the mercy of a monopolistic structure to satisfy their requirements for steel cord – a key basic material in the tire production. Despite high prices, the previous purchasing staff shied away from switching to a different supply source and thereby running the risk of compromised quality. This being the case, a parallel project group was instituted to track down new possibilities for obtaining this material. In the face of opposition from purchasing itself and from the production plants, the project group proposed buying steel cord from Russia. This involved, however, development of a much-expanded purchasing concept to allay the fears of those opposed to the switch and to dispel any reservations regarding quality. The future suppliers were involved in the planning activities. They worked together simultaneously with purchasers, quality staff and product developers to upgrade the products. In exchange for this preparatory work, long-term contracts were concluded with the new suppliers.

respectively in charge of line functions or central units. He always attached great importance to keeping the reasons for his rejection transparent, though, so that those in positions of responsibility could learn something from the case at hand.

(Dr. Bernadette Hausmann, Head of Corporate Purchasing and Strategic Technology)

Fostering strategic innovation

Striving for technological leadership

Already in 1991, in the first few months of his time as chairman of the Executive Board, Dr. von Grünberg set about implementing a reorientation of the corporation's business. He called on the company to strive for the leading position in technology in the sector on the basis of the innovative capability of the individual employees in all areas of the company. Notwithstanding the fact that the tire area's innovative potential seemed to have been almost exhausted, he continued to count on further product and process innovations.

Alone or in partnership with others, we were looking for access to fields of technology not already occupied.

(Dr. Hubertus von Grünberg)

The importance was demonstrated by substantial investments in R&D – even during the crisis. Approximately 4% of sales revenue was plowed back into the R&D. This was the absolute limit for investments that could be retrieved from the market via prices. This initial investment activity resulted for example in a new tire line, Eco-Contact, in 1992 and the development of a one-stage tire building machine in 1994.

Bundling innovative force

To make more efficient use of available resources and to increase the corporation's innovative power, Dr. von Grünberg made incursions into R&D's existing structure. After a two-year period of restructuring, a technology center was inaugurated in Hanover, in the immediate vicinity of Continental AG corporate headquarters, in April 1996. It was to supply the innovations the corporation required and underlined the significance of R&D as a sort of technological clamp around an increasingly decentralized corporation. In the face of considerable resistance at the decentral research locations, the R&D resources from the former brand locations in Traiskirchen (Semperit) and Aachen (Uniroyal) were brought together in Hanover. Representing an investment of €51 million, the technology center thus created employed 1000 engineers and technicians engaged in producing market-oriented innovations for car/truck tires and automotive systems.

RDE-meetings: Innovation meets market demands

The innovation activities were subject to exactly the same profit demands as had been formulated for the other corporate processes. At so-called research-development-engineering meetings (RDE-meetings), Continental researchers and developers were dealt with as if they were entrepreneurs and directly confronted with the demands of managers from market and customer units.

In 1992, Dr. von Grünberg introduced these quarterly RDE-meetings as a means of conducting research and development innovations. The sessions brought together the Board member for the tire division and those in charge of the R&D areas for a presentation of new projects and a review of the progress made so far. Alongside material prospects, the marketability of the technological innovation was introduced as a key criterion in the evaluation of these innovations. The RDE-meetings thus determined in large measure Continental's specific technological orientation, which was clearly market- and customer-driven.

(Heinrich Huinink, Head of Strategic Technology)

The RDE-meetings offered a platform for display of new business ideas and systems solutions, e.g. by linking existing products with other technologies and with the market areas.

(Wolf-Dieter Gogoll, Head of Corporate Human Resources until 2000)

Towards a systems supplier for the automotive industry

Dr. von Grünberg held to the ambition that Continental AG was itself capable of developing and marketing cutting-edge technology. From 1992 on, he therefore pursued a competitively induced reorientation of the company's strategic activities in the direction of the systems business with the automotive industry. As part of this, the tire product range was expanded to incorporate technical chassis components to form complete systems that could be supplied as such to the automotive industry.

> *We believed and continue to be convinced that over the medium and long term, suppliers of complete systems will play the dominant role in the automotive industry of the future.*
>
> (Dr. Hubertus von Grünberg)

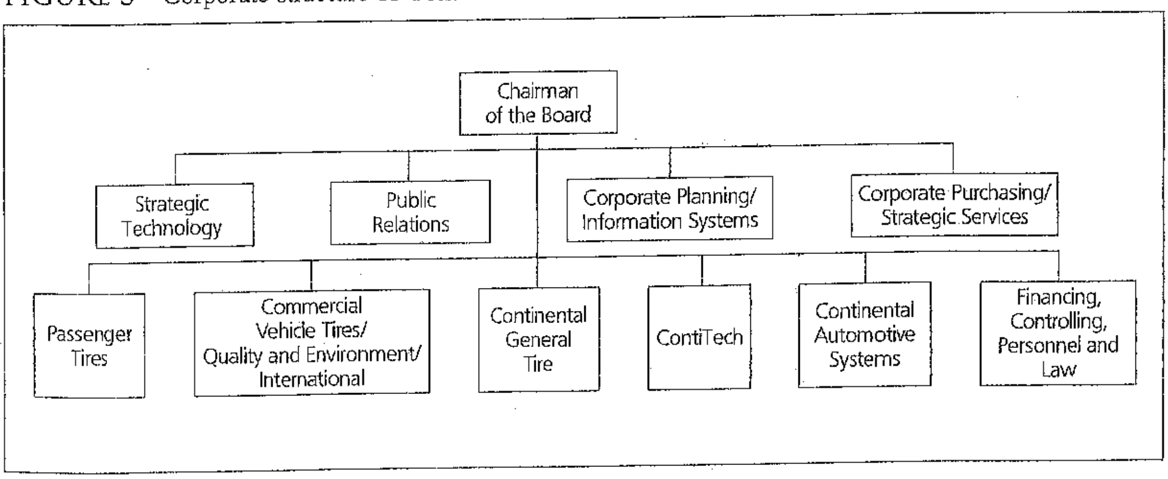
In the long run, the delivery of technically sophisticated components is intended to cushion the strategic problems inherent in the supplier/automaker relationship. The latter includes the limited technological development potential of tires as products, the secondary importance of tires for the automotive industry and uncertain growth potential because of dependence on auto industry production volumes. In view of the tendency in the auto industry to reduce the number of suppliers, it was generally assumed that Continental could no longer expect to remain a direct supplier if the corporation stuck almost exclusively to the production of tires. The company ran the risk of seeing its status downgraded to that of secondary supplier, with only minimal impact on development. To avoid this, tires were to be combined with other technical components and supplied to the auto industry as systems.

A major move towards acquiring the status of systems supplier to the automotive industry was the founding of a separate Board area 'Automotive Systems' in 1994 (see Figure 3) to be headed by Albert Beller, a former manager at ITT Industries with formative experience in the chassis business.

The division established itself initially as supplier of pre-assembled wheel/tire systems. Starting with 10,000 tires in 1994, production was increased to three million tires pre-assembled in 1996. This was accompanied by the development of a series of innovative product ideas for the chassis – TPMS, CECC, CASS, SWT, to cite just the major ones.[2] These ideas did not immediately have an impact on profit but formed the basis for the systems business as future added-value potential.

> *By establishing the Board area Automotive Systems, Dr. von Grünberg made clear where he wanted to position the corporation. Even if the development fields he had his sights on were very small at Continental in comparison to what the competition maintained, it significantly demonstrated the direction the corporation was heading for.*
>
> (Heinrich Huinink, Head of Strategic Technology)

FIGURE 3 Corporate structure of Continental AG in 2001



[2] TPMS (Tire Pressure Monitoring System); CECC (Continental Electronic Chassis Control, an electronically controlled brake system); CASS (Continental Air Suspension System for passenger cars); SWT (Sidewall Torsion Sensor, provides electronic information on the deformation of the tire during driving).

Acquisition of Teves

This acquisition of Teves – ITT Industries' brake and chassis operations – in 1998 marked the first time that Dr. von Grünberg went outside the corporation in pursuit of systems supplier status. Up to that point, he had worked to position the company in the systems field strictly on the basis of its own entrepreneurial strength and innovation potential. He invested a good €1.5 billion in this acquisition, which gave the corporation competence, sales and revenue in chassis technology.

Teves' major products were the antilock braking system (ABS) and the electronic stability program (ESP). The additional sales that Teves contributed to the company heaved it into the no. 9 slot among automotive suppliers (see Table 3). At the same time it gave the company as a whole a development capacity and technological innovation force of around 2500 researchers and developers.

As a result Continental was enabled to play a major role in the further development of the worldwide automotive industry. For automakers it made more sense to technically and economically optimize whole modules than to work on individual components. Thus Continental positioned itself as a global systems and technology partner in the automotive industry.

With the joint competence now available, Dr. von Grünberg's aspirations continued to evolve, however. He emphasized the goal of supplying unique products that could not be copied, therefore generating sustainable competitive advantages.

TABLE 3 The top-selling automotive suppliers

Company	*1999 sales in billion Euro*	*1998 sales in billion Euro*
Delphi	27.6	28.5
Visteon	18.3	17.8
Bosch	16.9	16.5
TRW Auto/Lucas Varity	16.0	11.5
Dana Corporation	12.4	12.8
Denso	13.8	12.6
Lear/UT Automotive	11.7	12.1
Johnson Controls Auto	11.4	9.3
Continental	9.1	6.7
Valeo/ITT Electrical Syst.	7.7	8.9
Magna International	7.0	6.6

> *For Continental these new possibilities opened the way to an electronically controlled chassis that considerably enhanced driving safety and riding comfort.*
>
> (Dr. Hubertus von Grünberg)

Already in 1999 this division contributed €2.6 billion in sales (see Table 4).

Unleashing managers' entrepreneurial energy

Guidelines for entrepreneurial activity

From the previous development it was evident that restructuring gave managers a great deal of latitude. Already in December 1991 Dr. von Grünberg called upon the corporation's managers to put this extra freedom to good use by adopting an entrepreneurial mindset and, above all, by acting in an entrepreneurial manner:

> *Everywhere in the company, it is necessary to think and act more entrepreneurially. I want to have entrepreneurs in our company who assert themselves against any and all resistance. Who have well thought-out ideas and see to it that they lead to profitable results. (. . .) I would often like to see more daring and more willingness to take risks. (. . .) The basic principle for the future is the precedence of earnings over quantity. To this end I would like to provide all senior executives with profit responsibility.*
>
> (Dr. Hubertus von Grünberg)

The far-reaching process of cultural change that got under way in 1992 – 'Delegation of Authority and Responsibility' (DAR) – unleashed a mobilization of entrepreneurial potential in all direct and indirect areas throughout the company.

In this process Dr. von Grünberg brought managers together working on a concept for a higher degree of entrepreneurship extending beyond a mere restructuring of the units.

> *He selected those persons – regardless of where they were in the hierarchy – who already evinced a knack for entrepreneurial behavior and who exhibited a willingness to enforce a larger quantum of entrepreneurship at Continental. No specific project with the title DAR was founded. The process was powered by drivers who were*

TABLE 4 Sales and EBIT[1] shares of the various corporate divisions (in million Euro)

	Automotive Systems		*Car Tires*		*Commercial Vehicle Tires*		*Continental General Tire*		*ContiTech*	
	Sales	*EBIT*	*Sales*	*EBIT*	*Sales*	*EBIT*	*Sales*	*EBIT*	*Sales*	*EBIT*
1993			2,011	129	527	−25	1,150	11	1,084	48
1994			1,998	107	549	−15	1,122	21	1,266	58
1995			2,082	128	597	3	1,054	28	1,427	62
1996			2,158	171	548	−12	1,053	42	1,515	91
1997			2,223	207	669	11	1,203	64	1,580	91
1998	630	−5	2,389	241	759	48	1,230	71	1,704	78
1999	2,544	59	2,547	270	879	49	1,494	74	1,716	130
2000	3,023	216	2,639	177	976	36	1,763	12	1,787	139

[1] EBIT (earnings before interest and taxes)

already actively living out the idea and who had thus made entrepreneurship their business.

(Axel Witt, Head of Corporate Human Resources, Development & Internal Consulting)

The process led to the formulation of a concrete call for entrepreneurial, profit-oriented action on the part of Continental managers and employees:

- Cross-functional action instead of functional thinking.
- Result responsibility instead of mere plan fulfillment.
- Customer orientation instead of functional-hierarchical orientation.
- Agreement on targets instead of those on top dictating what is to be done.
- Internal service units instead of central staff functions.

Creating internal competition

Benefiting from an increasingly decentralized structure and managers increasingly sensitized for entrepreneurial thinking and acting, Dr. von Grünberg pinpointed corporate units with poor earnings or especially high costs and kept at the top managers in charge to get the situation into line financially. He focused his interest on these 'burning platforms' and kept a close eye on the development of their units.

The pattern for this 'burning platform' approach was characterized by high pressure on those in charge of certain selected units to effect change, backed up, above all, by corresponding figures and the unambiguous call to put an end to the miserable situation. Dr. von Grünberg always sketched an escape route and offered far-reaching support for the steps that had to be taken to unleash the necessary change.

(Wolf-Dieter Gogoll, Head of Corporate Human Resources until 2000)

By way of stepping up the pressure for change, he consciously put units in competition with one another.

Internal competition was an important, intensively used instrument for generating the pressure for change. In the end it helped to meet the targets set by encouraging those involved to think in terms of alternatives. Of course, this internal competition often involved painful processes for the company and caused a lot of unnecessary trouble. The tension it generated was laid to rest by the ensuing success. The success worked like a drug that welded the units in the company together.

(Dr. Bernadette Hausmann, Head of Corporate Purchasing and Strategic Technology)

Dr. von Grünberg made purposeful use of this instrument in the production area. Regularly he had productivity comparisons drawn up at the various plants. At the same time he entrusted the plants with a greater degree of authority to control performance processes. The plant in Mount Vernon, Illinois, was assigned the status of benchmark in 1993. Furthermore, in 1995 and 1996 Dr. von Grünberg announced that one of the existing plants would be closed because of the production quantities in most of the plants being uneconomically small. However, he did not explicitly name the plant. The performance and productivity ratios at the individual plants was under permanent review and served as the basis for deciding which plant was to be shut down. In this very direct way Dr. von Grünberg made abundantly clear to the plant managers and employees the absolute inevitability of change. The outcome of this process was the closure of the plant in Dublin in 1996 and the transfer of the production of 2 million tires from Traiskirchen to the plant in Otrokovice, Czech Republic.

Internal benchmarking continued to be practiced in the following years, with the prospect of a further plant shutdown. In November 1999 the production in Newbridge, Scotland, was closed. And so for years on end Dr. von Grünberg succeeded in asserting unrelenting pressure on a number of corporate units to change and increase earnings.

Creative destruction of the status quo

Dr. von Grünberg was not only unswerving in his insistence on improved profit, he also encouraged top managers to constantly and fundamentally question the status quo in their respective areas. In a major departure from the prevailing mindset at the time he joined the company, he strongly encouraged risk-taking. Risks were no longer regarded as negative but as genuinely positive. He expected his employees to exhibit a willingness and the initiative to avoid solutions that upheld the status quo and to engage instead in wide-ranging processes of change. The related risk was supported and even explicitly solicited.

> *Several times Dr. von Grünberg employed Schumpeter's mental construct of 'creative destruction'. To encourage managers to break up the status quo, he directed the attention of those involved at first on the idea of destruction. The second aspect – the creative element – was emphasized later after they had opened up.*
>
> (Wilhelm Schäfer, Executive Board member responsible for Passenger Tires from 1993 to 1995)

Underlining the permanent challenge of the status quo Dr. von Grünberg rejected, above all, the argumentation of managers that certain processes in the tire business were off limits to change by merit of their traditional status. Many in positions of responsibility at Continental tended to think along these lines and numerous processes were very firmly anchored in the corporate culture. Dr. von Grünberg strongly rejected this line of thought viewing these arguments as excuses for avoiding the strain connected with the questioning of given processes and their alteration. Therefore this procedure was internally called 'no-excuse management'.

Dr. von Grünberg, however, preferred to focus on the incentive to look for innovative solutions that would break existing principles as well as habits and themselves define new rules for the market and for internal processes.

> *Dr. von Grünberg was always open to new, radical ideas put forth by the employees.*
>
> (Dr. Bernadette Hausmann, Head of Corporate Purchasing and Strategic Technology)

Parallel to the existing structure, Dr. von Grünberg formed teams that were to overcome the status quo by working on pilot conceptional experiments. Examples of this were the MMP project and the purchasing processes. He gave the affected line positions time to understand the impact of these projects and to become actively involved in the process. After giving those concerned a certain time to accept the new procedures, consequent measures were taken against employees who persistently disregarded the new ideas and refused to get involved in the process of change. In certain cases employees even had to leave the company.

Another key building block for the success of Continental's transformation was that more emphasis was placed on actually implementing changes than on engaging in planning of these changes. Previously planning had enjoyed priority at Continental. Dr. von Grünberg attached greater importance, however, to the actual realization of new concepts and ideas. He ensured this for example by confronting developers with internal customers in the RDE-meetings. But in other areas as well, employees who had developed a new concept were given the job of implementing it. In this way, a stronger link between conception and realization was established.

EXHIBIT 3 MODULAR MANUFACTURING PROCESS (MMP): A NEW PRODUCTION CONCEPT FOR TIRES

The production of tires was traditionally geared to the type of mass production that accommodated the markets' broad demand for similar products. Despite the fact that there still was a sizable market – 10–15% of customers – demanding high product diversity in small lots, production was still organized to high volumes rather than small batches. The goal of the MMP project unveiled in 1997 was to efficiently satisfy this heterogeneous demand by means of a new process that yielded a fit of high product flexibility and low stocktaking ('built-to-order' principle).

The project provoked a great deal of internal resistance, confronting, as it did, most engineers with a fundamental challenge to the aforementioned mass production model. Dr. von Grünberg got around this by setting up a parallel project team. With MMP he succeeded in splitting the production process up into two stages to develop a kind of platform strategy. This put an end to the necessity of manufacturing tires in a continuous process in one factory. Basic tire modules were first manufactured en masse. Final production of limited-volume articles could then be carried out in small factories located in the new target markets.

The project proved successful. The first plant for 'basic modules' was started up in Romania in 2000. It was planned to have 15% of car tire production made in MMP plants by 2003, covering 60% of the product spectrum.

Dr. von Grünberg himself provided a living example of rigorous orientation to implementation of strategic decisions. Departing from the way things had traditionally been done at Continental, he pushed through unpopular decisions in the face of considerable internal opposition. Examples of this were the closure of the Dublin plant and the transfer of production capacities from Traiskirchen, Austria, to the low wage plant in Otrokovice, Czech Republic.

Appointing 'entrepreneurs' to key positions

One effect of Dr. von Grünberg's policies was that the personnel structure reflected the process of change, both by way of dismissals and in the form of enhanced career opportunities. Managers – even Board members – who did not adhere to the new entrepreneurial requirements were let go. Examples of this were the departure of Günter H. Sieber, Board member for the passenger cars/marketing and tire sales area in 1993 and Klaus-Dieter Röker's removal from the post of Board member in charge of commercial vehicle tires, research and environment in 1997. Responsibility for profit and loss thus manifested itself in negative and positive personnel consequences.

> *Dr. von Grünberg employed sanctioning with a persistence and to an extent previously unknown at the company. Above all the dismissal of managers who failed to deliver had a shock effect for Continental, which had been more accustomed to a consensus-oriented corporate culture. This really shook up the company.*
>
> (Dr. Bernadette Hausmann, Head of Corporate Purchasing and Strategic Technology)

At the same time, the personnel policy offered major chances for young, venturesome managers who accepted and exemplified the new entrepreneurial mindset. Dr. von Grünberg took the risk and entrusted young senior executives with tasks, authority and responsibility.

> *Via tailored departments, he brought young managers into 'combat-like' situations and pushed them to the utmost limits of their performance capability.*
>
> (Heinrich Huinink, Head of Strategic Technology)

To provide a living example of entrepreneurship, Dr. von Grünberg himself took over operative responsibility for the car tire division early in 1996, exercising this function alongside that of Board chairman.

> *Dr. von Grünberg was of the opinion that a living example of entrepreneurial action was the best way to let employees know what was expected of them. Those who adhered to this*

EXHIBIT 4 DISMISSAL OF MANAGERS AS A RADICAL BREAK IN CORPORATE CULTURE

General Tire, Continental's US-American tire subsidiary, was incurring huge losses as a result of obsolete production structures and poor market positioning. To revitalize the company, General Tire was reorganized as an independent decentralized Board area and provided with a large scope of entrepreneurial freedom. In spite of this, Board member Alan Ockene still did not manage to achieve the turnaround demanded. And so the company dismissed Ockene on December 31, 1994, downgraded GT to only a division under the management of an officer with full powers to act on behalf of the corporation (general power of attorney) and bound GT closely to the systems and R&D in Europe ('transatlantic union'). Following the successful development of the division under Bernd Frangenberg, General Tire 1998 was reinstated as a separate Board area.

style were allowed an extremely high degree of freedom in their positions.

(Klaus Friedland, Board member in charge of Finance, Controlling, Human Resources and Law)

Proving oneself in difficult situations formed the basis for a fast promotion to important leadership positions in the corporation. In this way Dr. von Grünberg consciously bypassed the established routes for promotion and assigned concrete crisis areas to young senior executives. So, in January 1995, Dr. Bernadette Hausmann, just 34 at the time, was appointed head of Corporate Purchasing and Procurement Strategy. In April 1997 she was made manager with general power of attorney and additionally given responsibility for strategic tire technology, and thus for Continental's central technological competence. In 1995 Dr. Stephan Kessel was just 42 when he was put in charge of cutting losses and reorienting the original equipment business. In April 1997, he was appointed Board member for Commercial Tires, in which position he was charged with bringing about a turnaround in the division.

Developing entrepreneurial competencies

A key task for the human resources department was to identify those young executives who were able and willing to get involved in the progress of the corporation. To promote the entrepreneurial development of young managers it was also necessary to transfer competence for the innovative handling of processes of change.

The premise of our work was and is that change cannot be achieved by management decision or per order. We as a corporation can, however, lay the groundwork for change in the human resources department. We have to find employees with a high tolerance for ambiguity, as this quality is needed in initiating change and dealing with it. For the selection of these key people we worked out the 'Big 6' for Continental. It encompasses the requirements for managers generally and for processes of change in particular. Our criteria for competence are: Knowledge, learning, capability for change, drive, interaction and vision

(Wolf-Dieter Gogoll, Head of Corporate Human Resources until 2000)

For about ten years, management development ran a Junior Management Training Program (JMTP) intended to promote the qualities expected of managers, namely the ability to challenge the status quo, on the one hand, and the capability to get things done, on the other hand. Young executives with a very high performance and potential rating were given a business puzzle to work on, alongside their regular tasks. Over a period of seven months they were expected to develop a concept and an implementation strategy. To assure that there was a real problem pressure as well as a clear 'customer' for their solutions the topics for the business puzzles were proposed by the Executive Board and senior executives of other business units. The results were presented in front of the 85 top managers and the full Board so that an immediate project commitment could be issued, where appropriate, and implementation could get under way immediately.

EXHIBIT 5 RUBBER 'LIFTING BELTS' AS A PRODUCT OF COORDINATED CORPORATE ENTREPRENEURSHIP

An example of a successful entrepreneurial initiative and business idea worked out at one of these development programs was the proposal to operate lifts with rubber 'lifting belts' instead of steel cables. Overcoming internal resistance a group of program members followed their idea consequently and it proved possible to sell this idea to ContiTech Antriebssysteme (drive systems) in Dannenberg. After gathering initial project results, the Dannenberg plant became development partner to the US elevator manufacturer, Otis, the world's leading company in this sector, which was working on the same idea. A new generation of elevators was jointly developed through to production readiness. The new elevators have no machine room, smaller drive motors and require minimum maintenance. In the meantime the products are already in use and ContiTech has netted a supply contract for around four million meters of belting a year.

Future challenges for Continental AG in 2001

When Dr. von Grünberg took over the chairmanship of Continental's Executive Board in 1991, the company was very strained economically. After the year's profit plunged again in 1993, to just €33.3 million, the reorientation that had been initiated finally began to pay off. Entrepreneurially driven managers in key positions, the company's innovative capabilities and its new strategic position helped increase profit in the following years (see Table 1). In 1998 all divisions contributed positively to corporate earnings. In 1998 commercial vehicle operations ended the year in the black for the first time since the founding of the division in 1992. The overall profit for the year came to €138.6 million, with an annual rate of return after taxes of 3.1%.

When the Board chairmanship passed to Dr. Stephan Kessel on June 1, 1999, Continental was a healthy, highly profitable company well placed in a new market. It had accomplished an important step in its transformation to a corporation with an entrepreneurial mindset.

However, Continental was aware that the process of change was not yet completed. Continental was called upon to prove itself in generating prerequisites for sustained corporate renewal. In fact, maintaining the then liberated entrepreneurial energy was seen as a key task of the new CEO. More precisely, Dr. Kessel saw his challenge in terms of the basic new cultural maxim. It involved managers constantly questioning the status quo in an entrepreneurial manner and accepting the change process as an ongoing personal task.

Stretch in the core area of competence – chassis systems

In 2001 Continental found itself immersed in the concrete implementation of its sustainable strategic reorientation to an automotive industry systems supplier.

> *The company evolved from a manufacturer of outstanding products to a specialist for automotive chassis. It did this by bundling its know-how in the area of tires, tire sensors, brakes and suspension systems.*
>
> (Dr. Stephan Kessel, Chairman of the Executive Board of Continental AG)

By establishing chassis systems as core competence, it targeted the systems supply business as its prime growth market.

> *Electronics make up about 15 to 17 percent of the value of a standard-size vehicle. The general estimate is that in five years time this will have increased to 35 to 40 percent.*
>
> (Dr. Stephan Kessel)

To take advantage of this growth market and to expand its competitive position with a lasting effect, it was necessary to maintain employees' ongoing innovative activities and profit orientation.

Integrating tires and chassis components

A seminal point of the future strategy was the expansion of the Automotive Systems division through realization of further synergies to be derived from the collaboration of Continental Teves with the tire divisions. Hence it was necessary that managers and the workforce developed an awareness of the win-win situation available to truly realize a joint, cross-functional identity as chassis specialist. The introduction and, above all, the implementation of a new policy – the so-called BASICS – provided the sustainable framework for this (see Exhibit 7).

> *The primary goal of the BASICS is to create value. That is not necessarily anything new. The difference is that we want to create value that benefits all of our stakeholders. In other words, our shareholders and owners, our customers and employees and, last but not least, the general public as well. To this end we have developed the clear targets enunciated in the BASICS.*
>
> (Dr. Stephan Kessel)

Dr. Kessel initiated a company wide balanced scorecard process for the purpose of firmly establishing these guidelines within Continental. He involved a great number of managers in this strategic process of integrating the various corporate competencies. At workshops and with the support of internal multiplicators, a balanced scorecard was prepared for each business unit as well as for the indirect service areas. The scorecard was aligned to the prevailing policy – in other words, to the strategic reorientation – and was to be reviewed annually. Having each unit work through the BASICS each year the global strategic understanding and the cross-functional entrepreneurial thinking of managers and employees increased. Furthermore, the company wide use of the balanced scorecard provided a better handling of corporate divisions using fewer performance figures. This was of value as control information and allowed for fast responses.

Alongside these processes, the success of joint technology-driven projects played a crucial role, first in realizing the synergies envisioned from collaboration between the tire divisions and Automotive Systems, and second in gaining a technological edge on competition. The newly founded Strategic Technology unit played an important role in this regard.

> *The demand on the newly founded corporate unit Strategic Technology embodied in exemplary fashion the corporation's altered way of thinking. The collaboration between the four products and research areas – tires, chassis, brakes and technical products – is to be guaranteed by means of profit- and action-oriented networking. This is a perfect example of the company's reorientation to a systems supplier. The objective is system optimization rather than optimization of several individual components from various divisions. This unit*

EXHIBIT 6 STRATEGIC POSITION AS SYSTEMS SUPPLIER TO THE AUTOMOTIVE INDUSTRY

As a systems supplier, Continental had to avoid ending up in the same type of position it found itself in as a tire manufacturer.

> *In the tire business we were no. 4 and our chances of surviving were seen as meager. With our reorientation and the acquisition of Teves, we captured the no. 9 slot worldwide among automotive industry suppliers. We had, to be sure, also achieved competence in the combination of tires, chassis and electronics that could not yet be copied*
>
> (Axel Witt, Head of Corporate Human Resources, Development & Internal Consulting)

The Teves acquisition and the reorientation brought Continental into a new market. With sales of €9 billion it lagged behind its key competitors in the supplier sector, however (see also Table 3). For this reason it was crucial for Continental to maintain price leadership by further innovative development of those products and systems that provide sales and profit. By marketing innovative products not yet offered by competitors Continental expected to escape downward price pressure. The company also moved ahead with further globalization so as to quickly realize advantages in new markets and in the immediate vicinity of automotive industry plants.

EXHIBIT 7 BASICS: THE NEW CONTINENTAL POLICY

OUR TASK: SHAPE CONTINENTAL TOGETHER

Our Vision

- **We make individual mobility safer and more comfortable.** Thanks to our core competence, our products and our services, we, together with our customers, improve the safety, comfort and fun of driving.
- **We will be the global technology leader in all our business areas.** As international manufacturer of components, modules and systems, we are a backbone of the global automotive industry, setting standards worldwide and helping vehicle manufacturers to fulfill their product promises.

Overall Focus – Value Creation

- **Value creation is a central management task.** In the interest of the entire corporation and our stakeholders, we will pursue every opportunity to create value.

Focus – Stakeholders

- **Our obligation to all involved** – Getting things done alone is history.
- **Customer and market orientation** – We aim to delight our customers.
- **Shareholder value** – Our goal is creating value.
- **With and for our employees** – Our employees make Continental strong.
- **Social responsibility** – We stand by our social responsibility.
- **The environment** – We are committed to environmental protection.
- **Partnerships** – We believe in partnerships.
- **Suppliers** – We appreciate the contributions of our suppliers.

Focus – Products and Services

- **Superior technology and services** – We will be the best.
- **Technology leadership and innovation** – Technology is our passion.
- **Quality without compromise** – We set market standards.

Focus – Corporate Spirit

- **A culture of high performance** – Our culture rewards excellence.
- **Striving for the best** – Only the best is good enough.
- **Cooperation and teamwork** – We cooperate with each other.
- **Responsibility and management** – Everybody must be accountable for his or her action.
- **Learning and knowledge management** – Competitive advantages is based on knowledge.

ensures, moreover, the leading position in terms of technological innovation and allows the corporation to be a trendsetter rather than just a fast follower. The upshot of this was not only incremental improvements but also technological shakeups that provided the impetus for product development.

(Heinrich Huinink, Head of Strategic Technology)

The specific implementation took the form of the cross-divisional '30-meter car' and 'global chassis control' projects. The '30-meter car' project stands for the goal of optimizing the interplay of tires and chassis electronics to such an extent that a car traveling at 100 km/h comes to a full stop in thirty-meters. The 'global chassis control' project takes on the overall architecture of the chassis to interlink all components synergistically and without frictions.

Maintaining entrepreneurial energy

In 2001 Continental saw itself constrained to further maintain the once achieved awareness for ongoing extraordinary change and entrepreneurial activities it had nurtured.